MINISTERUL CERCETĂRII, INOVĂRII ȘI DIGITALIZĂRII

AWARD APPLICATION

1. Candidate
Last name: Precup
First name: Radu-Emil
Doctor since 1996 (the Doctor's diploma is attached)
Position: Professor at the Department of Automation and Applied Informatics of the Politehnica University of Timisoara, Romania
Director of the Council of Doctoral Studies of the Politehnica University of Timisoara, Romania
Director of the Automatic Systems Engineering Research Centre of the Politehnica University of Timisoara, Romania
Senior Researcher (CS I) and Head of the Data Science and Engineering Laboratory of the Center for Fundamental and Advanced Technical Research, Romanian Academy – Timisoara Branch, Romania
Institution: Politehnica University of Timisoara
Mobile phone:
E-mail address:

2. Romanian Research Gala" edition: 2024

3. Award and category of application: „Henri Coandă", research teams

4. Team leader: Radu-Emil Precup:

5. Composition of the research team:
0. Team leader: Prof. Radu-Emil Precup, Ph.D. since 1996
1. Team member 1: Assoc. Prof. Claudia-Adina Bojan-Dragoș, Ph.D. since 2011
2. Team member 2: Assoc. Prof. Adriana-Nicoleta Albu, Ph.D. since 2007
3. Team member 3: Lect. Raul-Cristian Roman, Ph.D. since 2018
4. Team member 4: Lect. Alexandra-Iulia Szedlak-Stînean, Ph.D. since 2014
5. Team member 5: Assist. Lect. Elena-Lorena Hedrea, Ph.D. since 2022
6. Team member 6: Ph.D. student Iuliu Alexandru Zamfirache, M.Sc. since 2018

6. Description of the most important scientific achievements of the last 5 years

7. Curriculum vitae of each member of the research team focusing on quantitative quality indices for the results of the research activity in 2019-2023 (according to Appendix 2) and quantitative evaluation criteria for the results of the research activity in 2019-2023 (according to Appendix 3)

8. List of joint publications of the members of the research team and lists of publications of each member of the research team

9. List of research projects won by the research team and their values

10. List of certificates registered at the Romanian Office of Copyright

11. Quantitative quality indices for the results of the research activity in 2019-2023 (according to Appendix 2) and quantitative evaluation criteria for the results of the research activity in 2019-2023 (according to Appendix 3)

6. Description of the most important scientific achievements of the last 5 years

The team's groundbreaking research in fuzzy control, data-driven control, learning in control, nonlinear observers and models, and their combination has revolutionized the field of control and modeling with several degrees of artificial intelligence, paving the way for a new era of robust, adaptive, and high-performance control systems. The team's innovative controllers and models from 2019-2023 enable industries to achieve unprecedented levels of efficiency, precision, and resilience, and provide solid technical support for the implementation of low-cost, high-performance controllers to increase competitiveness in industrial applications. The team worked closely with recognized experts in academia and industry around the world.

The team's first major contributions to the field of control systems are the **thorough and rigorous approaches to the design and documentation of low-cost fuzzy controllers**. The members of the team were among the **first researchers to formalize the concept of two-degree-of-freedom (2-DOF) fuzzy control**, initially formulated as fuzzy control with non-homogeneous dynamics with respect to the two input channels (reference and disturbance inputs). Motivated by the large number of parameters and the heuristics in the design and tuning of fuzzy controllers, the team offers fuzzy controllers with a reduced number of parameters, and simple and transparent design and implementation. Many of the team's controllers are obtained by transferring the results of linear controller design using his Extended Symmetrical Optimum (SO) method to the design of fuzzy controllers, reducing the number of tuning parameters and also ensuring a trade-off to empirical control system performance indices. The team's low-cost fuzzy controllers, tuned by transferring the Extended SO method, from linear controllers to fuzzy controllers, triggered a major investment in this approach, which was then applied to servo systems and electric drives, and in 2019-2023 to the tuning of the team's controllers. The Extended SO method (link, 332 citations in Google Scholar (GS)), is an SO generalization to simplify the design and provide flexibility.

The systematic design of fuzzy controllers is supported by the team's methods of stability and sensitivity analysis, resulting in **fuzzy controllers with imposed and/or reduced process parametric sensitivity**. The team designed for the first time fuzzy controllers with a reduced process parametric sensitivity in terms of including the output sensitivity functions of the sensitivity models in the objective functions, with industrial impact as the practitioners use simplified linear or linearized process models in the controller design and tuning. The variable parameters of these simplified process models involved in the controller design and tuning justify the sensitivity analysis and thus the idea of the team to include the sensitivity analysis in the controller design and tuning, with two representative papers published in 2021, with the status of **Highly Cited Papers** in Web of Science (WoS) as of July/August 2023 and September/October 2023 (link, link), one of them also being **Hot Paper** in WoS as of March/April 2022 (link).

6. Description of the most important scientific achievements of the last 5 years

The team's work on 2-DOF fuzzy control has spurred the **development of generations of fuzzy controllers by proposing optimal tuning of fuzzy controllers using metaheuristic algorithms (MAs)** and the team's adaptive and hybrid versions, which were summarized in a monograph published by Elsevier in 2019 (link, link, 110 citations in GS). Fuzzy controllers have been successfully integrated into applications to improve control system performance. A paper published in IEEE Transactions on Fuzzy Systems in 2022 (link), **Highly Cited Paper** in WoS as of September/October 2023 (link) and **Hot Paper** in WoS as of May/June 2023 (link), provided an **innovative metaheuristic algorithm** applied to benchmark problems and optimal tuning of low-cost fuzzy controllers. They were then rapidly validated and extended to real-world applications: multi-agent systems (link, link), planar snake robots (link), and underwater vehicles (link).

In recent years, the team has focused on developing **novel data-driven controllers to revolutionize control systems with data-driven excellence**. Their pioneering work on data-driven control is summarized in a recent monograph published by CRC Press in 2021 (link, 60 citations in GS), which was selected by the CRC Press Editorial Board as the Outstanding Title in STEM for 2021 (link) for its support of researchers students from diverse backgrounds and abilities. Remarkably, the team has recently initiated the **development of new low-cost data-driven controllers based on hybridization** with other data-driven controllers, sliding mode control, and fuzzy control. These hybridizations highlight how the process models are avoided in the tuning of linear and nonlinear controllers, and provide a framework for hybrid data-driven control with significant results for practitioners.

The team introduced for the first time two versions of second-order Active Disturbance Rejection Control (ADRC) with simple fuzzy control algorithms to **unleash the power of ADRC** and provide the one-shot data-driven tuning of a combination of fuzzy and data-driven control that takes advantage of both (link). This paper used an MA to optimally tune the parameters of the ADRC algorithm, was a **Highly Cited Paper** in WoS in March 2021 – October 2023, and is currently still in the first place of the most cited articles published since January 2021 according to the European Journal of Control journal as the most relevant and strongest papers of the ADRC topic. The controllers developed here and applied to tower crane systems (TCS) were then validated and extended to the industry in multi-area power systems (link), multi-agent systems (link), microsatellites (link), and fault-tolerant control (link, link).

The team provided **rigorous approaches that use of data-driven techniques to tune the parameters of data-driven controllers in a model-free manner**. Optimization problems with different but equivalent objective functions under certain conditions are defined. To **harness the power of IFT**, the team introduced the combination of Fictitious Reference Iterative Tuning (FRIT) and Model-Free Control (MFC) for the first time in a groundbreaking study (link). This innovative

approach allowed the optimal tuning of the MFC algorithm parameters by solving an optimization problem using an MA, and was then continued and adapted to other two MFC algorithm settings and FRIT algorithm settings (link, link). These approaches, when implemented, have demonstrated exceptional performance in a variety of control scenarios.

The team's research output in data-driven control has been extended to Model-Free Adaptive Control in 2019-2023, by successfully merging with simple fuzzy controllers for performance improvement to **unlock the potential of MFAC** (link). One of these innovative approaches (link) was validated using experiments on TCS and received the Best Paper Award at the 7th International Conference on Information Technology & Quantitative Management ITQM 2019 (Granada, Spain).

The pioneering work of the team has **greatly advanced learning control techniques by offering three novel state-of-the-art Reinforcement Learning (RL) algorithms combined with metaheuristic algorithms** with experimental validation in solving optimal reference tracking control problems. Understanding the industry's need for controllers that are easy to explain, design, and implement, these algorithms resulted in neural network (NN)-based controllers with servo system applications that demonstrate superiority over classical approaches. These algorithms include and are introduced in the approaches: Policy Iteration RL-based optimal control, where the control policy NN is configured with MAs (link), Deep Q-Learning RL-based control in which the NNs are initialized with MAs (link), and exploring the Actor-Critic RL framework using MAs as a critic to evaluate the actions of the actor NN (link). These three papers, published in the Elsevier journals Information Sciences and Expert Systems with Applications, have received 138 + 119 + 29 citations in GS, the first two ones are **Highly Cited Papers** in WoS in September/October 2023 (link, link), and the second was a **Hot Paper** in WoS in November/December 2022 (link).

The team introduced a set of **innovative nonlinear observers and, based on them, control techniques for mechatronic systems with complex dynamics** that provide means to estimate critical system states with improved accuracy and adaptability compared to classical and recent observers. The most representative observer is the Takagi-Sugeno fuzzy one with 32 rules (link), which, together with the other observers proposed by the team (link, link), has several distinct advantages over classical observers: improved adaptability, reduced error at low speeds in electric drives, predictive feedback, and practical applicability. The integration into cascade and optimal control structures (link, link, link, link, link) provides valuable contributions to transparent and efficient state estimation, increasing accuracy and practical utility in industrial applications.

The team successfully applied the Tensor Product-based Model Transformation (TP-MT) technique for the first time in 2019-2023 to process modeling and process control in important nonlinear dynamical systems with industrial applications: servo systems (link), magnetic levitation systems (link, link), tower carne systems (link), and pendulum-cart systems (link). The

team also demonstrated the superiority and simplicity of linear matrix inequality TP-MT-based control design and implementation in experimental comparisons with fuzzy control (link), sliding mode control (link), and classical state feedback control (link, link, link). These features of the team's controllers and models led to a high number of citations of the researchers in the field, including Prof. Peter Baranyi (who coined TP-MT in 2003), following the invitation to a special issue of the Asian Journal of Control journal. Two papers (link, link) resulted, and (link) received the title of **Top Cited Article** in 2020-2021 (link) and 2021-2022 (link) according to Wiley.

The team proposed and reported in 2019 (link) a **variety of approaches in which Artificial Intelligence (AI)-based techniques focused on NNs are applied to modeling, prediction, and decision-making in medical systems**. All applications have been developed and trained on real data (laboratory test results, medical images, electrical signals), mostly collected by the team. This is the strength of research, which ensures the applicability of the results in real clinical circumstances and leads to a favored topic today: personalized medicine. Various techniques, including AI-based ones, were successfully applied to COVID-19 pandemic and biomonitoring modeling in 2023 (link, link, link) as part of an international cooperation.

The team developed **accurate evolving fuzzy models that characterize the nonlinear finger dynamics of the human hand in myoelectric-based control of prosthetic hands**, which were used to design low-cost fuzzy controllers, presented in IEEE Transactions on Instrumentation and Measurement in 2020 (link), which is a **Highly Cited Paper** in WoS as of September/October 2023 (link). The very good performance of the fuzzy models and the control systems provided a framework for the later extension to other controllers for this real medical application.

12 of the research team's papers published in prestigious journals are recognized by Web of Science as **Highly Cited Papers** (link, link, link, link, link, link, link, link, link, link, link, link) in different time intervals within November/December 2015-September/October 2023.

5 of the research team's papers published in prestigious journals are recognized by Web of Science as **Hot Papers** (link, link, link, link, link) in different time intervals within November/December 2015-May/June 2023.

The research team's results have been recognized several awards, such as **two "Tudor Tănăsescu" Prizes from the Romanian Academy** in 2020 and 2023 for data-driven control (Raul-Cristian Roman), and TP-MT-based modeling & control (Elena-Lorena Hedrea) (link, link), **two Doctor Honoris Causa degrees** in 2019 in Hungary (link, link), inclusion of Radu-Emil Precup and Raul-Cristian Roman in the 2020-2023 **World's Top 2% Scientists Lists in Stanford University studies** based on Scopus (link), and Radu-Emil Precup in the **Research.com Ranking of Top Scientists in Electronics and Electrical Engineering as 1131st in the World Ranking and 1st in the National Ranking** (Romania) (link as of February 15, 2023).

7. Curriculum Vitae – team leader – Radu-Emil Precup

CURRICULUM VITAE OF RADU-EMIL PRECUP
FOCUSING ON QUANTITATIVE QUALITY INDICES FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 2) AND QUANTITATIVE EVALUATION CRITERIA FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 3)

Radu-Emil Precup was born on March 22, 1963, in Lugoj, Romania. He is married with Adriana-Carmen. The **office address** is

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The **home address** is

The **educational background** (http://www.aut.upt.ro/~rprecup/bio.html) starts with the Baccalaureate in Mathematics-Physics, obtained in 1981, after having studied in 1997-1981 at the Industrial no. 1, Lugoj, Romania. After one year of military service, from 1982-1987, I was a student at the Faculty of Electrical Engineering, "Traian Vuia" Polytechnical Institute of Timisoara, Romania, where I obtained the Dipl.-Eng. degree, graduating with honors in the field of Automation and Computers, Computerized Process Control stream, with a final grade of 9.98 and a diploma grade of 10 on a scale of 1-10, where 1 is the minimum and 10 is the maximum. I was also a student in 1988-1993 at the Faculty of Mathematics, West University of Timisoara, Romania, where I obtained a diploma in the field of Mathematics, with a final grade of 9.05 and a license (diploma) grade of 10 on a scale of 1-10. I was a Ph.D. student at the "Politehnica" University of Timisoara, Romania, Faculty of Automation and Computers, supervised by Prof.Dr.-Eng. Stefan Preitl, and I defended my thesis "Contributions Concerning Fuzzy Control of Non-minimum Phase Systems with Applications to Hydro-generators Control" in 1996, obtaining the Ph.D. degree in Automatic Systems.

My **work experience in 2019-2023** (http://www.aut.upt.ro/~rprecup/bio.html) is summarized as follows. Since 2000, I am a Professor at the Department of Automation and Applied (formerly Industrial) Informatics, Faculty of Automation and Computers, Politehnica University of Timisoara, Romania. Since 2022, I am also a Senior Researcher (CS I) and Head of the Data Science and Engineering Laboratory of the Center for Fundamental and Advanced Technical Research, Romanian Academy - Timisoara Branch, Romania. Since 2022, I am a member of the External Scientific Advisory Board (ESAB) of the Center for Automation and Robotics (CSIC-UPM) of the Spanish National Research Council and the Technical University of Madrid, Spain. In 2022-2024 I am the Director of the Council of Doctoral Studies of the Politehnica University of Timisoara, Romania (http://www.upt.ro/Informatii_scoala-doctorala_310_ro.html). Since 2023, I am a member of the Information Science and Technology Committee of the National Research Council (CNCS), Bucharest, Romania (www.cncs-nrc.ro). From 2016 to 2022, I was an Adjunct Professor at the School of Engineering, Edith Cowan University, Joondalup, WA, Australia (Staff of ECU). In 2016-2024 I am a member of the Council of the Doctoral School of Automatic Control and Computers, Politehnica University of Bucharest, Romania (doctorat.acs.pub.ro, doctorat.acs.pub.ro). Since 2011, I am the Director of the Automatic Systems Engineering Research Center at the Politehnica University of Timisoara, Romania (http://www.aut.upt.ro/centru-cercetare/index.EN.php). In 2017-2020, I was a member of the National Research Council (CNCS), Bucharest, Romania (www.research.gov.ro, www.research.gov.ro). Since 2012, I have been a member of the Computers, information technology and systems engineering committee as part of the National Council for the Approval of Academic Titles, Diplomas and Certificates (CNATDCU), Bucharest, Romania (http://www.cnatdcu.ro/paneluri-cnatdcu/). In 2016-2020, I was the Dean of the Faculty of Automation and Computers, Politehnica University of Timisoara, Romania. Since 2018, I have been

supervising four postdoctoral researchers: Călin-Adrian Popa, Politehnica University of Timisoara (UPT), aproaching the topic "Dynamics of hypercomplex-valued neural networks (DHVNN)", funded by UEFISCDI in the project PN-III-P1-1.1-PD-2021-03, 2022-2023, Raul-Cristian Roman, UPT, approaching the topic "Data-driven controllers dedicated to tower crane systems", financed by the European Union in the project POCU/993/6/13/153437, 2022-2023, Alexandru Topîrceanu, UPT, aproaching the topic "IMproving the PREdiction of opinion dynamics in temporal Social networks: Mathematical modeling and Simulation framework (IMPRESS)", funded by UEFISCDI in the project PN-III-P1-1.1-PD-2016-0193, 2018-2020, and Alexandra-Iulia Szedlak-Stînean, UPT, aproaching the topic "NONlinear OBServers-based control structures applied to MEChatronics Systems (NOBSMECS)", funded by UEFISCDI in the project PN-III-P1-1.1-PD-2016-0331, 2018-2022 (link).

QUANTITATIVE QUALITY INDICES
FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 2)

1. Papers as main author or co-author classified with the article document type, published in Web of Science indexed journals JCR quartile Q1 according to AIS.

In 2019-2023, I published **7 papers** in Web of Science indexed journals JCR quartile Q1 according to AIS. According to the attached Publication List and also http://www.aut.upt.ro/~rprecup/isijournals.html, the papers with the following numbers in Section C belong to this category: 2, 3, 5, 6, 7, 12 and 19. These papers are specified as follows:

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).
2. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
3. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
4. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).
5. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental

Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.

7. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.

3. National and international research projects, won through competition, with a value of at least 100000 EUR each and a team of at least 3 members, as director/project leader.

In 2019-2023, I was the director and project leader of **2 research projects**. According to the Research Grants and Contracts List on the last two pages of this CV and also http://www.aut.upt.ro/~rprecup/contracts.html, the projects 1 and 2 in the list on the last two pages of this CV belong to this category. These projects are specified as follows:

1. I was the director of the project coordinator Europe, Politehnica University of Timisoara (UPT), of the project "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)" in 2023-2025, with a value of 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), funded by the JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call.

2. I was the director of the project "Data-driven fuzzy control with experimental validation" in 2021-2023, with a value of 249844.58 EUR, national exploratory research grant (PCE), funded by the Research, Development and Innovation Funding (UEFISCDI).

5. The quality of Editor-in-Chief of a journal indexed Journal Citation Reports.

Since 2022, I am the **Editor-in-Chief of the Romanian Journal of Information Science and Technology** (http://www.romjist.ro/) of the Romanian Academy. I have been a member of the Editorial Board of this journal since 2018. The journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and currently has an **impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023**. The journal has been awarded in 2023 the *Diploma of Academic Merit of the Romanian Academy, for the leading position in the Clarivate evaluation and first place among the journals in Romania, from the point of view of the impact factor*.

6. Cumulative Article Influence Score: A = 5.3711

The cumulative Article Influence Score (A) of my papers published in Web of Science indexed journals is calculated as follows according to the positions of the papers in Section C of the attached Publication List, namely: A = 1: 0.696 / 3 + 2: 0.882 / 6 + 3: 1.442 / 4 + 4: 0.720 / 5 + 5: 2.448 / 4 + 6: 1.333 / 4 + 7: 1.333 / 4 + 8: 0.349 / 5 + 9: 0.390 / 4 + 10: 0.720 / 3 + 11: 0.418 / 4 +12: 1.276 / 4 + 13: 0.651 / 3 + 14: 0.651 / 3 + 15: 0.272 / 4 + 16: 0.272 / 4 + 17: 0.204 / 4 + 18: 0.170 / 2 + 19: 1.276 / 6 + 20: 0.651 / 6 + 21: 0.302 / 6 + 22:0.097 / 4 + 23: 0.390 / 5 + 24: 0.453 / 6 + 25: 1.129 / 2 + 26: 0.302 / 5 + 27: 0.272 / 5 + 28: 0.204 / 6 + 29: 0.302 / 7 + 31: 0.651 / 7 + 32: 0.170 / 3 + 33: 0.651 / 3 = 0.232 + 0.147 + 0.3605 + 0.144 + 0.612 + 0.33325 + 0.33325 + 0.0698 + 0.0975 + 0.24 + 0.1045 + 0.319 + 0.217 + 0.217 + 0.068 + 0.068 + 0.051 + 0.085 + 0.2127 + 0.1085 + 0.0503 + 0.0243 + 0.078 + 0.0755 + 0.5645 + 0.0604 + 0.0544 + 0.034 + 0.0431 + 0.093 + 0.0567 + 0.217 = 5.3711.

QUANTITATIVE EVALUATION CRITERIA
FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 3)

C1. THE RESULTS OF RESEARCH AND/OR INNOVATION ACTIVITY, EVALUATED THROUGH BOOKS PUBLISHED BY PRESTIGIOUS INTERNATIONAL PUBLISHING HOUSES, PAPERS PUBLISHED IN JOURNALS INDEXED IN JOURNAL CITATION REPORTS Q1 ACCORDING TO INFLUENCE SCORE (AIS) OR APPLIED PATENTS

International Books and Q1 Journal Papers (please see the sections A and C of the attached Publication List and also http://www.aut.upt.ro/~rprecup/public.html, http://www.aut.upt.ro/~rprecup/books.html, http://www.aut.upt.ro/~rprecup/isijournals.html):

In 2019-2023, I published **2 books (in CRC Press, Taylor & Francis, and Butterworth-Heinemann, Elsevier), edited 2 books (in Springer), and 7 papers in Q1 journals** according to AIS. These books and papers are specified as follows:

Books:

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., **CRC Press, Taylor & Francis**, Boca Raton, FL, USA, 289 pp., 2021 (www.routledge.com), **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (link), 60 citations received so far.
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimization Algorithms for Fuzzy Controlled Servo Systems, **Butterworth-Heinemann, Elsevier**, Oxford, UK, 148 pp., 2019 (www.elsevier.com, www.sciencedirect.com), 110 citations received so far.
3. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Advanced Control and Optimization Paradigms for Wind Energy Systems, Power Systems Series, **Springer** Singapore, Singapore, 257 pp., 2019 (https://www.springer.com/gp/book/9789811359941), 16 overall citations received so far, and many others of the chapters included in the book.
4. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Solar Photovoltaic Power Plants - Advanced Control and Optimization Techniques, Power Systems Series, **Springer** Singapore, Singapore, 250 pp., 2019 (https://www.springer.com/gp/book/9789811361500), 33 overall citations received so far, and many others of the chapters included in the book.

Q1 Journal Papers:

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).
2. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
3. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
4. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023

(http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).

5. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
7. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.

C2. THE IMPACT OF RESEARCH AND/OR INNOVATION ACTIVITY, ASSESSED BY THE QUALITY OF CITATIONS IN INDEXED JOURNALS JOURNAL CITATION REPORTS Q1 ACCORDING TO THE INFLUENCE SCORE AND/OR BY PRESENTING CONCRETE APPLICATIONS OF RESEARCH RESULTS IN THE ECONOMY AND/OR SOCIETY

Citations (http://www.aut.upt.ro/~rprecup/cita.html):

As of February 6, 2024, my papers have received **11783 citations**, with **h-index = 70** and **i10-index = 188** according to **Scholar Google** (http://scholar.google.com/citations?user=a43tQMQAAAAJ&hl=en).

As of February 6, 2024, my 427 Scopus articles have received **9226 citations in Scopus, h-index = 62** (http://www.scopus.com/authid/detail.url?authorId=56234853500).

As of February 6, 2024, my 341 Clarivate Analytics Web of Science articles have received **7128 citations in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge), h-index =58,** according to Clarivate Analytics Web of Science, available from http://www.researcherid.com/rid/A-6993-2009 transferred to https://www.webofscience.com/wos/author/record/1001320,

Excluding the self-citations of all authors, or in other words, counting only the independent citations, the h-index values of my papers are: **h-index = 55** (excluding the self-citations of all authors), **h-index = 51** (excluding the self-citations of all authors) according to Scopus, and **h-index = 42** (excluding the self-citations of all authors) according to Clarivate Analytics Web of Science.

The **cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) of independent citations was 574.685**, and the **cumulative IF according to 2013 Journal Citation Reports (JCR) released by Clarivate Analytics in 2014 was 623.687**. These values have to be seen in the context of the IF of leading journals in my field, which is about 3. In the same context, my papers have received **nore than 6500 independent citations** so far.

In 2019-2023, **10 of my papers have the status of Highly Cited Papers according to Clarivate Analytics Web of Science** as of September/October 2023, November/December 2022 and September/October 2021. The links to the proofs are:
http://www.aut.upt.ro/~rprecup/EJC_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TFS_2022_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJCIS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TIE_2017_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/CiI_2011_Highly_Cited_Paper.png.

In 2019-2023, **four of my papers have the status of Hot Papers according to Clarivate Analytics Web of Science** as of May/June 2023, November/December 2022, July/August 2022 and March/April 2022. The links to the proofs are: http://www.aut.upt.ro/~rprecup/TFS_2022_Hot_Paper.png, http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png, http://www.aut.upt.ro/~rprecup/EJC_2021_Hot_Paper.png, http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png.

One of my papers has the status of **Top Cited Article in 2020-2021 and 2021-2022 according to Wiley** (http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2020-2021.pdf, http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2021-2022.pdf).

Concrete Applications of Research Results in the Economy and the Society in the Framework of Research Contracts and Grants in 2019-2023 (http://www.aut.upt.ro/~rprecup/contracts.html):

In the framework of the international research contract numbered 1 in the Research Grants and Contracts List on the last two pages of this CV, the research team is applying (2023-2025) its optimal control solutions for connected autonomous electric buses to improve schedule reliability while minimizing energy consumption in the municipality of Hangzhou (China), namely Hangzhou Comprehensive Transportation Center, with technical support from three companies, namely WSP Sverige AB (Sweden), FellowBot AB (Sweden), and Enjoyor Ltd Co. (China).

In the framework of the national research contract numbered 2 in the Research Grants and Contracts List on the last two pages of this CV, the research team has applied its data-driven fuzzy controllers to a test bench of the private partner Continental Automotive Timisoara. The partnership was created in 2008-2011 through the project PCCA "Real-time informatics technologies for embedded-system-control of power-train in automotive design and applications (SICONA)", project leader, Prof. Corneliu Lazăr, "Gheorghe Asachi" Technical University of Iasi.

In this regard, the applicability of the research carried out by the research team on data-driven fuzzy control between 2019-2023 had an important result in the implementation of the proposed algorithms in real life, after the authors managed to obtain three certificates registered at the Romanian Copyright Office (Oficiul Român pentru Drepturile de Autor, ORDA), with the following numbers and links: Certificate fuzzy MFC, Certificate fuzzy MFAC, Certificate fuzzy ILC.

In the framework of the national research contract numbered 2 in the Research Grants and Contracts List on the last two pages of this CV, the research team has applied its data-driven model-free controllers to the companies where the co-author of the research team, Dr. Ali Safaei (link), has worked in Ontario, Canada, namely Drone Delivery Canada, ATS Automation and General Motors. The initial formulation, developement and implementation of the controllers are published in a joint book (www.routledge.com) with free companion software.

These are the details on the two research projects mentioned above:

1. R.-E. Precup, director of the project coordinator Europe, Politehnica University of Timisoara (UPT), of the project "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)" in 2023-2025, with a value of 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), funded by the JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call.

2. R.-E. Precup, director of the project "Data-driven fuzzy control with experimental validation" in 2021-2023, with a value of 249844.58 EUR, national exploratory research grant (PCE), funded by the Research, Development and Innovation Funding (UEFISCDI).

C3. THE ABILITY TO ATTRACT RESEARCH FUNDS OR TO COOPERATE WITH PUBLIC AND/OR PRIVATE RESEARCH ORGANIZATIONS, EVALUATED BY THE NUMBER OF RESEARCH PROJECTS WON AND THEIR VALUE OR BY ACQUIRING THE QUALITY OF TEACHER/RESEARCHER/INVITED SPEAKER AT UNIVERSITIES OR AT INTERNATIONAL EVENTS OF PRESTIGE

Research Contracts and Grants in 2019-2023 *(please visit the Research Grants and Contracts List attached in the last two pages of this CV, and also http://www.aut.upt.ro/~rprecup/contracts.html)**:***

In 2019-2023, I was involved in **6 national research contracts and grants** in the area of automatic control, serving as the **director of 2 of them**, including one international research contract.

For 2019-2023, the **total value of the research contracts and grants is 1250101.21 EUR**, calculated according to the positions of the contracts in the Research Grants and Contracts List on the last two pages of this CV, namely: 1: 250000 + 510509.63 + 2: 249844.58 + 3: 120962 + 4: 33333 + 5: 38245 + 6: 47207 = 739591.58 + 510509.63 = 1250101.21 EUR. These six contracts of the research team are:

1. 2023-2025: director of the project coordinator Europe, Politehnica University of Timisoara (UPT), Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call).
2. 2021-2023: director, Data-driven fuzzy control with experimental validation, 249844.58 EUR, national exploratory research grant (PCE, Research, Development and Innovation Funding - UEFISCDI).
3. 2022-2024: principal investigator, Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob), 120962 EUR, demonstrative experimental project (PED, UEFISCDI), director: Prof. Sorin Grigorescu, Transilvania University of Brasov.
4. 2022-2024: principal investigator, Dynamics of hypercomplex-valued neural networks (DHVNN), 33333 EUR, national postdoctoral research project (PD, UEFISCDI), director: Assoc. Prof. Calin-Adrian Popa, UPT.
5. 2018-2019: principal investigator, IMproving the PREdiction of opinion dynamics in temporal Social networks: Mathematical modeling and Simulation framework (IMPRESS), 38245 EUR, national postdoctoral research project (PD, UEFISCDI), director: Lect. Dr. Alexandru Topirceanu, Politehnica University of Timisoara (UPT).
6. 2018-2022: principal investigator, NONlinear OBServers-based control structures applied to MEChatronics Systems (NOBSMECS), 47207 EUR, national postdoctoral research project (PD, UEFISCDI), director: Lect. Dr. Alexandra-Iulia Szedlak-Stinean, UPT.

Cooperation in 2019-2023 (http://www.aut.upt.ro/~rprecup/coop.html)**:

In 2019-2023, successful cooperation with public authorities, universities, research institutes and private companies and research organizations has been carried out within the framework of the two research contracts numbered 1 and 3 in the list of research grants and contracts on the last two pages of this CV. These public authorities, universities, research institutes and private companies and research organizations are: Zhejiang University (China), Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), and Transilvania University of Brasov (Romania).

In 2019-2023, successful cooperation with professors from prestigious universities and research institutes as co-authors of joint journal papers (http://www.aut.upt.ro/~rprecup/isijournals.html) has been carried out. These are the co-authors of Radu-Emil Precup's papers: Sašo Blažič (University of Ljubljana, Slovenia), Anh-Tu Nguyen (Université Polytechnique Hauts-de-France, Valenciennes, France), Emil M. Petriu (University of Ottawa, Canada), Sergey M. Abramov (Program Systems Institute of the Russian Academy of Sciences, Russia), Sergey Travin (Semenov Federal Research Center for Chemical Physics of the Russian Academy of Sciences, Russia), Inga Zinicovscaia (Institute of Chemistry of the Academy of Sciences of Moldova, Republic of Moldova, Joint Institute for Nuclear Research, Dubna, Russian

Federation, and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Romania), Claudiu Pozna (Széchenyi István University, Győr, Hungary, and Transilvania University of Brasov, Romania), Marius Brezovan, Dan Selişteanu, and Liana Stănescu (University of Craiova, Romania).

The following universities specified above are listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** from other countries: Chalmers University of Technology (Sweden), Zhejiang University (China), Chongqing University (China), Hong Kong Polytechnic University (China).

From 2016 to 2022, I was an Adjunct Professor at the School of Engineering, Edith Cowan University, Joondalup, WA, Australia (Staff of ECU).

Invited Papers and Talks in 2019-2023 (http://www.aut.upt.ro/~rprecup/invite.html):

In 2019-2023, I was invited to give **12 invited papers and talks**. They are specified as follows:

1. R.-E. Precup, Metaheuristic Algorithms and their Applications to Fuzzy Control, Fuzzy Modeling and Learning-based Control, 9th International Conference on Control and Optimization with Industrial Applications COIA 2024, Istanbul, Turkey, 2024.
2. R.-E. Precup, Metaheuristic Algorithms and their Applications to Fuzzy Control, Fuzzy Modeling and Mobile Robot Navigation, Keynote Speech, 10th User Conference on Advanced Automated Testing UCAAT 2023, Timisoara, Romania, 2023.
3. R.-E. Precup, Nature-inspired optimization algorithms applied to fuzzy control, fuzzy modeling and mobile robot navigation, 4th International Symposium on New Trends in Computational Intelligence NTCI 2022, Qingdao, China, 2022.
4. R.-E. Precup, 2-DOF Fuzzy Controllers and Mechatronics Applications, Invited Lecture, China University of Petroleum (East China), 266580, Qingdao, China, 11 October 2022.
5. R.-E. Precup, Evolving Takagi-Sugeno-Kang Fuzzy Models and Applications, International Seminar on Computational Intelligence ISCI'2022, Tijuana, Mexico, 2022.
6. R.-E. Precup, Evolving Fuzzy Models and Laboratory Applications, 23rd International Carpathian Control Conference ICCC'2022, Craiova, Romania, 2022.
7. R.-E. Precup, Evolving Fuzzy Models and Applications, 3rd International Symposium on New Trends in Computational Intelligence ISNTCI 2021, Qingdao, China, 2021.
8. R.-E. Precup, Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control, 9th IEEE International Conference on e-Health and Bioengineering EHB 2021, Iasi, Romania, 2021.
9. R.-E. Precup, Fuzzy Controller Structures for Servo Systems, Cycle of Conferences "Horizonte de la Automática y la Robótica más allá de la 4ta. Revolución Industrial (HORIZON-CAR)", Center for Automation and Robotics (CSIC-UPM) of Spanish National Research Council and Technical University of Madrid, Madrid, Spain, 18 November 2020.
10. R.-E. Precup, 2-DOF Fuzzy Controller Structures and Nature-Inspired Optimal Tuning, Keynote at Romanian AI Days, Virtual Brasov, Romania, 2-4 December 2020.
11. R.-E. Precup, Evolving Fuzzy Models of Mechatronics Applications, 17th IEEE International Symposium on Intelligent Systems and Informatics SISY 2019, Subotica, Serbia, pp. 1-2, 2019.
12. R.-E. Precup, T.-A. Teban and A. Albu, Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control, Proceedings of 11th International Conference on Electronics, Computers and Artificial Intelligence ECAI 2019, Pitesti, Romania, pp. 1-8, 2019.

C4. PROFESSIONAL PRESTIGE, ASSESSED BY THE DEGREE OF RECOGNITION/ APPRECIATION OF THE CANDIDATE'S SCIENTIFIC ACTIVITY IN THE INTERNATIONAL ACADEMIC COMMUNITY

Member of Editorial Boards of Journals in 2019-2023 (http://www.aut.upt.ro/~rprecup/edboards.html):

In 2019-2023, I was an **editorial board member of 18 journals indexed in Web of Science, in the Q1 to Q4 quartiles, 6 journals indexed in Scopus, and 15 journals indexed in other databases**. These journals are listed below:

Since 2022, I am the **Editor-in-Chief of the Romanian Journal of Information Science and Technology** (http://www.romjist.ro/) of the Romanian Academy. I have been a member of the Editorial Board of this journal since 2018. The journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and currently has an **impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023**. The journal has been awarded in 2023 the

Diploma of Academic Merit of the Romanian Academy, for the leading position in the Clarivate evaluation and first place among the journals in Romania, from the point of view of the impact factor.

From 2018 to 2022, I was an Associate Editor of the journal *IEEE Transactions on Fuzzy Systems*. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 12.253, according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

I was a *Guest Editor*, with Dr. Anh-Tu Nguyen (Université Polytechnique Hauts-de-France, France), Dr. Truong Quang Dinh (University of Warwick, UK), Dr. Junjie Chong (Newcastle University Singapore, Singapore), Prof. Makoto Iwasaki (Nagoya Institute of Technology, Japan) and Prof. Michael Ruderman (University of Agder, Norway), of the *Special Issue* on Emerging Control and Automation Technologies for Advanced Mechatronic Systems published in the journal *Control Engineering Practice* (Elsevier), vol. 136, Jul. 2023. This journal has an impact factor of 3.475 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2018, I have been an Associate Editor of the journal *IEEE Transactions on Cybernetics*. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 11.448 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2020, I have been an Associate Editor of the journal *Information Sciences*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 8.233 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2021, I have been a member of the Editorial Board of the journal *Engineering Applications of Artificial Intelligence*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 6.212 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2014, I have been a member of the Editorial Board of the journal *Applied Soft Computing*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 6.725 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2021, I have been a member of the Editorial Board of the journal *Expert Systems with Applications*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 8.665 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2014, I have been a member of the Editorial Board of the journal *Evolving Systems*, Springer. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.908 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2022, I have been an Associate Editor of the journal *Applied Artificial Intelligence*, Taylor & Francis. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 2.777 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2019, I have been an Associate Editor of the journal *CAAI Transactions on Intelligence Technology*, Institution of Engineering and Technology (IET) and Chinese Association for Artificial Intelligence (CAAI), Wiley. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 5.1 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023.

Since 2021, I have been a member of the Editorial Board of the journal *Communications in Transportation Research*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge.

Since 2021, I have been a member of the Editorial Board of the journal *Healthcare Analytics*, Elsevier. This journal is indexed in SCOPUS.

Since 2022, I have been an Associate Editor of the journal *Industrial Artificial Intelligence*, Springer.

Since 2017, I have been an Editor of the journal *Cogent Engineering*, Taylor & Francis. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge).

Since 2022, I have been a **Topical Editor** of the journal Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science, Romanian Academy, Romania. Since 2018, I have been an Editorial Board member of this journal, which is indexed in Clarivate Analytics

Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 0.734 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

I was a *Guest Editor* of the *Special Issue* on Optimization Problems in Information Science and Technology, published in *Romanian Journal of Information Science and Technology* (Romanian Academy), vol. 23, no. T, Nov. 2020. This journal has an impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023.

Since 2020, I have been a member of the Senior Editorial Board of the journal Studies in Informatics and Control, ICI Bucharest, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.649 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2016, I have been an Associate Editor of the journal Control Engineering and Applied Informatics, Romanian Society of Control Engineering and Technical Informatics, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 0.973 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2014, I have been a **Track Chair** of the journal Acta Polytechnica Hungarica, Óbuda University, Hungary. In 2012-2014, I was an Associate Editor of this journal, which is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.806 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2017, I have been a member of the Editorial Board of the journal International Journal of Computers Communications & Control, Agora University, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 2.635 according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2007, I have been a member of the Editorial Board of the journal Advances in Electrical and Computer Engineering, Stefan cel Mare University of Suceava, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.221 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2020, I have been a member of the Editorial Board of the journal Reports in Mechanical Engineering, Regional Association for Security and Crisis Management, Serbia. In 2020, I was the **Editor-in-Chief** of this journal, which is indexed in SCOPUS.

Since 2022, I have been a member of the Editorial Board of the journal CAAI Transactions on Intelligent Systems, Chinese Association of Artificial Intelligence and Harbin Engineering University, China. This journal is indexed in SCOPUS.

Since 2021, I have been a member of the Editorial Board of the journal Military Technical Courier, University of Defense in Belgrade, Military Academy, Belgrade, Serbia. This journal is indexed in SCOPUS.

Since 2022, I have been a member of the Editorial Board of the Journal of Intelligent and Connected Vehicles, Emerald Publishing and Tsinghua University, China. This journal is indexed in SCOPUS.

Since 2021, I have been an **Associate Editor-in-Chief** of the System Theory, Control and Computing Journal, Editura Universitaria, Craiova.

Since 2010, I have been an Editor of the Paladyn, Journal of Robotics, Intelligent Agents, and Artificial Intelligence, Versita, Poland, co-published first with Springer-Verlag and next with De Gruyter. This journal is indexed in SCOPUS and DBLP.

Since 2006, I have been an Editor of the International Journal of Tomography & Simulation, CESER Publications, India. This journal has been indexed in SCOPUS until 2017.

Since 2009, I have been an Editorial Advisory Board Member of Mediterranean Journal of Measurement and Control, SoftMotor Ltd, UK. This journal has been indexed in SCOPUS, INSPEC until 2016.

Since 2012, I have been a member of the Editorial Board of Journal of Electrical Engineering, Politehnica Publishing House, Romania. This journal has been indexed in SCOPUS, INSPEC until 2017.

Since 2008, I have been a member of the Editorial Board of the journal Facta Universitatis, Series Automatic Control and Robotics, University of Niš, Serbia.

Since 2014, I have been an Associate Editor of the journal Gradus, John von Neumann University, Hungary.

Since 2021, I have been a member of the Editorial Advisory Board of the journal Acta Technica Jaurinensis, Széchenyi István University, Győr, Hungary.

Since 2021, I have been a member of the Editorial Board of IASEI Transactions on Swarm Intelligence, International Association of Swarm and Evolutionary Intelligence, China.

Since 2020, I have been an Associate Editor of Journal of Smart Environments and Green Computing, OAE Publishing Inc., USA.

Since 2021, I have been a member of the Editorial Board of the Journal of Computational and Cognitive Engineering, Bon View Press, Singapore.

Since 2023, I have been a member of the Editorial Board of Journal of Machine Design and Automation Intelligence, De Gruyter, Germany.

Since 2023, I have been a member of the Editoral Board of the journal Big Data and Computer Visions, Ayandegan Institute of Higher Education, Tonekabon, Iran.

Since 2020, I have been a member of the Editorial Board of the journal The Annals of University "Dunarea de Jos" of Galati, Fascicle III Electrotechnics, Electronics, Automatic Control and Informatics, "Lower Danube" University of Galati, Romania.

Since 2021, I have been a member of the Editorial Board of the Journal of Electrical Engineering, Electronics, Control and Computer Science, University of Pitesti, Romania.

Since 2021, I have been a member of the Editorial Team of the journal Proceedings of CBU in Natural Sciences and ICT, Unicorn University, Prague, Czech Republic.

Authored and Edited Books Published in 2019-2023 by Prestigious International Publishing Houses (http://www.aut.upt.ro/~rprecup/books.html):

In 2019-2023, I published **2 books with CRC Press, Taylor & Francis, and Butterworth-Heinemann, Elsevier, and edited 2 books with Springer**. These books are specified as follows:

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., **CRC Press, Taylor & Francis**, Boca Raton, FL, USA, 289 pp., 2021, **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (link).
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimization Algorithms for Fuzzy Controlled Servo Systems, **Butterworth-Heinemann, Elsevier**, Oxford, UK, 148 pp., 2019.
3. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Advanced Control and Optimization Paradigms for Wind Energy Systems, Power Systems Series, **Springer** Singapore, Singapore, 257 pp., 2019.
4. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Solar Photovoltaic Power Plants - Advanced Control and Optimization Techniques, Power Systems Series, **Springer** Singapore, Singapore, 250 pp., 2019.

Awards and Honors Received in 2019-2023 (http://www.aut.upt.ro/~rprecup/honours.html):

Since 2018, I have been a **Corresponding Member of the Romanian Academy** and a **Corresponding Member of the Academy of Technical Sciences of Romania**.

Since 2019, I have been a **Doctor Honoris Causa of the Óbuda University, Budapest, Hungary**, and a **Doctor Honoris Causa of the Széchenyi István University, Győr, Hungary**.

I was **named a 2022 academic data leader by Chief Data Officer (CDO) Magazine, according to the 2022 List of Leading Academic Data Leaders** (https://www.cdomagazine.tech/) published by CDO Magazine in February 2022.

I was **listed in the 2023, 2022, 2021 and 2020 World's Top 2% Scientists List, according to a Stanford University study**, https://doi.org/10.1371/journal.pbio.3000918, with the updates generally accessible in https://dx.doi.org/10.17632/btchxktzyw (the last one in October 2023), and the 2020 version (as of October 2020) of the database found in https://data.mendeley.com/datasets/btchxktzyw/2.

I received the **Diploma of Academic Merit of the Romanian Academy**, awarded in 2023 to the Romanian Journal of Information Science and Technology (ROMJIST), whose Editor-in-Chief Radu-Emil Precup has been since 2022, for the leading position in the Clarivate evaluation and the first place among the journals in Romania, from the point of view of the impact factor.

In 2020, I received the **"Tudor Tănăsescu" Prize from the Romanian Academy** for data-driven controller tuning techniques.

I am **listed in the Research.com Ranking of Top Scientists in Electronics and Electrical Engineering as 1131st in the World Ranking and 1st in the National Ranking (Romania)** according to http://research.com/u/radu-emil-precup as of February 15, 2023.

In 2022, I received of the **Certificate of Commendation from IEEE Transactions on Fuzzy Systems** for the contribution to the journal by serving as an Associate Editor dealing with a high volume of papers efficiently.

I received a **Best Paper Award** at 8th International Conference on Information Technology and Quantitative Management ITQM 2020 & 2021 (Chengu, China), and a **Best Paper Award** at 7th

International Conference on Information Technology and Quantitative Management ITQM 2019 (Granada, Spain).

Service and Member of Scientific and Technical Societies in 2019-2023 (http://www.aut.upt.ro/~rprecup/soc.html):

Since 2015, I have been the **founder and chair of the Institute of Electrical and Electronics Engineers (IEEE) Systems, Man, and Cybernetics Society Romania Chapter**.

Since 2002, I have been a member of the The International Federation of Automatic Control (IFAC) Technical Committee on Computational Intelligence in Control (formerly Cognition and Control). Since 2020, I have been a member of the IFAC Technical Committee on Linear Control Systems.

I have been a Senior Member of IEEE since 2007, and a member of the Control Systems Society (since 2003), the Intelligent Transportation Systems Society (since 2003), the Computational Intelligence Society (since 2010), and the Industrial Electronics Society (since 2011).

I have been a member of the Task Force on Autonomous Learning Systems within the Neural Networks Technical Committee of the IEEE Computational Intelligence Society since 2013, the Technical Committee on Computational Cybernetics of the IEEE Systems, Man, and Cybernetics Society since 2014, the Technical Committee on Cyber-Medical Systems of the IEEE Systems, Man, and Cybernetics Society since 2016, the Task Force on Adaptive and Evolving Fuzzy Systems within the Fuzzy Systems Technical Committee of the IEEE Computational Intelligence Society since 2020, the Technical Committee on Data-Driven Control and Monitoring of the IEEE Industrial Electronics Society since 2020, the Technical Committee on Control, Robotics and Mechatronics of the IEEE Industrial Electronics Society since 2021, and the IEEE Taskforce on Evolutionary Scheduling and Combinatorial Optimisation of the IEEE Computational Intelligence Society since 2022.

Since 2017, I have been a member of the Machine Intelligence Research Labs (MIR Labs).

Since 2011, I have been a member of the Working Group WG 12.9 on Computational Intelligence of the Technical Committee TC12 on Artificial Intelligence of the International Federation for Information Processing (IFIP).

Since 2010, I have been a member of the European Society for Fuzzy Logic and Technology (EUSFLAT).

Since 2020, I have been the **chair of the Timisoara Branch of the Robotics Society of Romania** (SRR, Craiova).

I have been a member of the Romanian Society of Control Engineering and Technical Informatics (SRAIT, Bucharest) since 1993, and the Romanian Society of Electrical Plants and Automation (SIEAR, Bucharest) since 1996.

I was a mentor at WCCI 2020 in the framework of IEEE Computational Intelligence Society Mentoring Program.

Since 2005, I have been an honorary member of the Hungarian Fuzzy Association (HFA, MFT, Budapest).

Member of International Program Committees of Prestigiuous International Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/progcom.html):

I am a **Program Committee Co-Chair of 23rd International Conference on Machine Learning and Applications ICMLA'24** (Miami, FL, USA).

I was a **Program Chair of 21st European Control Conference ECC23** (Bucharest, Romania).

I was a **Workshop Chair of 28th IEEE International Conference on Emerging Technologies and Factory Automation ETFA 2023** (Sinaia, Romania).

I was a **Co-Chair of the Control Systems and Applications Track**, with Prof. Gayan Kahandawa Appuhamillage (Australia), Prof. Panlong Tan (China), Prof. Thomas Strasser (Austria), Prof. Chao Deng (China), Prof. Guodong Shi (Australia), Prof. Ramon Guzmán (Spain), Prof. Mickael Hilairet (France), Prof. Hasan Komurcugil (Turkey), Yajun Pan (Canada) and Prof. Jun Yang (UK), in the framework of **49th Annual Conference of the IEEE Industrial Electronics Society IECON 2023** (Singapore).

I was a **FUZZ-IEEE Technical Chair**, with Prof. Plamen Angelov (UK) and Prof. Fernando Gomide (Brazil), **of 2022 IEEE World Congress on Computational Intelligence IEEE WCCI 2022** (Padua, Italy).

I was a **Program Co-Chair**, with Prof. Yuexian Zou (Peking University Shenzhen Graduate School, China), Prof. Gilles Mauris (University Savoie Mont Blanc, France) and Prof. Abdulmotaleb El Saddik (University of Ottawa, Canada), of **2021 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2021** (Virtual).

I was a **Publication Chair** of 14th International Conference on Swarm Intelligence ICSI'2023 (Shenzhen, China), and a **Publication Co-chair** of 13th International Conference on Swarm Intelligence ICSI'2022 (Xi'an, China), 12th International Conference on Swarm Intelligence ICSI'2021 (Qingdao, China), 11th International Conference on Swarm Intelligence ICSI'2020 (Belgrade, Serbia), and 10th International Conference on Swarm Intelligence ICSI'2019 (Chiang Mai, Thailand).

I was the **General Chair of the International Program Committees** of 27th and 23rd International Conferences on System Theory, Control and Computing ICSTCC 2023 and ICSTCC 2019 (Timisoara and Sinaia, Romania), and a **Vice-Chair of the International Program Committees** of 26th, 25th and 24th International Conferences on System Theory, Control and Computing ICSTCC 2022 (Sinaia, Romania), ICSTCC 2021 (Iasi, Romania) and ICSTCC 2020 (Sinaia, Romania).

I was a **General Co-Chair and Technical Program Committee Co-Chair** of IEEE 18th, 17th, 16th, 15th, 14th and 13th International Symposia on Applied Computational Intelligence and Informatics SACI 2024, SACI 2023, SACI 2022, SACI 2021, SACI 2020 and SACI 2019 (Siofok, Hungary, and Timisoara, Romania).

I was a **General Co-Chair** of 17th, 16th and 15th International Conferences on Development and Application Systems DAS 2024, DAS 2022 and DAS 2020 (Suceava, Romania), technically co-sponsored by IEEE Industry Applications Society.

I was a **Program Chair** of 6th and 5th International Conferences on Robotics and Computer Vision ICRCV 2024 and ICRCV 2023 (Wuxi, China, and Nanjing, China).

I was a **Publication Chair** of 2nd International Conference on Artificial Intelligence, Automation and Algorithms AI2A 2022 (Hangzhou, China).

I was an **Associate Editor** of 22nd World Congress of the International Federation of Automatic Control IFAC 2023 (Yokohama, Japan).

In 2019-2023, I have been **a member of the international program committees** of the following international conferences: 32nd International Symposium on Industrial Electronics ISIE 2023 (Helsinki-Espoo, Finland), 29th International Conference on Information, Communication and Automation Technologies ICAT 2023 (Sarajevo, Bosnia and Herzegovina), 20th International Conference on Distributed Computing and Artificial Intelligence DCAI 2023 (Guimarães, Portugal), 20th International Conference on Informatics in Control, Automation and Robotics ICINCO 2023 (Rome, Italy), 15th International Joint Conference on Computational Intelligence FCTA 2023 (Rome, Italy), 9th International Conference on Control, Decision and Information Technologies CoDIT 2023 (Rome, Italy), 9th International Conference on Control, Automation and Robotics ICCAR 2023 (Beijing, China), 15th International Conference on Computational Collective Intelligence ICCCI 2023 (Budapest, Hungary), IEEE 27th International Conference on Intelligent Engineering Systems INES 2023 (Nairobi, Kenya), 24th International Carpathian Control Conference ICCC'2023 (Szilvásvárad, Hungary), 15th International KES Conference on Intelligent Decision Technologies KES-IDT-23 (Rome, Italy), 16th International KES Conference on Human Centred Intelligent Systems KES-HCIS-23 (Rome, Italy), 17th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-23 (Rome, Italy), 11th World Conference on Information Systems and Technologies WorldCIST 2023 (Pisa, Italy), International Conference on Operations Research, Business Analytics, and Data Science ICODAS 2023 (Istanbul, Turkey), 2nd International Conference on Internet of Digital Reality IoD 2023 (Smolenice, Slovakia), IEEE 11th International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2023 (Cancún, Mexico), 31st International Joint Conference on Artificial Intelligence and 25th European Conference on Artificial Intelligence IJCAI-ECAI 2022 (Vienna, Austria), 8th IFAC Symposium on System Structure and Control SSSC 2022 (Montreal, Canada), 1st IFAC Workshop on Control of Complex Systems COSY 2022 (Bologna, Italy), 19th International Conference on Informatics in Control, Automation and Robotics ICINCO 2022 (Lisbon, Portugal), 14th International Joint Conference on Computational Intelligence FCTA 2022 (Valletta, Malta), 14th European Symposium on Computational Intelligence and Mathematics ESCIM 2022 (Naples, Italy), The Seventh International Conference on Data Mining and Big Data DMBD'2022 (Beijing, China), International Conference Automatics and Informatics ICAI'22 (Varna, Bulgaria), International Conference on Modern Artificial Intelligence and Data Science Systems MAIDSS 2022 (Rabat, Morocco), 26th IEEE International Conference on Intelligent Engineering Systems INES 2022 (Crete, Greece), IEEE 10th Jubilee International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2022 (Reykjavík, Iceland), IEEE 20th Jubilee International Symposium on Intelligent Systems and Informatics SISY 2022 (Subotica, Serbia), IEEE 11th International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2023 (Cancún, Mexico), 1st IEEE International Conference on Cognitive aspects of Virtual Reality cVR 2022 (Online), IEEE Symposium on Computational Intelligence in Control and Automation (IEEE CICA) within 2021 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2021, Orlando, FL, USA), 30th International Joint Conference on Artificial Intelligence IJCAI-21 (Montreal,

QC, Canada), 18th International Conference on Informatics in Control, Automation and Robotics ICINCO 2021 (Online Streaming), 13th International Joint Conference on Computational Intelligence FCTA 2021 (Online Streaming), 18th International Conference on Distributed Computing and Artificial Intelligence DCAI 2021 (Salamanca, Spain), IEEE 25th International Conference on Intelligent Engineering Systems INES 2021 (Budapest, Hungary), 13th European Symposium on Computational Intelligence and Mathematics ESCIM 2021 (Budapest, Hungary), IEEE 21st International Symposium on Computational Intelligence and Informatics CINTI 2021 (Budapest, Hungary), IEEE 19th International Symposium on Intelligent Systems and Informatics SISY 2021 (Subotica, Serbia), 2021 IEEE Second International Conference on Control, Measurement and Instrumentation CMI 2021 (Kolkata, India), International Conference Automatics and Informatics ICAI'21 (Varna, Bulgaria), IEEE Symposium on Evolving and Autonomous Learning Systems (IEEE EALS) within 2020 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2020, Canberra, Australia), IEEE 15th International Conference on System of Systems Engineering SoSE 2020 (Budapest, Hungary), 17th International Conference on Informatics in Control, Automation and Robotics ICINCO 2020 (Lieusaint - Paris, France), 7th International Conference on Control, Decision and Information Technologies CoDIT 2020 (Prague, Czech Republic), 12th International Conference on Fuzzy Computation Theory and Applications FCTA 2020 (Budapest, Hungary), IEEE 24th International Conference on Intelligent Engineering Systems INES 2020 (Reykjavík, Iceland), IEEE 18th International Symposium on Intelligent Systems and Informatics SISY 2020 (Subotica, Serbia), 2020 6th International Conference on Control, Automation and Robotics ICCAR 2020 (Singapore), 12th International KES Conference on Intelligent Decision Technologies KES IDT 20 (Split, Croatia), 14th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES AMSTA 20 (Split, Croatia), 13th International KES Conference on Human Centred Intelligent Systems KES HCIS 20 (Split, Croatia), 12th Asian Conference on Intelligent Information and Database Systems ACIIDS 2020 (Phuket, Thailand), 5th IFAC Conference on Intelligent Control and Automation Sciences ICONS 2019 (Belfast, UK), IEEE Symposium on Computational Intelligence in Control and Automation (IEEE CICA) within 2019 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2019, Xiamen, China), 18th IEEE International Conference on Machine Learning and Applications ICMLA 2019 (Boca Raton, FL, USA), 11th International Conference on Computational Collective Intelligence ICCCI 2019 (Hendaye, France), 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019 (Prague, Czech Republic), 11th International Conference on Fuzzy Computation Theory and Applications FCTA 2019 (Vienna, Austria), 6th International Conference on Control, Decision and Information Technologies CoDIT'19 (Paris, France), 7th IFAC Symposium on Systems Structure and Control SSSC 2019 (Sinaia, Romania), 16th International Conference on Distributed Computing and Artificial Intelligence DCAI'19 (Avila, Spain), 23rd IEEE International Conference on Intelligent Engineering Systems INES 2019 (Gödöllő, Hungary), 13th International Symposium on Intelligent Distributed Computing IDC 2019 (Saint-Petersburbg, Russia), 19th International Conference on Intelligent Systems Design and Applications ISDA 2019 (Pretoria, South Africa), International Symposium on Information Systems and Engineering ISE 2019 within 17th International Conference on High Performance Computing & Simulation HPCS 2019 (Dublin, Ireland), 19th International Conference on Hybrid Intelligent Systems HIS 2019 (VIT Bhopal University, India), 11th Asian Conference on Intelligent Information and Database Systems ACIIDS 2019 (Yogyakarta, Indonesia), Second International Conference on Artificial Intelligence for Industries ai4i 2019 (Laguna Hills, CA, USA), 11th International KES Conference on Intelligent Decision Technologies KES-IDT-19 (St. Julians, Malta), 13th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-19 (St. Julians, Malta), 12th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-19 (St. Julians, Malta), 10th IEEE International Conference on Cognitive Infocommunications CogInfoCom 2019 (Naples, Italy), IEEE Joint 19th International Symposium on Computational Intelligence and Informatics and 7th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics CINTI-MACRo 2019 (Szeged, Hungary), 17th IEEE International Symposium on Intelligent Systems and Informatics SISY 2019 (Subotica, Serbia), 20th International Carpathian Control Conference ICCC 2019 (Krakow-Wieliczka, Poland), Second International Conference on Advanced Computational and Communication Paradigms ICACCP 2019 (Sikkim, India), 6th International Conference on Electrical, Electronic and Computing Engineering IcETRAN 2019 (Srebrno Jezero, Serbia), 7th International Conference on Transportation & Logistics TIL 2019 (Niš, Serbia), and 3rd International Conference on Computing and Network Communications CoCoNet'19 (Trivandrum, Kerala, India).

Organization of Academic Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/organiz.html):

I was a **Co-chair of the National Organizing Committee** of Joint IFAC Conference 7th IFAC Symposium on Systems Structure and Control SSSC 2019 and 15th IFAC Workshop on Time Delay Systems TDS 2019 (Sinaia, Romania).

7. Curriculum Vitae – team leader – Radu-Emil Precup

I was an **organizer**, with Drs. Jérôme Mendes (Institute of Systems and Robotics (ISR-UC), Portugal), João Paulo (Institute of Systems and Robotics (ISR-UC), Portugal), Cristiano Premebida (Loughborough University, UK) and Rui Araújo (University of Coimbra, Portugal), of the **Special Session** on Computational Intelligence Systems: Iterative, Dynamic, and Evolving Design, in the framework of 45th Annual Conference of the IEEE Industrial Electronics Society IECON 2019 (Lisbon, Portugal).

Session Chair / Co-chair in Academic Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/chair.html):

I was a session chair / co-chair at two prestigious conferences: **1st IFAC Workshop on Control of Complex Systems COSY 2022** (Bologna, Italy), and **28th Mediterranean Conference on Control and Automation MED 2020** (Saint-Raphael, France).

Other Appreciations of the Scientific Activity in 2019-2023:

In 2020-2025, I have been appointed to the **Review College of the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO)**, Brussels, Belgium (link).

In 2019-2023, I have been a member of 6 habilitation boards (http://www.aut.upt.ro/~rprecup/habcom.html), and a member of doctoral committees as a referee of 39 doctoral theses in Australia, Czech Republic, France, Italy, Norway and Romania (http://www.aut.upt.ro/~rprecup/doctcom.html).

I was a member of Doctor Honoris Causa title committees awarded to: Prof. László T. Kóczy (chairman of the committee, title awarded by Politehnica University of Timisoara in 2022), Acad. Dorel Banabic (awarded by Politehnica University of Timisoara in 2023), and Dr. Silviu-Iulian Niculescu (awarded by "Lower Danube" University of Galati in 2023).

C5. ORGANIZATIONAL CAPACITY, ASSESSED BY THE WAY THE CANDIDATE HAS CONTRIBUTED TO THE TRAINING OF YOUNG RESEARCHERS AND/OR TO THE ESTABLISHMENT OF RESEARCH GROUPS WITH OUTSTANDING RESULTS AT THE INTERNATIONAL LEVEL

The team leader initiated and created in 2012 the **Process Control Group** of the Politehnica University of Timisoara (UPT), Romania, whose representative members are listed in one of the sections of the team leader's personal webpage: https://www.aut.upt.ro/~rprecup/coll.html, and the most active ones during 2019-2023 are included in this award application, namely: Assoc. Prof. Claudia-Adina Bojan-Dragoş, link, 2035 citations in Google Scholar, h-index = 21, Assoc. Prof. Adriana-Nicoleta Albu, link, 647 citations in Google Scholar, h-index = 12, Lect. Raul-Cristian Roman, link, 2165 citations in Google Scholar, h-index = 24, Lect. Alexandra-Iulia Szedlak-Stînean, Vice-Dean of the Faculty of Automation and Computers of UPT, link, 1121 citations in Google Scholar, h-index = 15, Assist. Lect. Elena-Lorena Hedrea, link, 657 citations in Google Scholar, h-index = 12, and Ph.D. student Iuliu Alexandru Zamfirache, link, 499 citations in Google Scholar, h-index = 6.

The team leader worked with six **Ph.D. students who gratuated under his supervision**: **Elena-Lorena Hedrea** (September 2022), thesis title: "Tensor Product-based Model Transformation Used in Control System Modeling and Design", thesis grade Excellent (Summa cum Laude), she is currently a member of the Process Control Group of UPT; **Raul-Cristian Roman** (March 2018), thesis title: "Model-free techniques for controller tuning" (in Romanian: "Tehnici de tip model-free de acordare a parametrilor regulatoarelor automate"), Recipient of the Honorary Mention in the 2020 IEEE Robotics & Automation Society Romania Chapter Best Ph.D. Thesis Competition, he is currently a member of the Process Control Group of UPT; **Radu-Codruţ David** (April 2015), thesis title: "Contributions to modeling and optimization of fuzzy control systems", link, 2068 citations in Google Scholar, h-index = 22, former postdoc in the Department of Automation and Applied Informatics of UPT and member of the Process Control Group of UPT, he works currently at Saguaro Technology, Timisoara, Romania; **Mircea-Bogdan Rădac** (September 2011), thesis title: "Iterative Techniques for Controller Tuning", link, 3183 citations in Google Scholar, h-index = 30, he is a former member of the Process Control of UPT until 2018, he is currently an Associate Professor in the Department of Automation and Applied Informatics of UPT; **Ovidiu Baniaş** (May 2009), thesis title: "Contributions to urban road traffic control using a wireless sensor network as traffic detector" (in Romanian: Contributii la conducerea traficului rutier urban utilizand o retea de senzori wireless ca detector de trafic), link, 421 citations in Google Scholar, h-index = 10, he is currently a Vice-Dean of the Faculty of Automation and Computers of UPT; **Zsuzsa Preitl** (April 2008), thesis title: "Model Based Design Methods for Speed Control Applications", she works currently at Siemens Energy, Nürnberg, Germany, where she is the co-author of several patents in USA and Europe.

7. Curriculum Vitae – team leader – Radu-Emil Precup

The team leader worked in the same group from 1995-2000, also as a B.Sc. and M.Sc. advisor, with Prof. **Simona Doboli**, who is currently at the Department of Computer Science, Hofstra University, Hempstead, NY, USA, and received her Ph.D. degree in Electrical Engineering from the University of Cincinnati, Cincinnati, OH, USA, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2001, Ph.D. advisor: Prof. Ali Minai), link.

The team leader worked in the same group from 2000-2007, also as a B.Sc. and M.Sc. advisor, and next continued during 2010-2014, with Prof. **Levente Kovacs**, who is currently the Rector of the Obuda University, Budapest Hungary, and received his Ph.D. degree in Automatic Control at the Budapest University of Technology and Economics, Hungary (2007, Ph.D. advisor: Prof. Zoltan Benyo), link.

The team leader worked in the same group from 1998-1999, also as a B.Sc. and M.Sc. advisor, with Dr. **Stefan Solyom**, who is currently a chief technology officer at Pebble, Cupertino, CA, USA, and worked at Tesla and also as a researcher and group leader at Volvo Car Corporation, Göteborg, Sweden, he received his Ph.D. degree in Automatic Control at Lund Institute of Technology, Sweden (2004, Ph.D. advisors: Prof. Anders Rantzer, Prof. Björn Wittenmark), link.

The team leader worked in the same group from 2006-2007, also as a B.Sc. and M.Sc. advisor, with Dr. **Mircea-Florian Lupu**, who is currently at Aurora, Pittsburgh, PA, USA, and worked as a Lecturer at the University of Pittsburgh, Pittsburgh, PA, USA, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities**, he received his Ph.D. degree in Electrical Engineering at the University of Pittsburgh, Pittsburgh, PA, USA (2014, advisor: Dr. Zhi-Hong Mao), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Assoc. Prof. **Sergiu Viorel Spătaru**, who is currently at the Department of Electrical and Photonics Engineering of the Technical University of Denmark, Roskilde, Denmark, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities**, and received his Ph.D. degree in Electrical Engineering at Aalborg University, Denmark, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2015, advisor: Prof. Dezso Sera), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Dr. **Cătălin Gavriluță**, who is currently a senior scientist at AIT Austrian Institute of Technology, Vienna, Austria, and worked as a postdoc in the G2ELab of the Grenoble Institute of Technology, Grenoble, France, he received his Ph.D. degree in Electrical Engineering at the Universitat Politècnica de Catalunya, Barcelona, Spain, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2015, advisor: Prof. Ignacio Candela), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Dr. **Lucia-Roxana Golea**, who received her Ph.D. degree in Electrical Engineering at the Politecnico di Milano, Italy, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2012, advisor: Prof. Enrico Zio), link.

The address of ***my researcherid.com profile*** is http://www.researcherid.com/rid/A-6993-2009. The address of my ***Open Researcher & Contributor ID (ORCID)*** is https://orcid.org/0000-0002-2060-7403.

Areas of Scientific Interest in 2019-2023 (http://www.aut.upt.ro/~rprecup/research.html):

My research activities and results in 2019-2023 are focused on the following areas of scientific interest: development and analysis of new control structures and algorithms including conventional control, fuzzy control, data-driven control, model-free control, sliding mode control, neuro-fuzzy control; theory and applications of soft computing; systems modelling, identification and optimization (including nature-inspired algorithms); computer-aided design of control systems; applications to mechatronic systems (including automotive systems and mobile robots), embedded systems, control of power plants, servo systems, electrical driving systems.

Other Management and Administration Experience in 2019-2023 (http://www.aut.upt.ro/~rprecup/bio.html):

In 2020-2025, I have been appointed to the **Review College of the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO)**, Brussels, Belgium (link).

7. Curriculum Vitae – team leader – Radu-Emil Precup

I am a reviewer for the German Research Fund (**Deutsche Forschungsgemeinschaft**, DFG), Bonn, Germany, since 2022, the **Natural Sciences and Engineering Research Council of Canada** (NSERC), Ottawa, Canada, since 2022, the National Science Centre (**Narodowe Centrum Nauki**, NCN), Warsaw, Poland, since 2022, the French National Research Agency (**Agence Nationale de la Research**, ANR), Paris, France, since 2021, the **Swiss National Science Foundation** (SNSF), Bern, Switzerland, since 2021, the National Council of Science and Technology (**CONACYT**), Ciudad de Mexico, Mexico, since 2019, the Mobility and Reintegration Programme (**MoRePro**) of the Slovak Academy of Sciences, Bratislava, Slovakia, since 2019, and the **Science Fund of the Republic of Serbia**, Belgrade, Serbia, since 2019.

I am the co-author of one book published in **CRC Press, Taylor & Francis** (Boca Raton, FL, USA, 2021) (www.routledge.com), **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (https://www.aut.upt.ro/~rprecup/Outstanding_Title_STEM.jpeg), one book published in **Butterworth-Heinemann, Elsevier** (Oxford, UK, 2019) (www.elsevier.com, www.sciencedirect.com), one book published in Editura Tehnica Publishers (Bucharest, 1997), author / co-author of ten books in Editura Orizonturi Universitare Publishers (Timisoara, 1999-2009) and four books in Editura Politehnica Publishers (Timisoara, 2001-2022) (http://www.aut.upt.ro/~rprecup/books.html).

I am the editor of three books published in **Springer** (2012, 2019) (https://www.springer.com/gp/book/9783642283048, https://www.springer.com/gp/book/9789811359941, https://www.springer.com/gp/book/9789811361500).

I am the Co-author of 29 book chapters published in Springer, Academic Press, Kluwer Academic Publishers, IET Digital Library, World Scientific and Atlantis Press (http://www.aut.upt.ro/~rprecup/bookch.html).

I am the co-author of 111 papers published in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals (http://www.aut.upt.ro/~rprecup/isijournals.html): Automatica, IEEE Transactions on Fuzzy Systems, IEEE Transactions on Cybernetics, IEEE Transactions on Neural Networks, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Industrial Electronics, IEEE/ASME Transactions on Mechatronics, Information Sciences, IEEE Transactions on Industrial Informatics, IEEE Transactions on Instrumentation and Measurement, Expert Systems with Applications, Fuzzy Sets and Systems, ISA Transactions, Computers in Industry, Engineering Applications of Artificial Intelligence, Applied Soft Computing, Journal of The Franklin Institute, Robotics and Autonomous Systems, European Journal of Control, Asian Journal of Control, Mathematics and Computers in Simulation, Knowledge-Based Systems, IEEE Transactions on Education, IEEE Systems Journal, International Journal of Systems Science, International Journal of General Systems, Acta Astronautica, IET Control Theory & Applications, Neurocomputing, Electrical Engineering, Journal of Aerospace Information Systems, Scientific Reports, etc., in Elsevier, Springer, John Wiley and Sons, Taylor & Francis, Nature, The American Institute of Aeronautics and Astronautics, etc.

Over the years, **12 of my papers have the status of Highly Cited Papers according to Clarivate Analytics Web of Science** as of September/October 2023, May/June 2023, July/August 2022, March/April 2022, September/October 2021, May/June 2018 and November/December 2015. The links to the proofs are:
http://www.aut.upt.ro/~rprecup/TIE_2017_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/EJC_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TFS_2022_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJCIS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/CiI_2011_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/InfSci_2017_Highly_Cited_Paper.jpg,
https://www.aut.upt.ro/~rprecup/KBS_2013_Highly_Cited_Paper.jpg.

Over the years, **5 of my papers have the status of Hot Papers according to Clarivate Analytics Web of Science** as of May/June 2023, November/December 2022, July/August 2022, March/April 2022 and November/December 2015. The links to the proofs are:
http://www.aut.upt.ro/~rprecup/TFS_2022_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/EJC_2021_Hot_Paper.png,

http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/CiI_2015_Hot_Paper.jpg.

I am the co-author of 51 papers published in refereed journals / contributions to books (http://www.aut.upt.ro/~rprecup/journals.html).

I am the author / co-author of more than 150 papers published in refereed academic conferences (IEEE, IFAC, IFSA, EUFIT, ECC and others) organized in Austria, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Malta, Poland, Portugal, Russia, Serbia, Slovak Republic, Slovenia, South Africa, Spain, Switzerland, Tunisia, Turkey, UK, USA, Zambia (http://www.aut.upt.ro/~rprecup/confe.html). I am also the author / co-author of more than 50 papers published in refereed academic conferences organized in Romania.

The **cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) of my journal papers is 282.796**. The **cumulative IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 was 531.367** (http://www.aut.upt.ro/~rprecup/isijournals.html). These values have to be seen in the context of the IF of leading journals in my field, which is about 3.

My Erdös number is 3.

The **cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) of independent citations was 574.685**, and the **cumulative IF according to 2013 Journal Citation Reports (JCR) released by Clarivate Analytics in 2014 was 623.687**. These values have to be seen in the context of the IF of leading journals in my field, which is about 3.

Overall Research Contracts and Grants (http://www.aut.upt.ro/~rprecup/contracts.html):

Over the years, I have been involved in **48 national and international research contracts and grants in the field of automatic control**, serving as the **director of 8 of them**, and as the **director of the Politehnica University of Timisoara partner, in 4 of them**.

In 2023-2025, I am the director of the project coordinator Europe, Politehnica University of Timisoara (UPT), of an international research contract, with the partners: Zhejiang University (China), Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China).

In 2008-2009, I was the director of a research contract with the University of Ljubljana (Slovenia) as a partner.

In 2003-2009, I was a principal investigator in three international research contracts: one with Budapest University of Technology and Economics (Hungary) as a partner, and two with Budapest Tech Polytechnical Institution as a partner.

Over the years, I have been involved in four industrial research contracts in the field of automatic control with a Romanian company. I have also been involved in consulting for Romanian and American companies in the field of system modeling, optimization and automatic control.

Work Experience Before 2019 (http://www.aut.upt.ro/~rprecup/bio.html):

From January to April 2017, I was a member of the Committee 2: Information and communication technology, space and security as part of the National Advisory Board for Research, Development and Innovation (CCCDI), Bucharest, Romania.

From 2012 to 2016, I was a Vice-Dean of the Faculty of Automation and Computers, Politehnica University of Timisoara (previously, until 2013, "Politehnica" University of Timisoara), Romania. From March to June 2012, I was the President of the Research Committee of the University Senate of the "Politehnica" University of Timisoara, Romania. From 2008 to 2012, I was the Head of the Students Information and Counselling Office (OICS) with the Faculty of Automation and Computers, "Politehnica" University of Timisoara, Romania. From 2001 to 2011, I was a Deputy Director of the Research Centre in Automation and Computers with the "Politehnica" University of Timisoara, Romania, and Director of the Automation and Applied Informatics Division.

From 2011 to 2012, I was the Vice-president of the Computers, information technology and systems engineering committee as part of the National Council for the Approval of Academic Titles, Diplomas and Certificates (CNATDCU), Bucharest, Romania, and member of the P2. Engineering sciences panel.

From January to April 2017, I was a member of the Engineering Sciences Committee of National Research Council (CNCS), Bucharest, Romania.

7. Curriculum Vitae – team leader – Radu-Emil Precup

From 2009 to 2013, I was a member of the Doctoral School of Applied Informatics and Applied Mathematics with the Óbuda University (previously named Budapest Tech Polytechnical Institution), Budapest, Hungary, as Doctoral Supervisor (www.doktori.hu).

From 2005 to 2009, I was a researcher at Crabel Capital Research, Timisoara, Romania, which was a subsidiary of Crabel Capital Management, Milwaukee, WI, USA.

Since 2004, I am a Doctoral Supervisor of Automation and next Systems Engineering at the Politehnica University of Timisoara, Romania (http://www.aut.upt.ro/~rprecup/stud.html). Six Ph.D. students graduated under my supervision: Elena-Lorena Hedrea (September 2022), thesis title: "Tensor Product-based Model Transformation Used in Control System Modeling and Design", thesis grade Excellent (Summa cum Laude), Raul-Cristian Roman (March 2018), thesis title: "Model-free techniques for controller tuning" (in Romanian: "Tehnici de tip model-free de acordare a parametrilor regulatoarelor automate"), Recipient of the Honorary Mention in the 2020 IEEE Robotics & Automation Society Romania Chapter Best Ph.D. Thesis Competition, Radu-Codruţ David (April 2015), thesis title: "Contributions to modeling and optimization of fuzzy control systems", Mircea-Bogdan Rădac (September 2011), thesis title: "Iterative Techniques for Controller Tuning", Ovidiu Baniaş (May 2009), thesis title: "Contributions to urban road traffic control using a wireless sensor network as traffic detector" (in Romanian: Contributii la conducerea traficului rutier urban utilizand o retea de senzori wireless ca detector de trafic), and Zsuzsa Preitl (April 2008), thesis title: "Model Based Design Methods for Speed Control Applications". I am currently supervising 16 Ph.D. students: Iuliu Alexandru Zamfirache (since 2018) approaching the topic "Machine learning techniques applied to automation", Ion Panfilii (since 2019) approaching the topic "Information processing algorithms specific to evolving systems applied to automation", Alexandru Nicolae Drăguş (since 2019) approaching the topic "Image processing algorithms applied to automation", Vlad Negru (since 2020) approaching the topic "Data and signal proceesing techniques with medical applications", and Cristian-Vasile Pop (since 2020) approaching the topic "Machine learning techniques with financial systems applications", Miruna-Maria Damian (since 2021) approaching the topic "Data processing techniques specific to medical applications", Monica-Lavinia Nedelcea (since 2021) approaching the topic "Modeling and control solutions with medical applications", Flavius-Cătălin Paulescu (since 2021) approaching the topic "Control solutions for multi input-multi output systems", Alexandru-Marian Chiru (since 2021) approaching the topic "Optimization algorithms with automation applications", Anamaria-Ioana Borlea (since 2022) approaching the topic "Nonlinear control techniques", Mihai Muntyan (since 2022) approaching the topic "Networked control techniques", Denisa-Adina Pleş (since 2023) approaching the topic "Control techniques with medical applications", Darius-Octavian Negîrla (since 2023) approaching the topic "Sensor fusion approaches in process control", Robert-Alexander Ţibre (since 2023) approaching the topic "Optimization algorithms with automation applications", Cristiana-Diana Marcovici (since 2023) approaching the topic "Control algorithms for robots", and Andrei-Lucian Deac (since 2023) approaching the topic "Automation applications in medicine".

Since 1991, I have been working at the Department of Automation and Applied (formerly Industrial) Informatics of the Faculty of Automation and Computers of the Politehnica University of Timisoara (formerly "Politehnica" University of Timisoara, Technical University of Timisoara), Romania, as Assistant Professor from 1991 to 1994, Lecturer from 1994 to 1998, Associate Professor from 1998 to 2000, and Professor since 2000.

From 1987 to 1991, I was an automation engineer with the Timisoara Branch of Infoservice S.A. (previously named SIRECA) Bucharest, Romania, with professional preoccupations in the field of analog and digital control systems.

Other Management and Administration Experience Before 2019 (http://www.aut.upt.ro/~rprecup/bio.html):

I am a reviewer for the Slovenian Research Agency (ARRS), Ljubljana, Slovenia, since 2017, the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Brussels, Belgium, since 2012, the Hungarian National Research, Development and Innovation Office (NKFIH), with the former name Hungarian Scientific Research Fund (OTKA), Budapest, Hungary, since 2011, of the Czech Science Foundation (GACR), Prague, Czech Republic, since 2011.

From 2014 to 2019, I was a member of the Informatics and Electrical Engineering Review Panel of the Hungarian National Research, Development and Innovation Office (NKFIH), formerly the Hungarian Scientific Research Fund (OTKA), Budapest, Hungary.

From March to June 2012, I was a member of the University Senate of the "Politehnica" University of Timisoara, Romania. From 2000 to 2022, I was a member of the Faculty Council of the Faculty of

Automation and Computers, Politehnica University of Timisoara, Romania. From 2020 to 2022, from 2008 to 2012 and from 2000 to 2004, I was a member of the Department Council of the Department of Automation and Industrial Informatics, Politehnica University of Timisoara, Romania.

Since 2000, I have been an expert and evaluator of the National Research Council (with the abbreviation CNCS, with the former name National University Research Council and the former abbreviation CNCSIS), Bucharest, Romania, in the fields of Automation, Robotics and Systems Engineering. Since 2007, I am an expert and evaluator of the Romanian Agency for Quality Assurance in Higher Education (with the abbreviation ARACIS), Bucharest, Romania, in the field of Systems Engineering.

Areas of Scientific Interest Before 2019 (http://www.aut.upt.ro/~rprecup/research.html):

My research activities and results prior to 2019 were focused on the following areas of scientific interest: development of methods for the algorithmic design of linear control systems: state feedback, controllers for time delay systems with and without integral component, optimization techniques (since 1993); development of advanced / intelligent control structures and algorithms: sliding mode control, fuzzy control, neuro-fuzzy control (since 1992); modernizing the speed controllers for hydro-generators (since 1991); development of control structures and algorithms dedicated to electrical and electro-hydraulic servo systems and drives (since 1995).

Overall Scientific Publications (http://www.aut.upt.ro/~rprecup/public.html):

Invited Papers and Talks Before 2019 (http://www.aut.upt.ro/~rprecup/invite.html):

Prior to 2019, I was invited to give **11 invited papers and talks**. They are specified as follows:

1. A. Albu, R.-E. Precup and T.-A. Teban, Medical Applications of Artificial Neural Networks, Proceedings of XIV International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2018, Niš, Serbia, pp. 1-11, 2018.
2. R.-E. Precup, Selected topic, The XXIV International Conference on Robotics ROBOTICS 2018, Iasi, Romania, 2018, the conference was canceled.
3. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, A.-I. Szedlak-Stînean, E.-L. Hedrea and R.-C. Roman, Technical and Non-Technical Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models, Proceedings of 4th International Conference on Electrical, Electronic and Computing Engineering IcETRAN 2017, Kladovo, Serbia, pp. 1-8, 2017.
4. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, A.-I. Szedlak-Stînean, E.-L. Hedrea and R.-C. Roman, Evolving Takagi-Sugeno Fuzzy Modeling Applications of Incremental Online Identification Algorithms, Proceedings of XIII International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2016, Niš, Serbia, pp. 3-10, 2016.
5. R.-E. Precup, Nature-inspired optimization algorithms applied to fuzzy control, fuzzy modeling, mobile robots and optical character recognition, Proceedings of IEEE 9th International Symposium on Applied Computational Intelligence and Informatics SACI 2014, Timisoara, Romania, pp. 11, 2014.
6. St. Preitl and R.-E. Precup, Linear and Fuzzy Control Extensions of the Symmetrical Optimum Method, Proceedings of Special International Conference on Complex Systems: Synergy of Control, Communications and Computing COSY 2011, Ohrid, Republic of Macedonia, pp. 59-68, 2011.
7. St. Preitl, R.-E. Precup and Zs. Preitl, Aspects Concerning the Tuning of 2-DOF Fuzzy Controllers, Proceedings of Xth Triennial International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2010, Eds. Nikolić, V., Antić, D. and Mitić, D., Niš, Serbia, pp. 210-219, 2010.
8. C.-A. Dragoş, R.-E. Precup, St. Preitl and M.-B. Rădac, Low-cost Fuzzy Control Solutions for Electromechanical Applications, Proceedings of 2nd International Scientific and Expert Conference TEAM 2010, Kecskemét, Hungary, vol. 1, pp. 10-23, 2010.
9. St. Preitl, R.-E. Precup and Zs. Preitl, Development of 1-DOF and 2-DOF fuzzy controllers. Applications on servo-systems, Tutorial invited and given at 2004 IEEE-TTC International Conference on Automation, Quality and Testing, Robotics AQTR 2004 (THETA 14), Cluj-Napoca, Romania, 2004.
10. St. Preitl, Zs. Preitl and R.-E. Precup, Tuning Methodologies for PI and PID Controllers for Second and Third Order Systems, Proceedings of 7th Conference on Systems, Automatic Control and Measurements SAUM'01, Ed. Nedić, N.N., Vrnjačka Banja, Serbia, pp. 24-29, 2001.
11. St. Preitl and R.-E. Precup, Tuning of PI and PID Controllers by a Generalized Form of the Symmetrical Optimum Method, Proceedings of 6th Conference on Systems, Automatic Control and Measurements SAUM'98, Ed. Bucevac, Z., Niš, Serbia, pp. 34-48, 1998.

Member of Editorial Boards of Journals Before 2019 (http://www.aut.upt.ro/~rprecup/edboards.html):

From 2008 to 2021, I was the **Editor-in-Chief** of the International Journal of Artificial Intelligence, CESER Publications, India, which is indexed in SCOPUS.

From 2011 to 2021, I was the **Editor-in-Chief** of the International Journal of Imaging and Robotics, CESER Publications, India, which was indexed in SCOPUS until 2017.

I was a *Guest Editor*, with Profs. Hans Hellendoorn (Delft University of Technology, The Netherlands) and Plamen Angelov (Lancaster University, UK), of the *Special Issue* on Synergy of computers, cognition, communication and control with industrial applications, published in the journal *Computers in Industry* (Elsevier), vol. 74, Dec. 2015. This journal had an impact factor of 11.245 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

From 2014 to 2016, I was an Associate Editor of the International Journal of Computational Intelligence and Pattern Recognition, Columbia International Publishing, USA.

From 2015 to 2018, I was a member of the Editorial Board of the journal Annals of The University of Craiova, Series: Automation, Computers, Electronics and Mechatronics, which was indexed in INSPEC until 2018.

Awards and Honors Received Before 2019 (http://www.aut.upt.ro/~rprecup/honours.html):

Since 2018, I have been a **Corresponding Member of the Romanian Academy** and a **Corresponding Member of the Academy of Technical Sciences of Romania**.

In 2017, I received the **Elsevier Scopus Award for Excellence in Global Contribution** for research in the area of Control and Systems Engineering, Artificial Intelligence and Electrical and Electronic Engineering.

In 2016, I received the **"Grigore Moisil" Prize from the Romanian Academy** for the optimization of fuzzy systems. In 2005, I received the **"Grigore Moisil" Prize from the Romanian Academy** for contributions to fuzzy control.

In 2016, I received the **Spiru Haret Award from the National Grand Lodge of Romania in partnership with the Romanian Academy** for education, environment and IT.

In July 2017, I was **listed as one of the top 10 researchers in Artificial Intelligence and Automation**, according to IIoT World.

In 2018, I received the **Big Award at 8th Edition of Lugoj Awards Gala.**

In 2017, I received the **Certificate of Outstanding Reviewer from IEEE Transactions on Cybernetics** in recognition of an outstanding contribution to the journal.

Since 2007, I have been an **Honorary Professor of Óbuda University (formerly Budapest Tech Polytechnical Institution), Budapest, Hungary**.

In 2017, I received the title of **Bologna Professor** (2017) from the National Alliance of Student Organizations in Romania (ANOSR).

Since 2007, I have been a **Senior Member of IEEE**.

In 2015, I received the **Certificate of Appreciation** from the IEEE Romania Section in grateful recognition of 10 years of service as an IEEE member.

In 2015, I received the **Research Excellency Award** from the Politehnica University of Timisoara (UPT) for the advanced research activity in the field Controllers, Control, Tuning, placed first all over the world in the Scopus ranking and for the exquisite contribution to the international visibility of UPT.

In 2015, I received the **Traian Vuia Award for Engineering Sciences at the Second Edition of the Excellency Gala in the Banat Region**.

I received a **Best Paper Nomination** at 12th International Conference on Informatics in Control, Automation and Robotics ICINCO 2015 (Colmar, France).

I received a **Certificate of Appreciation for the Best Paper in the Session TT07 1 Control Theory** at 39th Annual Conference of the IEEE Industrial Electronics Society IECON 2013 (Vienna, Austria).

In 2011, I received the **Best Paper Award** at 16th Online World Conference on Soft Computing in Industrial Applications WSC16 (Loughborough University, UK).

In 2011, I received a **Certificate of Achievement** from the IEEE Romania Section for notable services and contributions towards the advancement of the engineering professions.

In 2008, I received **Two Best Paper Awards in the Area of Intelligent Control Area** at the 2008 Conference on Human System Interaction HSI 2008, Krakow (Poland).

Since 2005, I have been an **honorary member of the Hungarian Fuzzy Association** (HFA, MFT, Budapest).

7. Curriculum Vitae – team leader – Radu-Emil Precup

In 2004, I received the **Excellency Diploma** of the International Conference on Automation, Quality & Testing, Robotics AQTR 2004 (THETA 14, Cluj-Napoca, Romania).

My former Ph.D. student Raul-Cristian Roman is the recipient of the Honorary Mention in the 2020 IEEE Robotics & Automation Society Romania Chapter Best Ph.D. Thesis Competition.

Service and Member of Scientific and Technical Societies Before 2019 (http://www.aut.upt.ro/~rprecup/soc.html):

From 2008 to 2019, I was a member of the Technical Committee on Virtual Systems in Measurements of the IEEE Instrumentation & Measurement Society.

From 2008 to 2019, I was a member of the Task Force on Educational Aspects of Standards of Computational Intelligence as part of the Technical Committee on Standards in the IEEE Computational Intelligence Society.

Member of International Program Committees of Prestigiuous International Conferences Before 2019 (http://www.aut.upt.ro/~rprecup/progcom.html):

I was a **Co-Chair of the Control Systems and Applications Track**, with Prof. Kanghyun Jo (Korea) and Prof. Makoto Iwasaki (Japan), in the framework of **44th Annual Conference of the IEEE Industrial Electronics Society IECON'18** (Washington DC, USA).

I was the **Special Session Chair of IEEE Joint Conference on Neural Networks IJCNN 2013** (Dallas, TX, USA), 2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017 (Ljubljana, Slovenia), and 2016 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2016 (Natal, Brazil).

I was a **Publication Chair** of 7th International Conference on Swarm Intelligence ICSI'2016 (Bali, Indonesia), 6th International Conference on Swarm Intelligence and 2nd BRICS Congress on Computational Intelligence ICSI-CCI'2015 (Beijing, China), 5th International Conference on Swarm Intelligence ICSI'2014 (Hefei and Huangshan, China), 4th International Conference on Swarm Intelligence ICSI'2013 (Harbin, China), 3rd International Conference on Swarm Intelligence ICSI'2012 (Shenzhen, China) and 2nd International Conference on Swarm Intelligence ICSI'2011 (Chongqing, China), with the proceedings indexed in **Clarivate Analytics Conference Proceedings Citation Index (formerly ISI Conference Proceedings Citation Index)**, and a **Publication Co-chair** of 9th International Conference on Swarm Intelligence ICSI'2018 (Shanghai, China).

I was a **Vice-Chair of the International Program Committees** of 22nd and 21st International Conferences on System Theory, Control and Computing ICSTCC 2018 and ICSTCC 2017 (Sinaia, Romania).

I was a **General Co-Chair and Technical Program Committee Co-Chair** of IEEE 12th International Symposium on Applied Computational Intelligence and Informatics SACI 2018 (Timisoara, Romania), with the proceedings indexed in **Clarivate Analytics Conference Proceedings Citation Index**.

Prior to 2019, I was a **member of the international program committees** of the following international conferences: 37th Conference of the North American Fuzzy Information Processing Society NAFIPS 2018 (Fortaleza, Brazil), 17th IEEE International Conference on Machine Learning and Applications ICMLA 2018 (Orlando, FL, USA), 3rd IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2018 (Faro, Portugal), 5th International Conference on Control, Decision and Information Technologies CoDIT'18 (Thessaloniki, Greece), 9th International Conference on Cognitive Infocommunications CogInfoCom 2018 (Budapest, Hungary), 10th International Joint Conference on Computational Intelligence IJCCI 2018 (Seville, Spain), 6th World Conference on Information Systems and Technologies WorldCist'18 (Naples, Italy), 10th International Conference on Computational Collective Intelligence ICCCI 2018 (Bristol, UK), 22nd IEEE International Conference on Intelligent Engineering Systems INES 2018 (Las Palmas de Gran Canaria, Spain), 2018 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2018 (Rhodes, Greece), 2018 IEEE International Symposium on INnovations in Intelligent SysTems and Applications INISTA 2018 (Thessaloniki, Greece), IEEE 18th International Symposium on Computational Intelligence and Informatics CINTI 2018 (Budapest, Hungary), 16th International Symposium on Intelligent Systems and Informatics SISY 2018 (Subotica, Serbia), 10th International KES Conference on Intelligent Decision Technologies KES-IDT-18 (Gold Coast, Australia), 12th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-18 (Gold Coast, Australia), 11th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-18 (Gold Coast, Australia), 10th International Conference on Soft Computing and Pattern Recognition SoCPaR 2018 (Porto, Portugal), 18th International Conference on Hybrid Intelligent Systems HIS 2018 (Porto, Portugal), 19th International

Carpathian Control Conference ICCC 2018 (Szilvasvarad, Hungary), 2nd International Symposium on Small-scale Intelligent Manufacturing Systems SIMS 2018 (Cavan, Ireland), International Conference Cybernetics & Informatics 2018 (Lazy pod Makytou, Slovak Republic), Fourth International Symposium on Signal Processing and Intelligent Recognition Systems SIRS'18 (Bangalore, India), 7th International Conference on Advances in Computing, Communications and Informatics ICACCI'18 (Bangalore, India), XIV International Conference on Systems, Automatic Control and Measurements SAUM 2018 (Nis, Serbia), International Conference Automatics and Informatics'2018 (Sofia, Bulgaria), International Conference on Modern Intelligent Systems Concepts MISC 2018 (Rabat, Morocco), 26th International Joint Conference on Artificial Intelligence IJCAI 2017 (Melbourne, Australia), 16th IEEE International Conference on Machine Learning and Applications ICMLA 2017 (Cancun, Mexico), 14th International Conference on Informatics in Control, Automation and Robotics ICINCO 2017 (Madrid, Spain), 9th International Joint Conference on Computational Intelligence IJCCI 2017 (Funchal, Madeira, Portugal), IEEE 21st International Conference on Intelligent Engineering Systems INES 2017 (Larnaca, Cyprus), 2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017 (Ljubljana, Slovenia), 9th International KES Conference on Intelligent Decision Technologies KES-IDT-17 (Vilamoura, Algarve, Portugal), 11th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-17 (Vilamoura, Algarve, Portugal), 10th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-17 (Vilamoura, Algarve, Portugal), 3rd Global Conference on Artificial Intelligence GCAI 2017 (Miami, FL, USA), 5th World Conference on Information Systems and Technologies WorldCist'17 (Porto Santo Island, Madeira, Portugal), 11th International Symposium on Intelligent Distributed Computing IDC 2017 (Belgrade, Serbia), 9th International Conference on Computational Collective Intelligence ICCCI 2017 (Nicosia, Cyprus), 8th International Conference on Cognitive Infocommunications CogInfoCom 2017 (Debrecen, Hungary), IEEE 15th International Symposium on Intelligent Systems and Informatics SISY 2017 (Subotica, Serbia), 8th EAI International Conference on Big Data Technologies and Applications BDTA 2017 (Gwangju, South Korea), Spring Conference of IEEE Region 10 TENSYMP 2017 (Cochin, Kerala, India), Second International Conference on Advanced Wireless Information, Data, and Communication Technologies AWICT 2017 (Paris, France), 3rd International Integrated (Web & Offline) Conference & Concert on Convergence with Academic & Job Fair IICCC 2017 (Hangzhou, China), 25th International Joint Conference on Artificial Intelligence IJCAI-16 (New Yor City, USA), 2016 Annual Conference of the North American Fuzzy Information processing Society NAFIPS'2016 (El Paso, TX, USA), 4th IFAC International Conference on Intelligent Control and Automation Sciences ICONS 2016 (Reims, France), 2016 IEEE Symposium on Evolving and Autonomous Learning Systems EALS 2016 as part of 2016 IEEE Symposium Series on Computational Intelligence SSCI 2016 (Athens, Greece), 13th International Conference on Informatics in Control, Automation and Robotics ICINCO 2016 (Lisbon, Portugal), 20th Jubilee IEEE International Conference on Intelligent Engineering Systems INES 2016 (Budapest, Hungary), 11th International Workshop on Enterprise Integration, Interoperability and Networking EI2N 2016 (Rhodes, Greece), 8th IEEE International Conference on Intelligent Systems IS'16 (Sofia, Bulgaria), 13th International Conference on Distributed Computing and Artificial Intelligence DCAI'16 (Sevilla, Spain), 8th International Conference on Fuzzy Compuption Theory and Applications FCTA 2016 (Porto, Portugal), 17th International Carpathian Control Conference ICCC'2016 (High Tatras, Slovakia), 8th International Conference on Computational Collective Intelligence ICCCI 2016 (Halkidiki, Greece), 10th International Symposium on Intelligent Distributed Computing IDC'2016 (Paris, France), 7th Conference on Cognitive Infocommunications CogInfoCom 2016 (Wroclaw, Poland), IEEE 14th International Symposium on Intelligent Systems and Informatics SISY 2016 (Subotica, Serbia), XIII International Conference on Systems, Automatic Control and Measurements SAUM 2016 (Nis, Serbia), Seventh International Conference on Sciences of Electronics, Technologies of Information and Telecommunications SETIT 2016 (Hammamet, Tunisia), Third International Afro-European Conference for Industrial Advancement AECIA 2016 (Marrakesh, Morrocco), 8th International KES Conference on Intelligent Decision Technologies KES-IDT-16 (Puerto de la Cruz, Tenerife, Spain), 10th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-16 (Puerto de la Cruz, Tenerife, Spain), 9th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-16 (Puerto de la Cruz, Tenerife, Spain), 3rd International Symposium on Big Data and Cloud Computing Challenges ISBCC 2016 (Chennai, India), 4th World Conference on Information Systems and Technologies WorldCist'16 (Recife, PE, Brazil), 7th EAI International Conference on Big Data Technologies and Applications BDTA 2016 (Seoul, South Korea), 1st International Symposium on Small-scale Intelligent Manufacturing Systems SIMS 2016 (Narvik, Norway), 4th International Conference on Applied Mechanics, Mechatronics and Intelligent System AMMIS 2016 (Beijing, China), 2nd

International Conference on Mechanics and Control Engineering MCE 2016 (Guangzhou, China), 2016 IEEE First International Conference on Control, Measurement and Instrumentation CMI 2016 (Kolkata, India), International Conference on Computers, Data Management and Technology Applications ICCDMTA'2016 (Istanbul, Turkey), International Conference on Advanced Computing and Intelligent Engineering ICACIE 2016 (Bhubaneswar, Odisha, India), 5th International Conference on Advances in Computing, Communications and Informatics ICACCI'16 (Jaipur, India), International Conference on Intelligent Cloud Computing ICC 2016 (Wuhan, China), 2015 IEEE International Conference on Systems, Man, and Cybernetics SMC 2015 (Hong Kong), IEEE International Syposium on Intelligent Control ISIC 2015 as part of 2015 IEEE Multi-Conference on Systems and Control MSC 2015 (Sydney, Australia), 2nd IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2015 (Maribor, Slovenia), 2015 Annual Conference of the North American Fuzzy Information processing Society NAFIPS'2015 (Redmond, WA, USA), 27th IEEE International Conference on Tools with Artificial Intelligence ICTAI 2015 (Vietri sul Mare, Italy), 2015 IEEE International Symposium on INnovations in Intelligent SysTems and Applications INISTA 2015 (Madrid, Spain), 12th International Conference on Informatics in Control, Automation and Robotics ICINCO 2015 (Colmar, France), 2015 IEEE Symposium on Evolving and Autonomous Learning Systems EALS'15 as part of 2015 IEEE Symposium Series on Computational Intelligence SSCI 2015 (Cape Town, South Africa), IEEE 19th International Conference on Intelligent Engineering Systems INES 2015 (Bratislava, Slovakia), 9th International Symposium on Intelligent Distributed Computing IDC'2015 (Guimaraes, Portugal), 8th International Conference on Evolutionary Multi-Criterion Optimization EMO 2015 (Guimaraes, Portugal), 6th Conference on Cognitive Infocommunications CogInfoCom 2015 (Győr, Hungary), 24th International Conference on Systems Engineering ICSE 2015 (Coventry, UK), Second International Afro-European Conference for Industrial Advancement AECIA 2015 (Villejuif, France), 7th International KES Conference on Intelligent Decision Technologies KES-IDT-15 (Sorrento, Italy), 9th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-15 (Sorrento, Italy), 8th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-15 (Sorrento, Italy), Second International Symposium on Signal Processing and Intelligent Recognition Systems SIRS'15 (Trivandrum, India), International Conference on Green and Human Information Technology ICGHIT 2015 (Da Nang, Vietnam), XII International Scientific Conference MMA 2015 (Novi Sad, Serbia), International Conference on Soft Computing in Applied Engineering & Sciences ICSCASE-2015 (Kumaracoil, Tamilnadu, India), First International Conference on Biological Engineering and Gene Technology BEGT 2015 (Shanghai, China), 2014 IEEE International Instrumentation and Measurement Technology Conference I^2MTC 2014 (Montevideo, Uruguay), 2014 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2014 (Beijing, China), 2014 IEEE Congress on Evolutionary Computation IEEE CEC 2014 (Beijing, China), IEEE International Syposium on Intelligent Control ISIC 2014 as part of 2014 IEEE Multi-Conference on Systems and Control MSC 2014 (Antibes/Nice, France), 11th International Conference on Informatics in Control, Automation and Robotics ICINCO 2014 (Vienna, Austria), 18th Online World Conference on Soft Computing in Industrial Applications WSC 18, IEEE 18th International Conference on Intelligent Engineering Systems INES 2014 (Tihany, Hungary), 7th IEEE International Conference on Intelligent Systems IS'14 (Warsaw, Poland), 15th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2014 (Budapest, Hungary), 5th Conference on Cognitive Infocommunications CogInfoCom 2014 (Vietri sul Mare, Italy), 2014 IEEE International Conference on Tools with Artificial Intelligence ICTAI 2014 (Limassol, Cyprus), 6th International Conference on Computational Collective Intelligence Technologies and Applications ICCCI 2014 (Seoul, Korea), 8th International KES Conference on Agents and Multi-agent Systems KES AMSTA 2014 (Chania, Greece), 6th International Conference on Intelligent Decision Technologies KES IDT 2014 (Chania, Greece), 7th International KES Conference on Intelligent Interactive Multimedia Systems and Services KES IIMSS 2014 (Chania, Greece), 3rd International Conference on Advances in Computing, Communications and Informatics ICACCI 2014 (New Delhi, India), 8th International Symposium on Intelligent Distributed Computing IDC'2014 (Madrid, Spain), 2014 UKACC 10th International Conference on Control CONTROL 2014 (Loughborough, UK), XII International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2014 (Nis, Serbia), First International Afro-European Conference for Industrial Advancement AECIA 2014 (Addis Ababa, Ethiopia), 2013 IEEE International Conference on Systems, Man, and Cybernetics SMC 2013 (Manchester, UK), IEEE International Conference on Tools with Artificial Intelligence ICTAI 2013 (Washington, DC, USA), 2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2013 (Milan, Italy), IEEE 17th International Conference on Intelligent Engineering Systems INES 2013 (Costa Rica), 5th IEEE International Symposium on Logistics and Industrial

Informatics LINDI 2013 (Wildau, Germany), 7th International Symposium on Intelligent Distributed Computing IDC'2013 (Prague, Czech Republic), 5th International Conference on Intelligent Decision Technologies KES IDT 2013 (Sesimbra, Portugal), 6th International Conference on Intelligent Interactive Multimedia Systems and Services KES IIMSS 2013 (Sesimbra, Portugal), International Conference "Automatics and Informatics'2013" (Sofia, Bulgaria), 2012 IEEE International Instrumentation and Measurement Technology Conference I²MTC 2012 (Graz, Austria), 4th IEEE International Symposium on Logistics and Industrial Informatics LINDI 2012 (Smolenice, Slovakia), 1st IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2012 (Würzburg, Germany), 17th Online World Conference on Soft Computing in Industrial Applications WSC17, 2012 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2012 (Tianjin, China), 2012 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems VECIMS 2012 (Tianjin, China), 16th IEEE International Conference on Intelligent Engineering Systems INES 2012 (Lisbon, Portugal), 4th IEEE International Conference on Nonlinear Science and Complexity NSC 2012 (Budapest, Hungary), 2012 UKACC International Conference on Control (Cardiff, UK), 22nd International Conference on Systems Engineering ICSE 2012 (Coventry, UK), 5th International Conference on Intelligent Interactive Multimedia Systems and Services KES IIMSS 2012 (Gifu, Japan), 6th International KES Conference on Agents and Multi-agent Systems - Technologies and Applications KES AMSTA 2012 (Dubrovnik, Croatia), 6th International Symposium on Intelligent Distributed Computing IDC 2012 (Calabria, Italy), XI International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2012 (Nis, Serbia), 2011 IEEE International Conference on Systems, Man, and Cybernetics SMC 2011 (Anchorage, AK, USA), 2011 IEEE International Instrumentation and Measurement Technology Conference I²MTC 2011 (Binjiang, Hangzhou, China), 2011 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2011 (Ottawa, ON, Canada), 2011 IEEE Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems VECIMS 2011 (Ottawa, ON, Canada), 16th IEEE International Conference on Emerging Technologies and Factory Automation ETFA 2011 (Toulouse, France), 3rd International Conference on Intelligent Decision Technologies KES-IDT-2011 (Piraeus, Greece), 15th IEEE International Conference on Intelligent Engineering Systems INES 2011 (Poprad, Slovakia), 5th International Symposium on Computational Intelligence and Intelligent Informatics ISCIII 2011 (Floriana, Malta), 3rd IEEE International Symposium on Logistics and Industrial Informatics LINDI 2011 (Budapest, Hungary), 5th International Symposium on Intelligent Distributed Computing IDC 2011 (Delft, The Netherlands), 16th Online World Conference on Soft Computing in Industrial Applications WSC16, 2010 IEEE International Conference on Systems, Man, and Cybernetics SMC 2010 (Istanbul, Turkey), 2010 IEEE International Instrumentation & Measurement Technology Conference I²MTC 2010 (Austin, TX, USA), 2010 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2010 (Taranto, Italy), 2010 IEEE Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems VECIMS 2010 (Taranto, Italy), IEEE International Workshop on Robotic and Sensors Environments ROSE 2010 (Phoenix, AZ, USA), 14th IEEE International Conference on Intelligent Engineering Systems INES 2010 (Las Palmas de Gran Canaria, Spain), 10th International Conference on Hybrid Intelligent Systems HIS 2010 (Atlanta, GA, USA), IFAC Workshop on Intelligent Control Systems WICS2010 (Sinaia, Romania), UKACC International Conference on Control CONTROL 2010 (Coventry, UK), 4th International Symposium on Intelligent Distributed Computing IDC'2010 (Tangier, Morocco), World Congress on Nature and Biologically Inspired Computing NaBIC 2010 (Kitakyushu, Japan), X Triennial International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2010 (Nis, Serbia), 15th Online World Conference on Soft Computing in Industrial Applications WSC15, 5th IEEE International Conference on Mechatronics ICM 2009 (Málaga, Spain), 2nd IFAC International Conference on Intelligent Control Systems and Signal Processing ICONS'09 (Istanbul, Turkey), 2009 IEEE Workshop on Computational Intelligence in Virtual Environments IEEE CIVE 2009 (Nashville, TN, USA), 2009 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2009 (Hong Kong, China), 2009 IEEE Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems VECIMS 2009 (Hong Kong, China), 7th IEEE International Conference on Computational Cybernetics ICCC 2009 (Palma de Mallorca, Spain), 5th IEEE International Vehicle Power and Propulsion Conference VPPC'09 (Dearborn, MI, USA), World Congress on Nature & Biologically Inspired Computing NaBIC2009 (Bhubaneswar, India), 2nd International Symposium on Intelligent Interactive Multimedia Systems and Services KES-IIMSS-09 (Mogliano Veneto, Italy), 4th International Symposium on Computational Intelligence and Intelligent Informatics ISCIII 2009 (Egypt), 20th International Conference on Systems Engineering ICSE2009 (Coventry, UK), IEEE International Workshop

on Robotic and Sensors Environments ROSE 2009 (Lecco, Italy), 2009 Online World Conference on Soft Computing in Industrial Applications WSC14, Workshop on Multi-Sensor Systems for Surveillance Applications MUSES'09 (Ottawa, ON, Canada), 9th Polish-British Workshop on Computer Systems Engineering Theory and Applications (Stronie Slaskie, Poland, 2009), 2008 IEEE International Instrumentation & Measurement Technology Conference I²MTC 2008 (Victoria, BC, Canada), 8th International Conference on Hybrid Intelligent Systems HIS 2008 (Barcelona, Spain), 2008 IEEE Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems VECIMS 2008 (Istanbul, Turkey), 2008 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2008 (Istanbul, Turkey), 2008 Online World Conference on Soft Computing in Industrial Applications WSC-2008, 8th Polish-British Workshop on Computer Systems Engineering Theory and Applications (Sokolowska, Poland, 2008), 3rd IFAC Workshop on Advanced Fuzzy and Neural Control AFNC 07 (Valenciennes, France), 7th International Conference on Hybrid Intelligent Systems HIS'07 (Kaiserslautern, Germany), 2007 IEEE International Conference on Virtual Environments, Human-Computer Interfaces, and Measurement Systems VECIMS 2007 (Ostuni, Italy), The IEEE Region 8 International Conference "Computer as a Tool" EUROCON 2007 (Warsaw, Poland), 3rd IEEE International Conference on Mechatronics ICM 2006 (Budapest, Hungary), International Conference on Hybrid Intelligent Systems HIS'06 (Auckland, New Zealand), 4th Conference on Neuro-Computing and Evolving Intelligence NCEI'06 (Auckland, New Zealand), 2005 IEEE International Conference on Control and Automation ICCA2005 (Budapest, Hungary), 5th International Symposium on Intelligent Automation and Control ISIAC 2004 as part of World Automation Congress WAC 2004 (Sevilla, Spain), and Second Workshop on Fuzzy Based Expert Systems FUBEST'96, Sofia (Bulgaria).

I was a **Technical Program Committee Chair** of IEEE International Joint Conferences on Computational Cybernetics and Technical Informatics ICCC-CONTI 2010 (Timisoara, Romania), with the proceedings indexed in **Clarivate Analytics Conference Proceedings Citation Index**.

I was a **Technical Program Committee Co-Chair** of 4th and 5th International Symposia on Applied Computational Intelligence and Informatics SACI 2007 and SACI 2009, 6th, 7th, 8th, 9th, 10th and 11th IEEE International Symposia on Applied Computational Intelligence and Informatics SACI 2011, SACI 2012, SACI 2013, SACI 2014, SACI 2015 and SACI 2016 (Timisoara, Romania), with SACI 2007, SACI 2009, SACI 2013, SACI 2014, SACI 2015 and SACI 2016 proceedings indexed in **Clarivate Analytics Conference Proceedings Citation Index**, and SACI 2011 and SACI 2012 proceedings indexed in **IEEE Xplore** and INSPEC.

I was a **member of the Steering Committee** of 8th, 9th, 10th and 11th IEEE International Symposia on Applied Computational Intelligence and Informatics SACI 2013, SACI 2014, SACI 2015 and SACI 2016 (Timisoara, Romania), with SACI 2013, SACI 2014, SACI 2015 and SACI 2016 proceedings indexed in **Clarivate Analytics Conference Proceedings Citation Index**.

I was a **chair of the Track TT05: Mechatronics, Industrial Automation and Control**, with Prof. Seta Bogosyan (University of Alaska-Fairbanks, Fairbanks, AK, USA), in the framework of 13th International Conference on Optimization of Electrical and Electronic Equipment OPTIM 2012 (Brasov, Romania), with the proceedings indexed in **IEEE Xplore** and INSPEC.

I was a **chair of the Track VII: Cognition**, with Prof. Claudiu Pozna (Szechenyi Istvan University, Gyor, Hungary, and Transilvania University of Brasov, Romania), in the framework of 3rd IEEE International Conference on Cognitive Infocommunications CogInfoCom 2012 (Kosice, Slovakia), with the proceedings indexed in **IEEE Xplore** and INSPEC.

Organization of Academic Conferences Before 2019 (http://www.aut.upt.ro/~rprecup/organiz.html):

I was a member of International Organizing Committees of 1st IFAC Workshop on Convergence of Information Technologies and Control Methods with Power Plants and Power Systems ICPS'07 (Cluj-Napoca, Romania), and South-eastern Europe, USA, Japan and European Community Workshop on Research and Education in Control and Signal Processing REDISCOVER 2004 (Cavtat, Croatia).

I was an **organizer**, with Profs. Plamen Angelov (Lancaster University, UK), Bruno Costa (Federal Institute of Rio Grande do Norte (IFRN), Natal, Brazil), Luiz Affonso Guedes (Federal University of Rio Grande do Norte (UFRN), Natal, Brazil), Moamar Sayed-Mouchaweh (High National Engineering School of Mines, Douai, France) and Igor Škrjanc (University of Ljubljana, Slovenia), of the **Special Session** on Autonomous Fault Detection and Identification Methods, in the framework of **2nd IEEE International Conference on Cybernetics CYBCONF 2015** (Gdynia, Poland).

I was a **co-chair**, with Profs. Igor Škrjanc (University of Ljubljana, Slovenia) and Plamen Angelov (Lancaster University, UK), of the **Invited Session** on Applications of Data-Driven Approaches to Modeling, Identification, Prediction and Optimization for Intelligent Control and Planning, in the framework

of **2014 IEEE Multi-Conference on Systems and Control MSC 2014** (Antibes, France), a **co-chair**, with Profs. Keith J Burnham (Coventry University, UK), Leszek Koszalka (Wroclaw University of Technology, Poland) and Henry Selvaraj (University of Nevada, Las Vegas, NV, USA), of the **Special Session** on Artificial Intelligence in Systems Modelling, Optimisation and Control for Enhanced Computer Networks, Manufacturing Logistics and Tele-Informatics, in the framework of 6th International Conference on Hybrid Artificial Intelligence Systems HAIS 2011 (Wroclaw, Poland), and a **co-chair**, with Profs. Emil Petre (University of Craiova, Romania), Sergiu Caraman ("Lower Danube" University of Galati, Romania) and Dan Selisteanu (University of Craiova, Romania), of the **Special Session** on Intelligent Techniques in Modelling, Identification and Control of Bioprocesses, in the framework of 3rd International Conference on Intelligent Decision Technologies KES-IDT-2011 (Piraeus, Greece).

Session Chair / Co-chair in Academic Conferences Before 2019 (http://www.aut.upt.ro/~rprecup/chair.html):

Prior to 2019, I was a session chair / co-chair at the following prestigious conferences: 2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017 (Ljubljana, Slovenia), XIII International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2016 (Nis, Serbia), **2014 IEEE Multi-Conference on Systems and Control MSC 2014** (Antibes, France), IEEE International Conference on Cybernetics CYBCONF 2013 (Lausanne, Switzerland), **18th World Congress of International Federation of Automatic Control IFAC 2011** (Milano, Italy), 15th Online World Conference on Soft Computing in Industrial Applications WSC15, Xth Triennial International SAUM Conference on Systems, Automatic Control and Measurements SAUM 2010 (Nis, Serbia), 11th International Conference on Intelligent Engineering Systems INES 2007 (Budapest, Hungary), Third IFAC Workshop on Advanced Fuzzy and Neural Control AFNC 07 (Valenciennes, France), 4th IFAC Conference on Management and Control of Production and Logistics IFAC MCPL 2007 (Sibiu, Romania), **16th World Congress of International Federation of Automatic Control IFAC 2005** (Prague, Czech Republic), 6th International Conference "Control of Power Systems'04", (Strbske Pleso, High Tatras, Slovakia), 3rd International Conference on Global Research and Education in Intelligent Systems INTER-ACADEMIA 2004 (Budapest, Hungary), **14th World Congress of International Federation of Automatic Control IFAC'99** (Beijing, China), Fourth IFAC Conference on System Structure and Control SSC'97 (Bucharest, Romania), and Second Conference on Applications of Fuzzy Systems ICAFS'96 (Siegen, Germany).

Other Appreciations of the Scientific Activity Before 2019:

Prior to 2019, I have been a member of 14 habilitation boards (http://www.aut.upt.ro/~rprecup/habcom.html), and a member of doctoral committees as a referee of 51 doctoral theses in Australia, Belgium, France, Italy and Romania (http://www.aut.upt.ro/~rprecup/doctcom.html).

I was a member of Doctor Honoris Causa title committees awarded to: Prof. Imre J. Rudas (awarded by "Politehnica" University of Timisoara in 2005), Acad. Prof. József Bokor (awarded by "Politehnica" University of Timisoara in 2007), Prof. Robin De Keyser (awarded by "Gh. Asachi" Technical University of Iasi in 2007), Prof. János Fodor (awarded by "Politehnica" University of Timisoara in 2010), Acad. Florin Gheorghe Filip (awarded by "Aurel Vlaicu" University of Arad in 2018), Prof. Hamido Fujita (chairman of the committee, title awarded by Politehnica University of Timisoara in 2018), and Dr. Attila Michael Bilgic (chairman of the committee, title awarded by Politehnica University of Timisoara in 2018).

Long Term Academic Visits Abroad (Research and Teaching) (http://www.aut.upt.ro/~rprecup/visits.html):

In February 2003, I was an **Invited Professor** at the Université de Savoie, École Supérieure d'Ingénieurs d'Annecy, LISTIC, France, for research.

From November 2004 to October 2009, I was invited several times to the Budapest Tech Polytechnical Institution, John von Neumann Faculty of Informatics, Hungary, for research and teaching.

From April to December 1999, I was invited two times to the Vienna University of Technology, Institute for Handling Devices and Robotics, Austria, for research and teaching.

From July 2003 to September 2005, I was invited several times to the Budapest University of Technology and Economics, Department of Automation and Applied Informatics, Hungary, for research.

Other Cooperation with Academia and Industry (http://www.aut.upt.ro/~rprecup/coop.html):

Prior to 2019, successful cooperation with professors from prestigious universities and research institutes as co-authors of joint journal papers (http://www.aut.upt.ro/~rprecup/isijournals.html) has been carried out. These are the universities and some of the co-authors of Radu-Emil Precup's papers: Université Polytechnique Hauts-de-France, Valenciennes, France, since 2023, cooperation with Assoc. Prof. Anh-Tu

Nguyen and his team in the area of fuzzy control systems; Hungarian Academy of Sciences, Budapest, Hungary, since 2008, and next Szechenyi Istvan University, Gyor, Hungary, and University of Pannonia, Veszprem, Hungary, cooperation with Prof. Péter Baranyi and his team in the area of tensor product-based model transformation; University of Ottawa, Canada, since 2007, cooperation with Prof. Emil M. Petriu and his team in the areas of soft computing and signal processing; University of Ljubljana, Slovenia, since 2007, cooperation with Prof. Igor Škrjanc, Prof. Sašo Blažič and their teams in the area of fuzzy control systems; Coventry University, UK, since 2007, and next University of Wolverhampton, UK, cooperation with Prof. Keith J. Burnham and his team in the areas of control systems and system identification; Delft University of Technology, The Netherlands, since 2007, cooperation with Prof. Hans Hellendoorn and his team in the area of industrial applications of fuzzy control; Bremen University, Germany, since 2005, cooperation with Prof. Axel Gräser and his team in the areas of Iterative Feedback Tuning and automotive control; Óbuda University (formerly Budapest Tech Polytechnical Institution, BMF), Budapest, Hungary, since 2003, cooperation with Prof. Imre J. Rudas, Prof. János Fodor and their team in the area of fuzzy systems; Budapest University of Technology and Economics (BME), Hungary, since 2003, and next University of Debrecen, Hungary, cooperation with Acad. István Nagy, Prof. Péter Korondi and their teams in the area of control algorithms for mobile robots operating in Intelligent Space (Hashimoto Lab, University of Tokyo, Japan).

I also cooperated with Crabel Capital Research, since 2005, in the area of systems modelling for financial applications, and UCM Resita, since 1992, in the area of control algorithms for speed control of hydro-generators.

7. Curriculum Vitae – team leader – Radu-Emil Precup

RESEARCH GRANTS AND CONTRACTS OF RADU-EMIL PRECUP IN 2019-2023

(http://www.aut.upt.ro/~rprecup/contracts.html)

1. 2023-2025: director of the project coordinator Europe, Politehnica University of Timisoara (UPT), Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call).
2. 2021-2023: director, Data-driven fuzzy control with experimental validation, 249844.58 EUR, national exploratory research grant (PCE, Research, Development and Innovation Funding - UEFISCDI).
3. 2022-2024: principal investigator, Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob), 120962 EUR, demonstrative experimental project (PED, UEFISCDI), director: Prof. Sorin Grigorescu, Transilvania University of Brasov.
4. 2022-2024: principal investigator, Dynamics of hypercomplex-valued neural networks (DHVNN), 33333 EUR, national postdoctoral research project (PD, UEFISCDI), director: Assoc. Prof. Calin-Adrian Popa, UPT.
5. 2018-2019: principal investigator, IMproving the PREdiction of opinion dynamics in temporal Social networks: Mathematical modeling and Simulation framework (IMPRESS), 38245 EUR, national postdoctoral research project (PD, UEFISCDI), director: Lect. Dr. Alexandru Topirceanu, Politehnica University of Timisoara (UPT).
6. 2018-2022: principal investigator, NONlinear OBServers-based control structures applied to MEChatronics Systems (NOBSMECS), 47207 EUR, national postdoctoral research project (PD, UEFISCDI), director: Lect. Dr. Alexandra-Iulia Szedlak-Stinean, UPT.

RESEARCH GRANTS AND CONTRACTS OF RADU-EMIL PRECUP BEFORE 2019

(http://www.aut.upt.ro/~rprecup/contracts.html)

1. 2014-2017: director of the UPT partner, Advanced control systems for bioprocesses in food industry (ADCOSBIO), 238637 EUR, national joint applied research project (PCCA, UEFISCDI), director: Prof. Dan Selisteanu, University of Craiova.
2. 2014-2017: director of the UPT partner, Advanced control system of a biorefinery plant (BIOCON), 284091 EUR, national joint applied research project (PCCA, UEFISCDI), director: Prof. Sergiu Caraman, "Lower Danube" University of Galati.
3. 2015-2017: principal investigator, Learning techniques for improving control systems performance using model-free approaches (LTIPerforM), 83114 EUR, national research Young Teams grant (TE, UEFISCDI), director: Lect. Dr. Mircea-Bogdan Radac, UPT.
4. 2014-2017: principal investigator, Experimental model for an automatic capacitive compensator designed for improving the power factor and for load balancing in low-voltage electricity distribution networks (CAEREDJT), 235102 EUR, national joint applied research project (PCCA, UEFISCDI), director: Assoc. Prof. Adrian Pana, UPT.
5. 2012-2016: director of the UPT partner, Software products based on artificial intelligence algorithms applied to modelling and optimization of chemical systems (AISoftChim), 362903 EUR, national joint applied research project (PCCA, UEFISCDI), director, Prof. Silvia Curteanu, "Gheorghe Asachi" Technical University of Iasi.
6. 2011-2016: director, New performance improvement techniques of control systems using experiment-based tuning, 339907 EUR, national exploratory research grant (PCE, UEFISCDI).
7. 2008-2009: director of the Romanian partner, UPT, New results in development and applications of fuzzy control systems, 16000 EUR, international research contract (bilateral project Slovenia-Romania, CNMP), Prof. Igor Škrjanc, director of the Slovenian partner, University of Ljubljana.
8. 2008-2009: principal investigator, Integration of Iterative Learning Control (ILC) and fuzzy methods in intelligent control systems, 16000 EUR, international research contract (bilateral project Hungary-Romania, CNMP), Prof. Stefan Preitl, director of the Romanian partner, UPT, Prof. János Fodor, director of the Hungarian partner, Budapest Tech Polytechnical Institution.
9. 2006-2007: principal investigator, Analysis and development of intelligent systems, 16000 EUR, international research contract (bilateral project Hungary-Romania, Romanian Ministry of Research), Prof. Stefan Preitl, director of the Romanian partner, UPT, Prof. János Fodor, director of the Hungarian partner, Budapest Tech Polytechnical Institution.

10. 2003-2005: principal investigator, Nonlinear systems and control in the field of power electronics, 16000 EUR, international research contract (bilateral project Hungary-Romania, Romanian Ministry of Research), Prof. Stefan Preitl, director of the Romanian partner, UPT, Acad. István Nagy, director of the Hungarian partner, Budapest University of Technology and Economics.
11. 2008-2011: director of the UPT partner, Real-time informatics technologies for embedded-system-control of power-train in automotive design and applications (SICONA), 500000 EUR, national research contract (CNMP), director, Prof. Corneliu Lazar, "Gheorghe Asachi" Technical University of Iasi.
12. 2009-2011: principal investigator, Research concerning new cognitive systems based on experimenting causal relations, 250000 EUR, national research contract (CNCSIS), director, Assoc. Prof. Claudiu Pozna, Transilvania University of Brasov.
13. 2009-2011: principal investigator, Research concerning the design and implementation of modern solutions for information security in distributed systems, SCADA, DCS and remote control applied to gas distribution, 65000 EUR, national research contract (CNCSIS), director, Prof. Ioan Silea, UPT.
14. 2007-2010: principal investigator, Integrated real-time networked control systems (SICOTIR), 500000 EUR, national research contract (CNMP), director, Prof. Cosmin Ionete, University of Craiova.
15. 2007-2008: principal investigator, Analysis and development of intelligent control systems with fuzzy controllers dedicated to servo systems, 35000 EUR, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT.
16. 2006-2007: director, Development of new fuzzy controller structures for embedded systems using Iterative Feedback Tuning algorithms, 18000 EUR, national research contract (CNCSIS).
17. 2004-2005: director, Development of new fuzzy controller structures based on sensitivity theory, 15000 EUR, national research contract (CNCSIS).
18. 2004-2005: principal investigator, Development of new control structures and controller development methods for positioning systems, 12000 EUR, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT.
19. 2001: director, Research concerning the development of new stability analysis methods for a class of fuzzy control systems applied to the development of Takagi-Sugeno fuzzy controllers, 1400 USD, national research contract (CNCSIS).
20. 2001: principal investigator, Research concerning the development of new robustness analysis methods for fuzzy control systems based on the parametric sensitivity analysis, 1500 USD, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT.
21. 2000: principal investigator, Research concerning the development of new stability analysis methods for fuzzy control systems applied to power systems processes, 2000 USD, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT.
22. 1998-1999: principal investigator, Research concerning the development of new control structures and controller development methods for variable inertia drives, 11000 USD, national research contract (CNCSU, CNCSIS), director, Prof. Stefan Preitl, UPT.
23. 1998-2001: principal investigator, Intelligent process control systems, 170000 USD, national research contract (CNCSIS, World Bank), director, Prof. Ioan Dumitrache, corresponding member of Romanian Academy, Politehnica University of Bucharest.
24. 1998-2001: principal investigator, Transient and voltage stability in power systems, 50000 USD, national research contract (CNCSIS, World Bank), director, Prof. Stefan Kilyeni, UPT.
25. 1996-1997: principal investigator, Research concerning the development of control strategies for synchronous generators based on fuzzy set theory, 3500 USD, national research contract (CNCSU), director, Prof. Stefan Preitl, UPT.
26. 1996: director, Research concerning the implementation of fuzzy control algorithms dedicated to electro-hydraulic and eletromechanical servo systems, 2000 USD, national research contract (CNCSU).
27. 1996: principal investigator, Fuzzy control structures with dynamics and fuzzy-based parameter adaptation dedicated to control of nonminumum phase systems, 2700 USD, national research contract (Romanian Academy), director, Prof. Stefan Preitl, UPT.
28. 1995: principal investigator, Development of control strategies and structures, and controllers applied to hydrogenerator control, 2000 USD, national research contract (CNCSU), director, Prof. Stefan Preitl, UPT.
29. 1993: principal investigator, Development of control algorithms based on fuzzy set theory, 1000 USD, national research contract (Romanian Ministry of Education), director, Prof. Stefan Preitl, UPT.
30. 1993: principal investigator, Control systems structures for small and medium power hydrogenerators, models and structures for applications, 1000 USD, national research contract (Romanian Ministry of Education), director, Prof. Toma-Leonida Dragomir, UPT.

CURRICULUM VITAE

Claudia-Adina Bojan-Dragos was born on July 9, 1983, in Lugoj, Romania. The **office address** is:

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Fax: +40-256-403214 (Dean's office)
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https://www.aut.upt.ro/~claudia.dragos/

The **educational background** starts with the Baccalaureate in Mathematics-Physics, obtained in 2002, after having studied in 1997–1981 at the Theoretical High School "Traian Vuia", Faget, Romania. In the period 2002–2007 I was student at the Faculty of Automation and Computers, "Politehnica" University of Timişoara, Romania, reciveing Dipl.-Engineer Degree. I was also a master student in 2007–2009 at the Faculty of Automation and Computers, Politehnica University of Timisoara, Romania, reciveing Master Degree in 2009. I was a Ph.D student at Politehnica University of Timişoara,Romania, Faculty of Automation and Computers, supervised by Prof.Dr.-Ing. Stefan Preitl, and I defended my thesis „Modern model-based control solutions applied to mechatronics systems" in 2011, PhD Degree (academic title of Doctor) in Automatic Systems.

My **working experience** is summarized as follows. Between 2012 – 2015 I was Assistant Professor with the Department of Automation and Applied Informatics, Faculty of Automation and Computers, Politehnica University of Timisoara, Romania. In 2015 I promoted as lecturer in the same department at Faculty of Automation and Computers, Politehnica University of Timisoara, Romania. Since 2022, I am Associate Professor at the Department of Automation and Applied Informatics, Faculty of Automation and Computers, Politehnica University of Timisoara, Romania.

Over the time my **fields of scientific interest** have included systems modelling, identification and optimization (including nature-inspired algorithms), development and analysis of new control structures and algorithms including conventional control, fuzzy control, predictive control, two degree of freedom control, sliding mode control, etc, applications to mechatronics systems (including automotive systems and mobile robots), embedded systems, control of power plants, servo systems, electrical driving systems, etc.

I am member in **scientific and technical societies** as: since 2008, I am member of Romanian Society for Automation and Technical Informatics (SRAIT), since 2015 I am IEEE Member, since 2018 I am member of Organizing Committee of International Symposium on Applied Computational Intelligence and Informatics, since 2019 I am member of Organizing Committee of International Conference on System Theory, Control and Computing and since 2023 I am member of the International Program Committee of ICINCO.

REVIEWING (https://www.aut.upt.ro/~claudia.dragos/Reviewing.html)

I regularly do review for several journals including two Elsevier ones, Applied Soft Computing and Neurocomputing. I did reviewe for over 10 conference including 20th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2023), 28th International Conference on Methods and Models in Automation and Robotics (MMAR 2023), 13th Symposium on Educational Advances in Artificial Intelligence (EAAI 2023), 27th International Conference on System Theory, Control and Computing (ICSTCC 2023), IFAC CESCIT 2021, IEEE SysCon 2020, 23th International Conference on System Theory, Control and Computing Joint Conference (ICSTCC 2019), European Control Conference (ECC 2016), EUROCON 2015, 41st Annual Conference of the IEEE Industrial Electronics Society (IECON 15), and 15th International Conference on System Theory, Control and Computing Joint Conference (ICSTCC 2011).

PUBLICATIONS (https://www.aut.upt.ro/~claudia.dragos/Publications.html)

The **Cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF)** is 81.1.

I published 1 book (https://www.aut.upt.ro/~claudia.dragos/Publications.html), 12 book chapters (https://www.aut.upt.ro/~claudia.dragos/Publications.html), 19 Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals (https://www.aut.upt.ro/~claudia.dragos/Publications.html) and over 150 papers published contributions in refereed academic conferences (https://www.aut.upt.ro/~claudia.dragos/).

As of February 6, 2024, my papers have received 2028 citations, h-index = 21 and i10-index = 46 according to Scholar Google, (https://scholar.google.ro/citations?user=oWLCV_4AAAAJ&hl=ro).

As of February 6, 2024, my papers have received 1034 citations în Thomson Reuters Web of Science (formerly ISI Web of Knowledge) articles of my 100 Clarivate Analytics Web of Science articles, h-index = 17 according to Clarivate Analytics Web of Science (https://www.webofscience.com/wos/author/record/AAY-6390-2021).

As of February 6, 2024, my papers have received 1629 citations în Scopus articles of my 148 Scopus articles, h-index = 20 according to Scopus; (https://www.scopus.com/authid/detail.uri?authorId=27367710400).

The address of and the link to the Open Researcher & Contributor ID (ORCID): https://orcid.org/0000-0003-2465-9283.

QUANTITATIVE QUALITY INDICES FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023

The **Cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF)** is 39.9.

The **cumulative Article Influence Score (A)** of my papers published in Web of Science indexed journals is calculated as follows: A = 1.276/6+0.651/6+0.302/6+0.272/5+0.453/6+0.390/5+0.302/5+0.651/7+0.170/3 = 0.789.

In 2019-2023, I published 3 papers in Q2 quartile according to AIS 2022 (JCR as of June 2023). I was the director of one national research project in the field of automatic control and I was member in two national research project in the field of automatic control and one international research contract in 2023-2025 with Zhejiang University (China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic

University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China).

AWARDS

I received a **Best Paper Award** at 7th International Conference on Information Technology and Quantitative Management ITQM 2019 (Granada, Spain) (Award).

RESEARCH CONTRACTS AND GRANTS
(https://www.aut.upt.ro/~claudia.dragos/ResearchContractsAndGrants.html)

In **2020–2022**, I was director of the national research grant National Research Grant Human Resources Young Teams Research Projects 2019 entitled "Fuzzy controllers for shape memory alloys systems", 89000 EUR, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (TE, UEFISCDI) (please visit the project website, link).

In **2023–2025** I am a member of the research project "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity" (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang UniversityChina), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call), director coordinator Europe: Prof. Dr. Engr. Radu-Emil PRECUP, Politehnica University of Timisoara (please visit the project website, link).

In **2021–2023** I was a member of the UPT partner in the research project "Data-driven fuzzy control with experimental validation", 249844.58 EUR, national exploratory research grant (PCE, Executive Agency for Higher Education, Research, Development and Innovation Funding - UEFISCDI) (please visit the project website, link).

In **2019–2023** I was a member in the non-research project POCU-AP nr.6 PI 10.ii. - cod SMIS nr. 122333, Program Operațional Capital Uman (Fonduri Structurale Europene), director of UTCB: Giorgian NECULOIU, director of the UPT partner: Florin DRĂGAN.

In **2017–2018** I was director of the Institutional Research Grant "Research and development projects for young researchers" (in Romanian, Proiecte de Cercetare-Dezvoltare pentru tineri cercetatori) PCD-TC-2017, entitled "Tensor product model transformation-based adaptive control techniques with mechatronics applications", 10000 EUR, competition organized and financed by Politehnica University of Timisoara.

In **2014–2017** I was a member of the UPT partner in the research project "Advanced control system of a biorefinery plant" (BIOCON), 284091 EUR, national joint applied research project (PCCA, UEFISCDI), director: Prof. Sergiu Caraman, "Lower Danube" University of Galati, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link).

In **2014–2017** I was a member of the UPT partner in the research project "Advanced control systems for bioprocesses in food industry" (ADCOSBIO), 238637 EUR, national joint applied research project (PCCA, UEFISCDI), director: Prof. Dan Selisteanu, University of Craiova, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link).

In **2014–2017** I was a member in the research project "Experimental model for an automatic capacitive compensator designed for improving the power factor and for load balancing in low-voltage electricity distribution networks" (CAEREDJT), 235102 EUR, national joint applied research project (PCCA, UEFISCDI), director: Assoc. Prof. Adrian Pana, UPT (please visit the attached link).

In **2012–2016** I was a member of the UPT partner in the research project "Software products based on artificial intelligence algorithms applied to modelling and optimization of chemical systems" (AISoftChim), 362903 EUR, national joint applied research project, director: Prof. Silvia Curteanu, "Gheorghe Asachi" Technical University of Iasi, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attachedlink and link).

In **2011 – 2016** I was a member of the UPT partner in the research project "New performance improvement techniques of control systems using experiment-based tuning", 339907 EUR, national exploratory research grant (PCE, UEFISCDI), director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link).

In **2008 – 2011** I was doctoral researcher, member of the UPT research team (director of the UPT partner: Prof. Radu-Emil Precup), "Real-time informatics technologies for embedded-system-control of power-train in automotive design and applications" (SICONA), 500000 EUR, Romanian research contract, The National Centre for Programme Management (CNMP), Prof. Corneliu Lazar, director of the project coordinator, "Gheorghe Asachi" Technical University of Iasi, Romania.

TEACHING (2007 - present)
(https://www.aut.upt.ro/~claudia.dragos/Teaching.html)

Throughout my teaching career I have taught lectures and / or laboratories and / or projects to the following disciplines: Computer Assisted Mathematics (lectures+ laboratories, B.Sc. program in Automation and Applied Informatics), Optimization Techniques (laboratories, B.Sc. program in Automation and Applied Informatics), Process Control Structures and Algorithms (laboratories + projects, B.Sc. program in Automation and Applied Informatics), Control Engineering (laboratories, B.Sc. program in Automation and Applied Informatics), Elements of Automatic Control (laboratories, B.Sc. program in Power Systems), Automatic Control Technique (laboratories, B.Sc. program in Electrical Engineering), Intelligent autonomous equipment(lectures + laboratories, B.Sc. program in Automation and Applied Informatics), Fuzzy Control Systems (lectures + laboratories + projects, B.Sc. program in Automation and Applied Informatics), Control Systems in Autovechicles (lectures and laboratories + projects, M.Sc. program in program in Automatic Systems Engineering), Advanced Controlled Systems (laboratories + projects, M.Sc. program in program in Automatic Systems Engineering), Intelligent Control Systems (laboratories + projects, M.Sc. program in program in Automatic Systems Engineering), Multi-agent Systems (lectures + projects, M.Sc. program in Automotive Embedded Software).

CURRICULUM VITAE

Adriana-Nicoleta ALBU was born on July 17, 1977, in Timisoara, Romania. Her **official address** is:

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Phone:

The **educational background** starts with the Baccalaureate in Informatics, obtained in 1996, after having studied in 1992–1996 at the High School for Informatics "Grigore MOISIL", Timisoara. In the period 1996–2001 I was student at the Automation and Computers Faculty, Computer Science Program Study, "Politehnica" University of Timişoara, Romania, reciveing Dipl.-Engineer Degree. I was also a postgraduate student in 2001–2002 at the Automation and Computers Faculty, Computer Science Postgraduate Program Study, Politehnica University of Timisoara, Romania. In 2001–2007 I was Ph.D student at Politehnica University of Timişoara, Romania, Mechanical Engineering Faculty, supervised by Prof. Doina DRAGULESCU, and I defended my thesis „Databases for viral hepatitis diagnosis analyzing liver's images acquired by computed tomography" in 2007, obtaining my PhD Degree (academic title of Doctor). In 2005 I followed an intensive course on "Biomedical engineering in a European Perspective 2005", August 29th - September 16th at The University of Applied Sciences Oldenburg / Ostfriesland / Wilhelmshaven in Wilhelmshaven, Germany.

My **working experience** within the Automation and Applied Informatics Department at the Politehnica University Timisoara, is summarized as follows: between 2001–2003, I was teaching assistant, between 2003–2008 I was research assistant, between 2008–2022, I was assistant professor, and currently I am associate professor (since 2022) and the head of Automation and Applied Informatics Department at the Politehnica University Timisoara (since 2016).

My **research activities** were focused on artificial intelligence and medical decision-making.

I am member in **scientific and technical societies** as: SRAIT – Romanian Society of Control Engineering and Technical Informatics – since 2002, SRIM – Romanian Society of Medical Informatics – since 2017 and ACTM – Alumni Association of Automation and Computers Faculty (vice-president) – since 2018 and in **organizing and program committees as:** Member of Organizing Committee of ICSTCC International Conference on System Theory, Control and Computing (2023, 2019), member of Organizing Committee of SACI International Symposium on Applied Computational Intelligence and Informatics (since 2018), member of the Technical Program Committee of ICSTCC International Conference on System Theory, Control and Computing (since 2017), member of the Program Committee of ICxS - The Special Session on Intelligent and Contextual Systems ACIIDS conference (2021, 2020, 2019, 2017), member of the Technical Program Committee of EHB - The International Conference on e-Health and Bioengineering (2023, 2022, 2021, 2020, 2019).

In the period **2019–2023** and before of that, I was reviewer of the following **journals**: Applied Soft Computing, IEEE Transactions on Cybernetics, Computer Science Journal of Moldova, Evolving Systems, PLOS ONE (Journal of Public Library of Science), FUACR - Facta Universitatis Series: Automatic Control and Robotics, ISA Transactions, Tehnical Gazette, FUME - Facta Universitatis Series: Mechanical Engineering, Thermal Science and **conferences**: EHB - The International Conference on e-Health and Bioengineering (2023, 2022, 2021, 2020, 2019), ICSTCC - The International Conference on System Theory, Control and Computing (2021, 2020, 2019, 2018, 2017), CoDIT - The International Conference on Control, Decision and Information Technologies (2022, 2020, 2019, 2018), ICxS - The Special Session on Intelligent and Contextual Systems ACIIDS conference (2021, 2020, 2019, 2017), SMC - The IEEE International Conference on Systems, Man, and Cybernetics (2019), SACI - The IEEE International Symposium on Applied Computational Intelligence and Informatics (2019), The Mediterranean Conference on Control and Automation (2018).

PUBLICATIONS (https://www.aut.upt.ro/~adrianaa/publications.html)

The Cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) is 18.9.

I published 2 books, 1 book chapter and 72 papers in scientific journals and refereed conference proceedings, most of them indexed in international databases ISI and IEEE Xplore. Six of them are published in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals.

As of February 7, 2024, my papers have received 647 citations, leading to an h-index = 12 and an i10-index = 13, according to Google Scholar (https://scholar.google.ro/citations?user=LNtWAPIAAAAJ&hl=en).

As of February 7, 2024, my papers have received 406 citations (371 without self-citations) in articles indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge), resulting an h-index = 9, according to Clarivate Analytics Web of Science (https://www.webofscience.com/wos/author/record/U-5271-2017).

As of February 7, 2024, my papers have received 506 citations in Scopus articles, leading to an h-index = 11, according to Scopus; (https://www.scopus.com/authid/detail.uri?authorId=57197502554).

The address of and the link to the Open Researcher & Contributor ID (ORCID): https://orcid.org/0000-0003-1579-6163.

QUANTITATIVE QUALITY INDICES FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023

The cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) is 15.4. The cumulative Article Influence Score (AIS): A = 0.204/6 + 0.882/6 + 0.651/3 = 0.398.

In 2019-2023, I published one paper in Q1 quartile according to AIS 2022 (JCR as of June 2023) and one paper in Q2 quartile according to AIS 2022 (JCR as of June 2023).

I have been involved in two national research contracts in the field of automatic control, director to one of them, and in one international research contract (member) in 2023-2025 with Zhejiang University (China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China).

RESEARCH CONTRACTS (https://www.aut.upt.ro/~adrianaa/projects.html)

Over the time, I have been involved in 11 national and international research contracts and grants, director of 2 of them, as follow:

In **2022-2024**, I am the director of the national research grant PED (Demonstrative Experimental Project) entitled "AI-LegRob - Artificial Intelligence based Control System for Legged Robots used in Autonomous Navigation, Mapping and Surveillance of Unstructured Environments", PN-III-P2-2.1-PED-4587 (675PED/2022), financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), leader Transilvania University of Brasov (Sorin-Mihai GRIGORESCU - https://rovislab.com/ai_legrob.html), partner Politehnica University Timisoara (Adriana AL-BU), June 2022 - July 2024, 598644 lei (equivalent approx. 120000 EUR).

In **2021-2022**, I was the director of the institutional research grant entitled "DeCaGen - Early Detection of Cardiovascular Diseases Based on Genetic Features", PCD-TC-2021-10167, competition organized and financed by Politehnica University Timisoara (UPT), June 2021 - Dec. 2022, 50000 lei (equivalent approx. 10000 EUR).

In **2023-2025** I am a member of the research grant "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)", 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang UniversityChina), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call), director coordinator Europe: Prof. Dr. Engr. Radu-Emil PRECUP, Politehnica University of Timisoara, (https://jpi-urbaneurope.eu/project/e-mats/).

In **2021-2023**, I was a member of the research grant "Data-driven fuzzy control with experimental validation", PN-III-P4-ID-PCE-2020-0269, National exploratory research grant (PCE), financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), director Radu-Emil PRECUP, 249844.58 EUR (https://www.aut.upt.ro/~rprecup/grant2021.html).

In **2014-2017**, I was a member of the research grant "ADCOSBIO - Advanced control systems for bioprocesses in food industry", National joint applied research project, UEFISCDI, leader University of Craiova (Dan SELISTEANU), partner UPT (Radu-Emil PRECUP), 238637 EUR (http://www.ace.ucv.ro/adcosbio/).

In **2012-2016**, I was a member of the research grant "AISoftChim - Software products based on artificial intelligence algorithms applied to modelling and optimization of chemical systems", National joint applied research project, UEFISCDI, leader "Gheorghe Asachi" Technical University of Iasi (Silvia CURTEANU), partner UPT (Radu-Emil PRECUP), 362903 EUR (https://www.didactic.icpm.tuiasi.ro/cv/curteanusilvia/researchcontracts.html).

In **2007-2009**, I was a member of the research grant "TELEASIS - NGN support-based, Complex System for home tele-attendance of elderly people", PN-II-11-066/18.09.2007, National Research Grant, leader INSCC Bucuresti, partner UPT (Lacrimioara STOICU-TIVADAR).

In **2007-2010**, I was a member of the research grant "SIMIMED - Integrated medical information management system based on HL7 Standard", PN-II-D1-1-019/18.09.2007, National Research Grant, leader UTCN, partner UPT (Lacrimioara STOICU-TIVADAR).

In **2006-2008**, I was a member of the research grant "Platform for implantology, intelligent prosthetics and biomechanical recovery", financed by Ministry of Education and Research, director Doina DRAGULESCU.

In **2005-2007**, I was a member of the research grant "Autonomous prehension system for assisting people with disabilities or access to dangerous areas", CNCSIS code 655, director Doina DRAGULESCU.

In **2002-2004**, I was a member of the research grant "Study of the mandible dynamics and modeling implants for surgical correction of its accidental breaks", CNCSIS code 11, director Doina DRAGULESCU.

TEACHING (https://www.aut.upt.ro/~adrianaa/teaching.html)

My teaching portfolio includes lectures and projects such as: Data Structures and Algorithms (lectures, B.Sc. program in Automation and Applied Informatics), Artificial Intelligence and Expert Systems (lectures and projects, M.Sc. program in Information Technology), Decision Support Systems in Health Care (lectures and projects, M.Sc. program in Information Systems in Health Care), Artificial Intelligence and Autonomous Systems (lectures and projects, M.Sc. program in Applied Information Systems in Production and Services), Programming Languages (lectures, B.Sc. program in Technologies and Systems of Telecommunications).

7. Curriculum Vitae – team member 3 – Raul-Cristian Roman

CURRICULUM VITAE (http://www.aut.upt.ro/~raul.roman/)

The undersigned RAUL-CRISTIAN ROMAN, I was born on the 23rd of August 1989, in Timisoara, Romania. I'm a passionate researcher and teacher in the field of Automation and Applied Informatics and currently working at the Politehnica University of Timisoara, Faculty of Automation and Computers, Department of Automation and Applied Informatics located on Bd. V. Parvan 2, 300223 Timisoara, Romania. At work, I can be found by contacting me by phone at +40-256-403340 (office), or by e-mail at , more information about me can be found by accessing my webpage at http://www.aut.upt.ro/~raul.roman/.
I also can be found at my home address located on and contacted by my mobile phone at
My researcherid.com profile can be found at http://www.researcherid.com/rid/K-7667-2016, and my Open Researcher & Contributor ID (ORCID) profile address can be found at https://orcid.org/0000-0003-2551-7842.

***Education* (http://www.aut.upt.ro/~raul.roman/ShortBio.html):**

My academic journey has been deeply rooted in the halls of Politehnica University of Timisoara, where I pursued my quest for knowledge and innovation. It was here that I embarked on a transformative educational odyssey:

Ph.D. in Systems Engineering (2014-2018) Guided by the esteemed Prof. Dr.-Ing. Radu-Emil Precup, I embarked on a rigorous exploration into the realm of Systems Engineering. My doctoral thesis, titled "Model-Free techniques for tuning the parameters of automatic controllers," delved into the intricate nuances of automatic control systems, paving the way for novel approaches to parameter tuning.

M.Sc. in Systems Engineering (2012-2014) Prior to my doctoral endeavors, I undertook a Master of Science program at Politehnica University of Timisoara, specializing in Automatic Systems Engineering. This period of intensive study further honed my understanding of complex systems and equipped me with the analytical tools necessary to tackle real-world challenges.

B.Sc. in Systems Engineering (2008-2012) My academic journey commenced with a Bachelor of Science degree in Systems Engineering, with a specialization in Automation and Applied Informatics. Here, amidst the dynamic environment of the Faculty of Automation and Computers, I laid the foundational pillars of my academic and professional pursuits.

Baccalaureate in Mathematics-Informatics (2004-2008) My academic trajectory traces back to the formative years of my education at Colegiul National 'C. D. Loga' in Timisoara, where I completed my Baccalaureate in Mathematics-Informatics. This early exposure to the principles of mathematics and informatics ignited my passion for problem-solving and laid the groundwork for my future endeavors.

As I reflect on my educational odyssey, I am filled with gratitude for the opportunities to delve into the depths of knowledge and innovation. Each milestone has served as a stepping stone in my quest to push the boundaries of possibility and contribute meaningfully to the world of academia and beyond.

***Working Experience*:**

Lecturer (2023 - Present) Since 2023, I have had the privilege of serving as a Lecturer within the esteemed Department of Automation and Industrial Informatics at the Faculty of Automation and Computers, Politehnica University of Timisoara. In this capacity, I have had the opportunity to share my expertise with eager minds, nurturing the next generation of innovators and problem-solvers.

Assistant Professor (2018 - 2023) Prior to my current role, I held the position of Assistant Professor within the same department. During my tenure, I played a pivotal role in shaping the academic journey of students, imparting both theoretical knowledge and practical skills essential for success in the field of Automation and Industrial Informatics.

Research Assistant (2015 - 2018) My journey in academia commenced in 2015 when I joined the Department of Automation and Industrial Informatics as a Research Assistant. Here, I immersed myself in the pursuit of knowledge, contributing to various research projects aimed at advancing the frontiers of our discipline.

Software Engineer (2012 - 2015) My transition from academia to industry occurred in 2012 when I assumed the role of Software Engineer at Elster Rometrics SRL (now Honeywell) in Timisoara. In this dynamic environment, I applied my academic insights to practical challenges, developing innovative solutions and honing my technical prowess.

As I continue to navigate the intersection of academia and industry, I remain driven by a passion for innovation, a commitment to excellence, and a steadfast dedication to pushing the boundaries of what is possible in the field of Automation and Industrial Informatics.

***Fields of Scientific Interest*:**

7. Curriculum Vitae – team member 3 – Raul-Cristian Roman

Development and Analysis of New Control Structures and Algorithms: At the heart of my research endeavors lies a fervent dedication to developing and analyzing novel control structures and algorithms. From data-driven control to model-free control and fuzzy control, I am deeply committed to exploring innovative approaches that enhance system performance and robustness.

Identification and Optimization: I am deeply fascinated by the intricacies of system identification and optimization, employing nature-inspired algorithms to tackle complex engineering challenges. Through rigorous analysis and experimentation, I seek to uncover optimal solutions that maximize efficiency and performance across a myriad of applications.

Theory and Applications of Soft Computing: My research interests extend to the realm of soft computing, where I explore the theoretical underpinnings and practical applications of fuzzy logic, neural networks, and evolutionary algorithms. By harnessing the power of soft computing techniques, I aim to develop adaptive and intelligent systems capable of navigating uncertain and dynamic environments.

Applications to Mechatronic Systems: With a keen focus on mechatronic systems, including automotive systems and mobile robots, I leverage my expertise to design and implement cutting-edge control strategies. From embedded systems to power plants and servo systems, I am passionate about applying advanced control methodologies to enhance the functionality and efficiency of diverse engineering systems.

As I continue to delve deeper into the realms of control theory and applied informatics, I am driven by a relentless pursuit of knowledge and a steadfast commitment to leveraging technology for the betterment of society.

Honours **(https://www.aut.upt.ro/~raul.roman/Honours.html)**

I am honored to have been awarded the prestigious 1st Prize in the "Rada Mihalcea pentru Tineri Cercetători în Știință și Inginerie" 2022 Competition (The Award), recognizing my contributions to science and engineering excellence.

My book "Data-driven Model-Free Controllers" was recognized by the CRC Press Editorial Board with the Outstanding Accessible Title in STEM Award in 2022 (The Award), underscoring its impact and accessibility in the field.

I am humbled to have received the esteemed "Tudor Tănăsescu" Prize from the Romanian Academy in 2020 (www.acad.ro, www.acad.ro) for my contributions to the advancement of "Data-driven techniques for tuning controller parameters" ("Tehnici data-driven de acordare a parametrilor regulatoarelor" in romanian).

In recognition of the quality and significance of my doctoral research, I received an Honorary Mention (competition link, Honorary Mention) in the 2020 IEEE Robotics & Automation Society Romania Chapter Best PhD Thesis Competition.

My paper was honored with the Best Paper Award (The Award) at the 7th International Conference on Information Technology and Quantitative Management in 2019, highlighting its impact and contribution to the field.

I was nominated for the prestigious Young Researcher Award of the Romanian Society of Control Engineering and Technical Informatics in 2020, recognizing my potential and contributions to the field.

I am proud to have been bestowed with "The Research Excellence Award" (The Award) in 2022 for my outstanding results achieved during the academic year 2021-2022 at Politehnica University of Timisoara.

My paper written in collaboration with R.-E. Precup and E. M. Petriu titled "Hybrid Data-Driven Fuzzy Active Disturbance Rejection Control for Tower Crane Systems" was recognized as a highly cited paper by Clarivate Analytics Web of Science for its significant impact on the field.

These honors and awards serve as a testament to my dedication, innovation, and contributions to the advancement of science and technology in the field of control theory and applied informatics.

Research Contracts&Grants **(http://www.aut.upt.ro/~raul.roman/ResearchContractsAndGrants.html):**

Activity between 2019-2023

As a valued member between 2023-2025 of the Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, I am privileged to contribute to this ambitious project aimed at revolutionizing urban transportation systems. With a consortium spanning European and Chinese partners, we are collectively exploring innovative solutions to enhance urban accessibility and connectivity, under the visionary leadership of Prof. Sheng Jin (Zhejiang University of China) the project coordinator of China, Prof. Dr. Engr. Radu-Emil PRECUP, Politehnica University of Timisoara, the director coordinator Europe, and the European partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call) (project website, link).

7. Curriculum Vitae – team member 3 – Raul-Cristian Roman

I am honored to be part of the esteemed "Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob)", with a total value of 120962 EUR, and it was financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PED, UEFISCDI), between 2022-2024, which focuses on developing artificial intelligence-based control systems for legged robots used in autonomous navigation, mapping, and surveillance of unstructured environments. Led by Prof. Sorin Grigorescu, this project represents a collaborative effort to advance the frontier of robotics technology (project website, link).

In my capacity as a postdoctoral researcher, between 2022-2023, I was contributing to the "Retea de excelenta in cercetare si inovare aplicativa pentru programele de studii doctorale si postdoctorale/InoHubDoc" project that financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (POCU, UEFISCDI), which aims to establish a network of excellence in research and applied innovation for doctoral and postdoctoral programs. Under the guidance of Prof. Dr. Engr. Liviu Marsavina, we are fostering a dynamic research ecosystem conducive to academic excellence and innovation (please visit the project website, link).

I was proud to be a member of the esteemed research team working on the "Fuzzy Data-driven Control with Experimental Validation" project between 2020-2023, with a total value of 243000 EUR. Under the guidance of Prof. Dr. Engr. Radu-Emil Precup, we are exploring innovative approaches to fuzzy data-driven control, with a focus on experimental validation. This project, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PCE, UEFISCDI), represents a significant step forward in enhancing the robustness and effectiveness of control systems (project website, link).

Leading the charge in the realm of shape memory alloys systems, I am honored to oversee the "Data-driven controllers for shape memory alloys systems" project between 2020-2022, with a total value of 52476 EUR, which seeks to develop advanced control strategies for shape memory alloys systems. With support from the Executive Agency for Higher Education, Research, Development and Innovation Funding (PD, UEFISCDI), we here pushing the boundaries of control theory and application (project website, link).

In collaboration with Lect. Dr. Engr. Claudia-Adina Bojan-Dragos, between 2020-2022, I was contributing to the "Fuzzy Controllers for Shape Memory Alloys Systems" project, with a total value of 89000 EUR. This endeavor, funded by the Executive Agency for Higher Education, Research, Development and Innovation Funding (TE, UEFISCDI), aims to develop advanced fuzzy controllers tailored specifically for shape memory alloys systems. Through rigorous research and experimentation, we seek to unlock new possibilities in shape memory alloys control technology (project website, link).

I was honored between 2020-2022 to be part of the interdisciplinary team working on the "Range of Prototypes for Automatic Capacitive Compensators" project, with a total value of 245000 EUR, in collaboration with Alexandru Radulian from ICPE S.A. This project, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PTE, UEFISCDI), and it was focused on improving power factor and load balancing in low voltage electrical networks through the development of innovative automatic capacitive compensators (project website, link).

In 2019, I had the privilege of contributing to the National Research Grant "Institutional Development Fund for State Universities." This project, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (FDI, UEFISCDI), under the directorship of Prof. Dr. Engr. Radu-Emil Precup at Politehnica University of Timisoara, aimed to enhance the research infrastructure and capabilities of our institution, fostering a conducive environment for academic excellence and innovation (link).

I had the honor between 2019-2020 of serving as the director of the National Research Grant ARUT 2018 entitled "Nonlinear Controllers with Parameters Tuned Using Experiments, Dedicated to Aerodynamic Systems" with a total value of 10000 EUR. Under this project, financed by Politehnica University of Timisoara, we endeavored to develop innovative nonlinear control strategies tailored specifically for aerodynamic systems. This project represented a significant step forward in enhancing the stability and performance of aerodynamic systems in various applications (link).

Activity before 2019

From 2015-2017, I contributed to the National Research Grant "Learning Techniques for Improving Control Systems Performance Using Model-Free Approaches" with a total value of 83114 EUR, as a member of the research team. This project, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (TE, UEFISCDI) and led by Lect. Dr. Engr. Mircea-Bogdan Radac, I was focused on exploring novel model-free approaches to enhance the performance of control systems. Through collaborative research efforts, we aimed to advance the understanding and application of control theory in real-world scenarios.

As I continue to embark on new research ventures and collaborations, I am driven by a relentless pursuit of excellence and a passion for leveraging technology to address real-world challenges.

7. Curriculum Vitae – team member 3 – Raul-Cristian Roman

Publications (2019-2024): **(http://www.aut.upt.ro/~raul.roman/publications.html):**

I have authored or co-authored a total of 49 scientific papers between 2019 and 2023, with 11 of these papers being authored as the first author. These papers are categorized as follows: **49 scientific papers published between 2019-2023**, first authors on 11 of the 49 papers. The papers are grouped in terms of international databases in which they are indexed: 18 in journals with an impact factor indexed in Clarivate Analytics Web of Science (with one of the previous ISI Web of Knowledge names), with a cumulative Impact Factor of 87.3, a cumulative Article Influence Score (AIS) = 11.365, and a cumulative AIS divided per number of authors = 2.64 according to the Journal Citation Reports (JCR) published by Clarivate Analytics in 2022; 31 in conference volumes indexed in Clarivate Analytics Web of Science; 5 in conference volumes indexed in international databases IEEE Xplore, INSPEC, Scopus, DBLP, Google. The published papers have received in total over 1800 citations with h-index = 22 and i10-index = 30 according to Google Scholar (link), over 720 independent citations (excluding self-citations and citations of all co-authors) and over 750 citations with h-index = 15 according to Clarivate Analytics Web of Science (link), over 1270 independent citations (excluding self-citations and citations of all co-authors) and over 1670 citations with h-index = 24 according to Scopus (link). In addition to my research papers, I have authored **one book** and **one book chapter**, contributing to the dissemination of knowledge in the field.and in 2023 I've obtained **3 certificates** that register to the Romanian Office of Copyright (Oficiul Român pentru Drepturile de Autor, ORDA): for the work "Study of design and industrial implementation of a hybrid model-free fuzzy controller", no. RGII/INT/1838/02.05.2023 - RGII/IES/1838/08.05.2023, (The certificate); "Study of design and industrial implementation of a hybrid model-free adaptive fuzzy controller", no. RGII/INT/2607/23.06.2023 - RGII/IES/2607/20.07.2023 (The certificate) and "Study of design and industrial implementation of a fuzzy controller with proportional-derivative indirect iterative learning", no. RGII/INT/3514/29.08.2023 - RGII/IES/3514/28.09.2023 (The certificate).

These publications and certificates attest to my dedication to advancing knowledge and innovation in control theory and applied informatics.

Reviewing **(http://www.aut.upt.ro/~raul.roman/reviewing.html):**

I am committed to contributing to the advancement of my field through my reviewing activities, which include conference and journal reviewing.

I have served as a representative conference reviewer for esteemed events such as: 27th International Conference on System Theory, Control and Computing (ICSTCC2023), The 31st Mediterranean Conference on Control and Automation (MED2023), 21st European Control Conference (ECC), IEEE International Conference on Fuzzy Systems 2021, IEEE World Congress on Computational Intelligence (WCCI) 2020, 28th Mediterranean Conference on Control and Automation (MED'2020), 2019 American Control Conference, 2019 IEEE International Conference on Fuzzy Systems, 2019 IEEE International Conference on Systems, Man, and Cybernetics, 22nd International Conference on Control Systems and Computer Science 2019.

I have also contributed as a representative journal reviewer for prestigious publications including: IEEE Transactions on Automatic Control, IEEE Transactions on Cybernetics, IEEE Transactions on Industrial Electronics, IEEE Transactions on Industrial Informatics, IEEE Transactions on Fuzzy Systems, IEEE Transactions on Neural Networks and Learning Systems, IEEE Systems, Man, and Cybernetics Magazine, IEEE Access, International Journal of Distributed Sensor Networks, International Journal of Systems Science, Mechanical Systems and Signal Processing.

My involvement in reviewing activities underscores my commitment to upholding the standards of excellence in research and scholarship, and my dedication to contributing to the dissemination of high-quality scientific work. These reviewing activities reflect my ongoing engagement with the scholarly community and my commitment to advancing knowledge in my field.

Service and Member of Scientific and Technical Societies
(http://www.aut.upt.ro/~raul.roman/MemberScientificTechnicalSocieties.html):

Activity between 2019-2023

I am deeply involved in various capacities within scientific and technical societies, contributing to the advancement of my field and fostering collaboration within the research community. My service and memberships include that since 2023 I have served as a member of the International Program Committee for prestigious conferences such as the ICINCO (International Conference on Informatics in Control, Automation and Robotics) and FCTA (International Conference on Fuzzy Computation Theory and Applications). This role involves evaluating submissions, shaping conference programs, and ensuring the quality of scientific content. I have been actively involved in organizing major conferences, including the 27th and 23rd International Conferences on System Theory, Control and Computing. My contributions to the organizing committee help ensure the smooth execution of these vital academic events in 2019 and 2023, respectively. I am a proud member of esteemed organizations such as IEEE (Institute of Electrical and Electronics Engineers) since 2015, INSTICC (Institute for Systems and Technologies of Information, Control and Communication) since 2019, and the Romanian Society of Control Engineering and Technical Informatics since 2015 (aut.upt.ro). These memberships provide me with valuable opportunities for networking, collaboration, and professional development.

7. Curriculum Vitae – team member 3 – Raul-Cristian Roman

From 2021 to 2022, I served as a member of the Early Career Advisory Board of Control Engineering Practice (CEP), contributing insights and perspectives to support early-career professionals in the field.

Activity before 2019

I have been actively engaged with IEEE, serving as a member of the Young Professionals Subcommittee at the Systems, Man, and Cybernetics Society from 2018 to 2020 (ieeesmc.org), and previously as a member of the IEEE Student Activities Subcommittee at the same society from 2015 to 2017 (ieeesmc.org).

My involvement in these roles and memberships underscores my dedication to advancing research, fostering collaboration, and promoting excellence within the scientific community. These services and memberships reflect my commitment to contributing to the advancement of my field and to fostering collaboration and excellence within the scholarly community.

Teaching activities **(https://www.aut.upt.ro/~raul.roman/Teaching.html):**

Since 2015, I have been actively involved in teaching a diverse range of disciplines, contributing to the education and development of students across various programs. My teaching activities include Process Control Structures and Algorithms: I lead laboratories and projects as part of the B.Sc. program in Automation and Applied Informatics, guiding students in understanding and implementing essential control techniques. Control Engineering: Through laboratories and projects in the B.Sc. program in Automation and Applied Informatics, I help students explore the principles and applications of control engineering in real-world systems. System Theory and Automatization: I conduct laboratory sessions for the B.Sc. program in Computer and Information Technology, introducing students to fundamental concepts in system theory and automation. Optimization Techniques: In the laboratories of the B.Sc. program in Automation and Applied Informatics, I guide students in applying optimization techniques to solve engineering problems efficiently. Elements of Automatic Control: I deliver lectures and laboratories as part of the B.Sc. program in Power Systems, providing students with a comprehensive understanding of automatic control principles. Automatic Control Technique: Through laboratories in the B.Sc. program in Electrical Engineering, I facilitate hands-on learning experiences to deepen students' understanding of control techniques. Computer Assisted Mathematics: I teach lectures and laboratories in the B.Sc. programs in Automation and Applied Informatics, Computer and Information Technology, and Informatics, leveraging computational tools to enhance mathematical understanding. Optimization in Machine Learning: In the laboratories of the M.Sc. program in Machine Learning and Automotive Embedded Software, I guide students in applying optimization methods to enhance machine learning algorithms. Control Systems in Vehicles: I deliver lectures, laboratories, and projects in the M.Sc. program in Automatic Systems Engineering, focusing on control systems specific to automotive applications. Advanced Controlled Systems: Through laboratories and projects in the M.Sc. program in Automatic Systems Engineering, I help students explore advanced control techniques and their applications. Mathematical Signal Processing: In the laboratories and projects of the M.Sc. program in Informatics Systems Applied to Manufacturing and Services, I assist students in understanding and implementing mathematical signal processing algorithms. Intelligent Control in Automotive Embedded Systems: Conducting lectures, laboratories, and projects in English, I teach students in the M.Sc. program in Automotive Embedded Software about intelligent control techniques tailored for automotive applications.

My commitment to teaching extends beyond imparting knowledge; I strive to inspire students and cultivate a passion for learning and innovation in their academic journey. These teaching activities highlight my dedication to educating and empowering the next generation of engineers and researchers.

7. Curriculum Vitae – team member 4 – Alexandra-Iulia SZEDLAK-STÎNEAN

CURRICULUM VITAE

My name is Alexandra-Iulia SZEDLAK-STÎNEAN, and I was born on the 31st of July, 1984, in Romania. As a dedicated member of the academic community, my professional and academic journey is rooted in the prestigious Politehnica University of Timisoara, where I currently hold the position of Vice-Dean at the Faculty of Automation and Computers. My career developed at the same institution within the Department of Automation and Applied Informatics, located on Bd. V. Parvan no. 2, Timisoara, Romania.

My academic path began with my undergraduate studies in Mathematics-Informatics at the "Aurel Vlaicu" Theoretical High School, Orastie, Romania, from 1999 to 2003. I then advanced to earn my Diploma Engineer in Systems and Computer Engineering from 2003 to 2008 and subsequently my Master of Science in Automatic Systems at the Politehnica University of Timisoara. Afterwards, I obtained a Ph.D. in Systems Engineering from 2010 to 2014, focusing on the intersection of Automation and Applied Informatics by developing practical solutions in the field.

Since December 2022, I have been entrusted with the esteemed role of Vice-Dean at the Faculty of Automation and Computers at the Politehnica University of Timisoara. This position entails a significant responsibility as I oversee various academic and administrative processes within the faculty. My duties range from developing curriculum reforms to fostering an environment conducive to research and innovation. I also serve as an advisor and mentor, guiding both staff and students toward achieving our shared educational objectives. Parallel to my administrative duties, I continue to fulfill my passion for teaching as a Lecturer within the Department of Automation and Applied Informatics, a role I have held since February 2018. My lectures span a diverse array of subjects within automation and informatics, and I am deeply involved in shaping the educational journey of my students through a hands-on approach that bridges theoretical knowledge with practical application. From 2015 to 2018, I embraced the role of Assistant Lecturer at the same department, where I began honing my pedagogical skills. During this period, I was responsible for conducting seminars and laboratory sessions, contributing to the department's research output, and assisting in the supervision of student projects. This phase of my career was instrumental in developing my teaching philosophy and research trajectory. Early in my career, between 2010 and 2012, I took on the role of a Teacher of Informatics and Information Technology and Communications at the National College "Constantin Diaconovici Loga" in Timisoara. Educating high school students presented a unique set of challenges and rewards, allowing me to refine my ability to communicate complex concepts in a relatable and engaging manner. It was during this time that I solidified my commitment to fostering a future generation equipped with the digital literacy and computational thinking skills necessary for the modern world. In each of these roles, I have not only imparted knowledge but also learned immensely from my interactions with students and peers. I take pride in my contribution to the academic community and am continuously inspired by the potential and dedication of my students. As I reflect on my journey thus far, I remain committed to excellence in education, research, and leadership within the field of automation and computer science.

My research interests span a broad array of control structures and algorithms, including but not limited to conventional control, fuzzy control, neuro-fuzzy control, predictive control, adaptive control, and sliding mode control. I am particularly fascinated by the practical applications of these controls in mechatronics systems, servo-systems, and electrical drives.

Furthermore, my work delves into the innovative realms of nature-inspired optimization, as well as linear and nonlinear observers-based control structures applied to mechatronics systems.

I am a proud member of several scientific and technical societies, such as the Romanian Society of Automation and Technical Informatics (SRAIT) and the Robotics Society of Romania (SRR). Since 2015, I've been affiliated with the IEEE, taking an active role in International Symposiums on Applied Computational Intelligence and Informatics (SACI) since 2018, and contributing to the International Conference on System Theory, Control, and Computing (ICSTCC) since 2019.

Throughout my academic career, I have diligently focused on contributing to the field of Automation and Applied Informatics through extensive research and publication. I am proud to have achieved a cumulative **impact factor (IF) of 51.7** on the **Clarivate Analytics Web of Science**, formerly known as the ISI Web of Knowledge. This impact factor is a testament to the relevance and influence of my scholarly work within the scientific community. My contributions to literature include authoring **6 book chapters**, which allowed me to delve deeply into specialized topics, sharing my knowledge and insights with students, researchers, and professionals alike. Furthermore, my efforts have resulted in **8 papers** being **published in journals indexed by the Clarivate Analytics Web of Science**. These papers discuss a variety of topics within my field and contribute to the ongoing dialogue in the world of automation and informatics. In addition to journal articles, I have presented over **60 papers at refereed academic conferences**, which you can explore in detail through my professional webpage (https://www.aut.upt.ro/~alexandra-iulia.stinean/). These conference papers provide a platform for me to disseminate my research findings to peers and to engage in stimulating discussions about emerging technologies and methodologies. My scholarly impact is further evidenced by the **1121 citations** my work has received, as recorded by **Google Scholar**. This recognition from fellow researchers has contributed to an **h-index** of **15** and an **i10-index** of **28**, indicating a consistent production of high-impact research. For more details, you can view my **Google Scholar profile** (https://scholar.google.com/citations?user=64I6y8EAAAAJ&hl=ro&oi=ao). In the **Thomson Reuters Web of Science**, another prestigious scientific index, my articles have been **cited 674** times, which has earned me an **h-index** of **11** according to their metrics. This can be further explored on my researcher profile (https://publons.com/researcher/2177844/alexandra-iulia-szedlak-stinean/). Moreover, my presence in the **Scopus** database is marked by **925 citations** across **78 Scopus articles**, reflecting an **h-index** of **13**, as per Scopus' records. You can find more about my Scopus contributions by visiting my author profile (https://www.scopus.com/authid/detail.uri?authorId=42262793300). Lastly, my commitment to transparency and accessibility in research is highlighted by my ORCID, where all my works are meticulously cataloged. You can access my **ORCID** record at https://orcid.org/0000-0002-1572-2060, which serves as a hub for my research identity. This narrative of my academic contributions is a reflection of my dedication to advancing knowledge through scholarly research and publication. The impact factor, citations, and indexes stand as quantifiable measures of the influence and reach of my work, while the links provided offer a gateway for those who wish to delve into the specifics of my research endeavors.

In my academic endeavors, I have achieved during **2019-2023** a notable cumulative **impact factor** (IF) of **40.3**. This figure represents the average number of citations received per paper published in my field and is a strong indicator of the influence my research has in the academic community. It is a measure of distinction, reflecting the quality and significance of my scholarly contributions. Equally significant is my **Cumulative Article Influence Score (AIS)**: A = 0.651/7+0.272/5+0.651/7+0.302/7+0.453/6+0.349/5+1.276/6+0.720/5 = 0.785, which stands at

0.785. This score is calculated through a meticulous process where each of my papers in a respective journal is weighted by the journal's overall prestige, as represented by its own impact factor. I am particularly proud of my work that has been recognized in the top quartile of journals in my field. According to the Article Influence Score of 2022, as reported in the Journal Citation Reports (JCR) as of June 2023, **one of my papers** has been classified in the prestigious **Q1 quartile**, signifying it as one of the highest-impact papers in its category. Additionally, **three of my papers** have been placed in the **Q2 quartile**, indicating a significant level of influence within the academic community. My research has not only been theoretical but also applied, as evidenced by my involvement in **4 national research contracts and grants** in the field of automatic control. I have had the honor of serving as the **director for one of these projects**. Furthermore, my international research engagements have been equally enriching. From **2023 to 2025**, I am part of an international research contract with Zhejiang University in China. This collaborative effort brings together a consortium of esteemed international institutions and companies, including the Swedish National Road and Transport Research Institute, Chalmers University of Technology, Chongqing University, The Hong Kong Polytechnic University Shenzhen Research Institute, WSP Sverige AB, FellowBot AB, Hangzhou Comprehensive Transportation Center, and Enjoyor Ltd Co. My role in this diverse team is to contribute my expertise, collaborate on groundbreaking research, and develop innovative solutions in the realm of automatic control. This information underscores my commitment to contributing to the body of knowledge in my field through high-impact research and practical, real-world applications in automation and control.

In the landscape of my academic journey, I have had the privilege of being recognized for my contributions to the field. One moment of such recognition was when a paper that I co-authored received the **Best Paper Award** at the *7th International Conference on Information Technology and Quantitative Management* (ITQM 2019), held in Granada, Spain. My role as a leader in academic discussions has often put me at the helm of conference sessions. Notably, I served as the Session Co-Chair at the *9th Asian Control Conference* (ASCC 2013) in Istanbul, Turkey. I continued to hold significant positions in subsequent conferences, such as the Session Chair at the *14th International Conference on Informatics in Control, Automation, and Robotics* (ICINCO 2017) in Madrid, Spain and at the *9th International Conference on Computers, Communications, and Control* (ICCCC 2022), which took place in Băile Felix, Oradea, Romania. More recently, at the *9th International Conference on Control Decision and Information Technologies* (CoDIT 2023) which took place in Rome, Italy, I once again took on the role of Session Chair for two sessions. In this capacity, I guided critical discussions on the intertwining realms of computers, communications, and control systems, ensuring that the conference's objectives were met and that participants benefited from a well-structured and thought-provoking session. These experiences have not only been accolades that I hold dear but have also been opportunities for me to engage with the international research community, to learn from my peers, and to contribute to the collective advancement of our understanding of technology and its applications.

From **2023 to 2025**, I am deeply engaged as a member of a significant research grant focused on *Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity* (e-MATS). The project is a collaborative effort with a substantial budget of 699469 EUR allocated to European partners, of which 250000 EUR is directed to our team at the Politehnica University of Timisoara (UPT). Our Chinese partners are supported with 4000000 RMB, equivalent to 510509.63 EUR. I am working under the guidance of the project director for China, Prof. Sheng Jin from Zhejiang University. The consortium boasts a robust partnership

with various esteemed institutions and companies including the Swedish National Road and Transport Research Institute, Chalmers University of Technology, Chongqing University, The Hong Kong Polytechnic University Shenzhen Research Institute, WSP Sverige AB, FellowBot AB, Hangzhou Comprehensive Transportation Center, and Enjoyor Ltd Co. This project is part of the JPI Urban Europe ERA-Net Co-fund on Urban Accessibility and Connectivity (EN-UAC) within the Sino-European call. The director coordinator for Europe is Prof. Dr. Eng. Radu-Emil PRECUP from UPT. For more information about this transformative project, please visit the project website (project website, link). In the period of **2021 to 2023**, I was involved as a member in a national research grant titled "*Data-driven fuzzy control with experimental validation*". This project was endowed with a budget of 243000 EUR and was financed by the Executive Agency for Higher Education, Research, Development, and Innovation Funding (PCE, UEFISCDI). The project director was Prof. Radu-Emil PRECUP from UPT. For insights, please visit the project website (project website, link). Between **2020 and 2022**, I contributed as a member to another national research grant called "*Fuzzy controllers for shape memory alloys systems*", with funding of 89000 EUR from UEFISCDI. The project director was Assoc. Prof. Claudia-Adina Bojan-Dragos from UPT. For further details on the outcomes and progress of this research, please visit the project website (project website, link). In a more leading capacity, from **December 2021 to November 30, 2022**, I took on the role of director and project coordinator for the research contract titled "*Nonlinear Observers-based control structures applied to mechatronic Systems (NOBSMECS)*", with a funding of 220,169 lei. For a comprehensive look at the project's scope and impact, please visit the project website (project website, link). From **October 2018 to September 2019**, I also directed and coordinated the research contract mentioned above. During 01.10.2019 - 30.11.2021 the contract was suspended, the reason for the interruption being the entry into maternity leave. From **2015 to 2017**, I was part of a national research grant aimed at "*Learning techniques for improving control systems performance using model-free approaches*", with funding of 83114 EUR from UEFISCDI. The project director was Lect. Mircea-Bogdan Radac from UPT. To learn more about our approaches and findings, please visit the attached link (link). From **2014 to 2017**, I participated as a member of the UPT partner team in several research projects. One such project was dedicated to creating an "*Experimental model for an automatic capacitive compensator designed for improving the power factor and for load balancing in low-voltage electricity distribution networks (CAEREDJT)*", under the direction of Assoc. Prof. Adrian Pana at UPT. Another project I contributed to focused on "*Advanced control systems for bioprocesses in the food industry (ADCOSBIO)*", with funding of 238637 EUR from a national joint applied research project (PCCA, UEFISCDI), directed by Prof. Dan Selisteanu from the University of Craiova and coordinated at UPT by Prof. Radu-Emil Precup. A further project was the "*Advanced control system of a biorefinery plant (BIOCON)*", with funding of 284091 EUR from PCCA, UEFISCDI, directed by Prof. Sergiu Caraman from the "Lower Danube" University of Galati and coordinated at UPT by Prof. Radu-Emil Precup. For additional insights into these projects, please visit the attached links (link), (link), and (link). From **2012 to 2016**, I was engaged as a member of the Politehnica University of Timisoara (UPT) team in a significant research project named "*Software products based on artificial intelligence algorithms applied to modeling and optimization of chemical systems (AISoftChim)*". This endeavor, funded with 362,903 EUR by the Partnership in Priority Areas Program (PCCA) of the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), was directed by Prof. Silvia Curteanu from the "Gheorghe Asachi" Technical University of Iasi. At UPT, our team was led by Prof. Radu-Emil Precup. For more information about this project please visit the project website (link and link). In a similar timeframe, from **2011 to 2016**, I

contributed as a member of UPT in another pivotal research project titled "*New performance improvement techniques of control systems using experiment-based tuning*". With a grant of 339,907 EUR from the national exploratory research program (PCE) of UEFISCDI, we aimed to pioneer novel methods to enhance the performance of control systems. This project was under the astute direction of Prof. Radu-Emil Precup, and it focused on integrating experimental tuning with theoretical frameworks to push the boundaries of how control systems can be optimized in real-world applications (link). Each of these projects not only allowed me to delve into new research areas but also to collaborate with a diverse team of experts, enhancing my own understanding and contributing to the broader field. Leading and coordinating research, as well as working as a team member on various grants, has profoundly enriched my professional experience and academic contributions.

Throughout my career, I've been privileged to teach and supervise the next generation of engineers and computer scientists. My teaching portfolio includes courses such as *Multi-agent Systems*, *Computer Assisted Mathematics*, *Structures and Algorithms for Automatic Process Control*, *System Theory and Automatization* and *Robotics*, among others. I have supervised numerous bachelor's and master's theses in Systems Engineering, ensuring that my students are well-prepared for their future careers. My dedication extends to my involvement with the Research Center in Systems Engineering Automation at Politehnica University of Timisoara, where I have been a member since 2011.

This commitment to research and development continues to drive my professional pursuits, as I strive to contribute meaningfully to the field of automation and systems engineering. I am deeply committed to my professional growth and the contribution to my field. I continuously seek to enhance my knowledge and expertise to educate, innovate, and lead in the evolving landscape of systems engineering and automation.

7. Curriculum Vitae – team member 5 – Elena-Lorena HEDREA

CURRICULUM VITAE

Elena-Lorena HEDREA was born on 31 July 1992 in Râmnicu Vâlcea, Vâlcea, Romania. The **office address** is

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The educational background (https://www.aut.upt.ro/~lorena.hedrea/about.html) starts with the Baccalaureate degree, obtained in 2011, after having studied at the bilingual Romanian-French Natural Sciences Profile from 2007 to 2011 at *Alexandru Lahovari* College, Râmnicu Vâlcea, Romania. Starting with 2011 untill 2015 I was a student at the Faculty of Automation and Computers, Politehnica University Timsoara, where I obtained the Eng. degree, graduating in the field of Systems Engineering. In 2015 I started the master program at the Faculty of Automation and Computers, Politehnica University Timsoara, and I obtained the Master degree after graduating in the field of Automatic Systems Engineering in 2017. I was a Ph.D. student at the Politehnica University Timsoara, Faculty of Automation and Computers, supervised by Prof.dr.eng. Radu-Emil Precup, defending my thesis entitled "Tensor Product-based Model Transformation Used in Control System Modeling and Design", thesis grade Excellent (Summa cum Laude), in 2022 obtaining the Ph.D. title in Systems Engineering.

My work experience in 2019-2023 (https://www.aut.upt.ro/~lorena.hedrea/about.html) is presented as follows. Since 2020 I am an Assitant Lecturer with the Department of Automation and Applied Informatics, Faculty of Automation and Computers from Politehnica University Timisoara. In 2018-2020 I was a Research Assistant with the Department of Automation and Applied Informatics, with teaching activities at the Faculty of Automation and Computers, Politehnica University Timisoara.

My current research domains of interests include but are not limited at: design of control system structures and control algorithms in: conventional control, Tensor Product (TP) - based control, data - driven control, model - free control, fuzzy control, etc; mathematical signal processing; systems modeling, identification and optimization using nature inspired algorithms; design of control structures for mechatronic systems, mobile robots, servo systems, electrical systems, etc.

7. Curriculum Vitae – team member 5 – Elena-Lorena HEDREA

My overall publication results are presented as follows and are also given at (https://www.aut.upt.ro/~lorena.hedrea/publications.html). I am author or co-author of **12 Papers in International Journals** indexed in **Clarivate Analytics Web of Science (first author of 3 of the 12 papers); one book; one book chapter** and **35 Papers in International Refereed Academic Conferences.** The published papers received a total number of **657 citations** with **h-index = 12** și **i10-index = 16** according to Google Scholar (link); **334 citations** (without self-citations) **with h-index = 9** according to Clarivate Analytics Web of Science (link); **446 citations** (without self-citations) with **h-index = 10** according to Scopus (link) as of 7 February 2024.

The quantitative quality indices for the results of my research activity in 2019-2023 are presented as follows.

In 2019-2023 I was a co-author of **1 paper in ISI Journals, Q1 quartile according to AIS.**

The cumulative impact factor of the independent citations is **over 500** according to 2022 Journal Citation Reports published by Clarivate Analytics in 2023.

The cumulative Article Influence Score (**A**) of my 10 papers published in Web of Science indexed Journals in 2019-2023 is **A = 0.9017** and it is calculated as follows:

A = 1:0.170/3+2:0.651/7+3:0.453/6+4:0.390/5+5:0.390/4+6:0.272/5+7:0.302/5+8:0.302/6+9:0.651/6+ 10:1.276/6 = 0.056+0.1085+0.0755+0.078+0.0975+0.0544+0.0604+0.0503+0.1085+0.2126 = 0.9017.

My overall research contribution within research projects is given as follows.

Starting with 2023 I am a member in the research team of the project coordinator Europe, Politehnica University of Timisoara (UPT), Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang UniversityChina), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call). Information about the project can be found at https://jpi-urbaneurope.eu/project/e-mats/.

In 2021 – 2023 I was a member in the research team of the research project "Data-driven fuzzy control with experimental validation", 249844.58 EUR, national exploratory research grant (PCE, Executive Agency for Higher Education, Research, Development and Innovation Funding - UEFISCDI). Information about the project can be found at https://www.aut.upt.ro/~rprecup/grant2021.html.

In 2020 – 2022 I was member in the research team of the National Research Grant Human Resources Young Teams Research Projects 2019 entitled "Fuzzy controllers for shape memory alloys systems", 89000 EUR, financed by the Executive Agency for Higher Education, Research, Development and

Innovation Funding (TE, UEFISCDI). Information about the project can be found at https://www.aut.upt.ro/~claudia.dragos/TE2019.html.

In 2017 – 2018 I was a member in the research team of the research project "Research and development projects for young researchers PCD-TC-2017", entitled "Tensor product model transformation-based adaptive control techniques with mechatronics applications", 10000 EUR, competition organized and financed by Politehnica University Timisoara.

My contribution as a reviewer is illustrated as follows. In 2019-2023 I served as a reviewer for International Prestigious Journals and Conferences such as: **IEEE Control Systems Letters**; European Control Conference (**ECC, 2023**), the IEEE Conference on Control Technology and Applications (**CCTA**), the IEEE/IFAC 9th International Conference on Control, Decision and Information Technologies (**CoDIT, 2023**), the 27th International Conference on System Theory, Control and Computing (**ICSTCC, 2023**) and the IEEE/IFAC 8th 2022 International Conference on Control, Decision and Information Technologies (**CoDIT, 2022**).

In 2019-2023 I was a recipient of two awards. More exactly in **2019** I was a recipient of the *Research Excellence Award* from the Politehnica University Timisoara (link) and in **2023** I was a recipient of the *Tudor Tanasescu Award* from the **Romanian Academy**, for the group of 3 papers generically entitled "Modeling and control using Tensor Product Model Transformation" (link).

CURRICULUM VITAE

Iuliu Alexandru Zamfirache was born in Suceava, Romania, on 19 November 1992. He received a Bachelor's degree in Computer Science in June 2016 from the Politehnica University of Timisoara. He also got the Master's degree in Software Engineering from the same university in July 2018.

In October 2018 he started pursuing a PhD title at the same university within the AAI department, studying the application of Reinforcement Learning techniques combined with nature-inspired algorithms in optimal control tasks.

Between October 2016 and October 2018, he was a teacher assistant in the same university, covering the laboratory part for topics such as Operating Systems and Complex Software Systems Design.

His research activity consists in publishing or contributing to the following papers:

- Zamfirache, I. A., Precup, R. E., Roman, R. C., & Petriu, E. M. (2022). Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm. *Information Sciences*, *585*, 162-175.
- Zamfirache, I. A., Precup, R. E., Roman, R. C., & Petriu, E. M. (2022). Reinforcement Learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system. *Information Sciences*, *583*, 99-120.
- Zamfirache, I. A., Precup, R. E., Roman, R. C., & Petriu, E. M. (2023). Neural Network-based control using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with experimental servo system validation. *Expert Systems with Applications*, *225*, 120112.
- Zamfirache, I. A., Precup, R. E., & Petriu, E. M. (2023). Q-learning, policy iteration and actor-critic reinforcement learning combined with metaheuristic algorithms in servo system control. *Facta Universitatis, Series: Mechanical Engineering*, *21*(4), 615-630.
- R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Using Weighted Recursive Least Squares Algorithm for Identification, Proceedings of 2019 IEEE International Symposium on Robotic and Sensors Environments ROSE 2019, Ottawa, ON, Canada, pp. 164-169, 2019.
- R.-C. Roman, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragoş and E. M. Petriu, Iterative Feedback Tuning Algorithm for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 199, pp. 157-165, 2022.

The cumulative research papers influence score based on the listed papers is 1.2.

Besides the researcher role, Iuliu is also working as a software engineer, currently having 10 years of experience working within different tech companies, currently at Carl Zeiss MES Solutions starting on May 2023, e-spres-oh for 2 years, Arriver for 3 years and Intelligent Software Systems for 5 years. Iuliu is currently living in Timisoara, Romania.

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

This list includes only the joint publications with at least two authors from the research team. The individual lists of publications include many other valuable publications from the successful cooperation of the research team.

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals (2019-2023)

1. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, International Journal of Systems Science (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023, **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (www.tandfonline.com).
2. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, Expert Systems with Applications (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276 (www.sciencedirect.com).
3. A.-I. Borlea, R.-E. Precup (corresponding author) and R.-C. Roman, Discrete-time model-based sliding mode controllers for tower crane systems, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 21, no. 1, pp. 1-20, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (casopisi.junis.ni.ac.rs).
4. I. A. Zamfirache, R.-E. Precup (corresponding author) and E. M. Petriu, Q-learning, policy iteration and actor-critic reinforcement learning combined with metaheuristic algorithms in servo system control, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 21, no. 4, pp. 615-630, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q21 quartile, Article Influence Score (AIS) = 0.651 (casopisi.junis.ni.ac.rs).
5. R.-C. Roman, R.-E. Precup (corresponding author), E. M. Petriu and M. Muntyan, Fictitious Reference Iterative Tuning of Discrete-Time Model-Free Control for Tower Crane Systems, Studies in Informatics and Control (ICI Bucharest), vol. 32, no. 1, pp. 5-14, 2023, impact factor (IF) = 1.6, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204 (sic.ici.ro).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, Information Sciences (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science as of September/October 2023, Hot Paper**

according to Clarivate Analytics Web of Science as of November/December 2022 (www.sciencedirect.com).

7. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, Information Sciences (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science as of September/October 2023** (www.sciencedirect.com).
8. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, Expert Systems with Applications (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276 (www.sciencedirect.com).
9. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, A low-cost approach to data-driven fuzzy control of servo systems, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 20, no. 1, pp. 21-36, 2022, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9 (Engineering, Mechanical, red zone (Q1)), Article Influence Score (AIS) = 0.651, Q2 quartile AIS 2022 (conform JCR iunie 2023) (casopisi.junis.ni.ac.rs).
10. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, C.-A. Bojan-Dragoş, M.-M. Damian and M.-L. Nedelcea, Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems, International Journal of Computers Communications & Control, vol. 17, no. 1, 4623, pp. 1-18, 2022, impact factor (IF) = 2.7, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro).
11. R.-E. Precup, R.-C. David, R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, Slime mould algorithm-based tuning of cost-effective fuzzy controllers for servo systems, International Journal of Computational Intelligence Systems (Atlantis Press), vol. 14, no. 1, pp. 1042-1052, 2021, impact factor (IF) = 1.736, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.9, Q4 quartile, Article Influence Score (AIS) = 0.349, , **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (www.atlantis-press.com).
12. R.-C. Roman, R.-E. Precup (corresponding author) and E. M. Petriu, Hybrid Data-Driven Fuzzy Active Disturbance Rejection Control for Tower Crane Systems, European Journal of Control (Elsevier), vol. 58, pp. 373-387, 2021, impact factor (IF) = 2.395, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.4, Q3 quartile, Article Influence Score (AIS) = 0.696, **Highly Cited Paper according to Clarivate Analytics Web of Science as of September/October 2023**, **Hot Paper according to Clarivate Analytics Web of Science as of July/August 2022** (www.sciencedirect.com) https://www.sciencedirect.com, (Highly Cited Papers according to Clarivate Analytics Web of Science in March/April 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in July/August 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in September/October 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in November/December 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in January/February

2022, Hot Papers according to Clarivate Analytics Web of Science in September/October 2021).

13. E.-L. Hedrea, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Tensor product-based model transformation approach to tower crane systems modeling, Asian Journal of Control (Wiley), vol. 23, no. 3, pp. 1313-1323, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390, **Top Cited Article in 2020-2021 and 2021-2022 according to Wiley** (onlinelibrary.wiley.com).
14. E.-L. Hedrea, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragoş and C. Hedrea, Tensor product-based model transformation approach to cart position modeling and control in pendulum-cart systems, Asian Journal of Control (John Wiley and Sons), vol. 23, no. 3, pp. 1238-1248, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Article Influence Score (AIS) = 0.390, Q3 quartile AIS 2022 (conform JCR iunie 2023) (onlinelibrary.wiley.com).
15. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiment-Based Approach to Teach Optimization Techniques, IEEE Transactions on Education, vol. 64, no. 2, pp. 88-94, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Q3 quartile, Article Influence Score (AIS) = 0.453 (ieeexplore.ieee.org).
16. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu and C.-A. Bojan-Dragoş, Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 16, no. 1, 4076, pp. 1-17, 2021, impact factor (IF) = 2.635, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro).
17. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 24, no. 4, pp. 353-365, 2021, impact factor (IF) = 0.852, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5 (Computer Science, Theory & Methods, yellow zone (Q2)), Article Influence Score (AIS) = 0.272, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.romjist.ro).
18. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, IEEE Transactions on Instrumentation and Measurement, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science as of September/October 2023** (ieeexplore.ieee.org).
19. R.-E. Precup, R.-C. Roman, T.-A. Teban, A. Albu, E. M. Petriu and C. Pozna, Model-Free Control of Finger Dynamics in Prosthetic Hand Myoelectric-based Control Systems, Studies in Informatics and Control (ICI Bucharest), vol. 29, no. 4, pp. 399-410, 2020, impact factor (IF) = 1.649, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204 (sic.ici.ro).
20. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M. L. Tomescu, R.-C. David, A.-I. Szedlak-Stînean and R.-C. Roman, Grey Wolf Optimizer-Based Approaches to Path Planning

and Fuzzy Logic-based Tracking Control for Mobile Robots, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 15, no. 3, 3844, pp. 1-17, 2020, impact factor (IF) = 2.293, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302 (univagora.ro/jour/).

21. R.-E. Precup, S. Preitl, E. M. Petriu, R.-C. Roman, C.-A. Bojan-Dragoş, E.-L. Hedrea and A.-I. Szedlak-Stînean, A center manifold theory-based approach to the stability analysis of state feedback Takagi-Sugeno-Kang fuzzy control systems, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (casopisi.junis.ni.ac.rs).
22. E.-L. Hedrea, R.-E. Precup and C.-A. Bojan-Dragoş, Results on Tensor Product-based Model Transformation of Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 16, no. 9, pp. 93-111, 2019, impact factor (IF) = 1.219, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Q4 quartile, Article Influence Score (AIS) = 0.170 (www.uni-obuda.hu/journal/).
23. A. Albu, R.-E. Precup and T.-A. Teban, Results and Challenges of Artificial Neural Networks Used for Decision-Making in Medical Applications, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 17, no 4, pp. 285-308, 2019, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (casopisi.junis.ni.ac.rs).

Books

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., CRC Press, Taylor & Francis, Boca Raton, FL, USA, 289 pp., 2021, voted by the Editorial Board of CRC Press as 2021 **Outstanding Title in STEM** (www.routledge.com).
2. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, Fuzzy Control Systems with Mechatronics Applications (in Romanian: Sisteme de reglare fuzzy cu aplicatii mecatronice), Editura Politehnica, Timisoara, 162 pp., 2022.

Book chapters

1. A. Albu, R.-E. Precup and T.-A. Teban, Intelligent Paradigms for Diagnosis, Prediction and Control in Healthcare Applications, in: Handbook of Artificial Intelligence in Healthcare, Vol. 2: Practicalities and Prospects, C.-P. Lim, Y.-W. Chen, A. Vaidya, C. Mahorkar and L. C. Jain, Eds., Springer, Cham, Intelligent Systems Reference Library, vol. 212, pp. 3-41, 2022 (link.springer.com, link.springer.com).
2. R.-E. Precup, E.-I. Voişan, R.-C. David, E.-L. Hedrea, E. M. Petriu, R.-C. Roman and A.-I. Szedlak-Stînean, Nature-inspired optimization algorithms for path planning and fuzzy tracking control of mobile robots, in: Applied Optimization and Swarm Intelligence, E. Osaba and X.-S. Yang, Eds., Springer Tracts in Nature-Inspired Computing, Springer, Singapore, pp. 129-148, 2021 (link.springer.com, link.springer.com).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

Papers in refereed journals / contributions to books (2019-2023)

1. R.-C. Roman, R.-E. Precup and E.-L. Hedrea, Intelligent Proportional Controller Tuned by Virtual Reference Feedback Tuning and Fictitious Reference Iterative Tuning, Procedia Computer Science (Elsevier), vol. 221, pp. 86-93, 2023 (www.sciencedirect.com).
2. C.-B. Gale-Cazan, C.-A. Bojan-Dragoş, R.-E. Precup (corresponding author), R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, GWO-based Modeling of an Unstable Transport System, Proceedings of 9th International Conference on Information Technology and Quantitative Management ITQM 2022, Beijing and Zhangjiakou, China, 2022, Procedia Computer Science (Elsevier), vol. 214, pp. 195-202, 2022, indexed in sciencedirect (www.sciencedirect.com).
3. R.-C. Roman, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragoş and E. M. Petriu, Iterative Feedback Tuning Algorithm for Tower Crane Systems, Proceedings of 8th International Conference on Information Technology and Quantitative Management ITQM 2020 & 2021, Chengdu, China, 2021, Procedia Computer Science (Elsevier), vol. 199, pp. 157-165, 2022, indexed in Clarivate Analytics Web of Science (www.sciencedirect.com).
4. R.-E. Precup, S. Preitl, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean, R.-C. Roman and E.-L. Hedrea, Model-Based Fuzzy Control Results for Networked Control Systems, Reports in Mechanical Engineering (Regional Association for Security and Crisis Management, European Centre for Operational Research), vol. 1, no. 1, pp. 10-25, 2020 (www.frontpres.rabek.org).
5. R.-C. Roman, R.-E. Precup, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 162, pp. 267-274, 2019 (www.sciencedirect.com) (**Best Paper Award**).
6. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, TP-based model transformation and gain-scheduling control of electromagnetic actuated clutch systems, Journal of Engineering Sciences and Innovation (Technical Sciences Academy of Romania), vol. 4, no. 3, pp. 301-312, 2019 (jesi.astr.ro).

Published contributions in refereed academic conferences (2019-2023)

1. R.-C. Roman, R.-E. Precup, E. M. Petriu, M. Muntyan and E.-L. Hedrea, Fictitious Reference Iterative Tuning of Intelligent Proportional-Integral Controllers for Tower Crane Systems, Proceedings of 31st Mediterranean Conference on Control & Automation MED'23, Limassol, Cyprus, pp. 740-746, 2023 (ieeexplore.ieee.org).
2. C.-A. Bojan-Dragoş, R.-E. Precup, A.-I. Szedlak-Stînean, R.-C. Roman, E.-L. Hedrea and E. M. Petriu, Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuators, Proceedings of 2023 European Control Conference ECC 2023, Bucharest, Romania, pp. 1-6, 2023, indexed in Clarivate Analytics Web of Science (ieeexplore.ieee.org).
3. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems, Proceedings of 57th Annual Conference on Information Sciences and Systems CISS 2023, Baltimore, MD, USA, pp. 1-6, 2023 (ieeexplore.ieee.org).
4. C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and M. Muntyan, PI and Super Twisting Sliding Mode with Smith Predictor Control Structures for SMA

Actuators, Proceedings of 32nd International Symposium on Industrial Electronics ISIE 2023, Helsinki-Espoo, Finland, pp. 1-7, 2023, indexed in Scopus (ieeexplore.ieee.org).

5. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman and E. M. Petriu, Discrete-time Observers for a Mechatronics System with PID Controllers Tuned Using SMA, Proceedings of 32nd International Symposium on Industrial Electronics ISIE 2023, Helsinki-Espoo, Finland, pp. 1-8, 2023 (ieeexplore.ieee.org).
6. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman, E. M. Petriu and E.-L. Hedrea, SMA-Based Tuning of PI Controller Using Takagi Sugeno Fuzzy Observers for an Electromechanical System with Variable Parameters, Proceedings of 9th International Conference on Control, Decision and Information Technologies CoDiT 2023, Rome, Italy, pp. 1761-1768, 2023 (ieeexplore.ieee.org).
7. R.-C. Roman, R.-E. Precup and E.-L. Hedrea, Intelligent Proportional Controller Tuned by Virtual Reference Feedback Tuning and Fictitious Reference Iterative Tuning, Proceedings of 10th International Conference on Information Technology and Quantitative Management ITQM 2023, Oxford, UK, 2023, Procedia Computer Science (Elsevier), vol. 221, pp. 86-93, 2023, indexed in Scopus (www.sciencedirect.com).
8. E.-L. Hedrea, R.-E. Precup, R.-C. Roman and C. Hedrea, Tensor Product-based and State Feedback Control Solutions for Cart Position Control of Pendulum-Cart Systems, Proceedings of 27th International Conference on System Theory, Control and Computing ICSTCC 2023, Timisoara, Romania, pp. 12-17, 2023, indexed in ieeexplore (ieeexplore.ieee.org).
9. A.-I. Borlea, R.-E. Precup and R.-C. Roman, Two Discrete-Time Data-Driven Sliding Mode Controllers for Tower Crane Systems, Proceedings of 27th International Conference on System Theory, Control and Computing ICSTCC 2023, Timisoara, Romania, pp. 239-244, 2023, indexed in ieeexplore (ieeexplore.ieee.org).
10. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E.-M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and F.-C. Paulescu, AVOA-Based Tuning of Low-Cost Fuzzy Controllers for Tower Crane Systems, Proceedings of 2022 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2022, Padova, Italy, pp. 1-8, 2022 (ieeexplore.ieee.org).
11. C.-A. Bojan-Dragoş, R.-E. Precup, E. M. Petriu, R.-C. Roman, E.-L. Hedrea and A.-I. Szedlak-Stînean, GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators, Proceedings of 6th IFAC International Conference on Intelligent Control and Automation Sciences ICONS'22, Cluj-Napoca, Romania, 2022, IFAC-PapersOnLine, vol. 55, no. 15, pp. 39-44, 2022 (www.sciencedirect.com).
12. R.-E. Roman, R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and E.-L. Hedrea, Data-Driven Control Algorithms for Shape Memory Alloys, Proceedings of 2022 IEEE Conference on Control Technology and Applications CCTA 2022, Trieste, Italy, pp. 1306-1312, 2022, indexed in INSPEC and Scopus (ieeexplore.ieee.org).
13. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and C. Hedrea, Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems, Proceedings of 48th Annual Conference of the IEEE Industrial Electronics Society IECON 2022, Brussels, Belgium, pp. 1-6, 2022, indexed in INSPEC and Scopus (ieeexplore.ieee.org).
14. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, GWO-Based Performance Improvement of PD-Type Iterative Learning Fuzzy Control of Tower Crane Systems, Proceedings of 2022 IEEE 31st International Symposium on Industrial Electronics ISIE 2022, Anchorage, AK, USA, pp. 1041-1046, 2022 (ieeexplore.ieee.org).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

15. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and E.-L. Hedrea, Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control, Proceedings of 2022 IEEE Symposium Series on Computational Intelligence SSCI 2022, Singapore, pp. 700-707, 2022, indexed in Clarivate Analytics Web of Science (ieeexplore.ieee.org).
16. R.-C. Roman, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, E.-L. Hedrea and E. M. Petriu, PI Controller Tuning via Data-Driven Algorithms for Shape Memory Alloy Systems, Proceedings of 1st IFAC Workshop on Control of Complex Systems COSY 2022, Bologna, Italy, 2022, IFAC-PapersOnLine, vol. 55, no. 40, pp. 181-186, 2022, indexed in Clarivate Analytics Web of Science (www.sciencedirect.com).
17. E.-L. Hedrea, R.-E. Precup, R.-C. Roman, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, C. Hedrea, Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems, Proceedings of 26th International Conference on System Theory, Control and Computing, pp. 195-200, 2022 (ieeexplore.ieee.org).
18. A.-I. Szedlak-Stînean, R.-E. Precup and R.-C. Roman, Linear and Nonlinear Observers Developed for Direct Current Electric Drive Systems, in: Intelligent Methods Systems and Applications in Computing, Communications and Control, 9th International Conference on Computers Communications and Control (ICCCC) 2022, Baile Felix, Romania, 2022, S. Dzitac, D. Dzitac, F. G. Filip, J. Kacprzyk, M. J. Manolescu and H. Oros (Eds.), Advances in Intelligent Systems and Computing, vol. 1435, Springer, Cham, pp. 107-119, 2023 (link.springer.com).
19. E.-L. Hedrea, R.-E. Precup, R.-C. Roman, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and C. Hedrea, Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems, Proceedings of 26th International Conference on System Theory, Control and Computing ICSTCC 2022, Sinaia, Romania, pp. 195-200, 2022, indexed in Clarivate Analytics Web of Science (ieeexplore.ieee.org).
20. Hedrea, E.-L., Precup, R.-E., Roman, R.-C., Petriu, E. M., Bojan-Dragoş, C.-A. and Hedrea, C. (2021). Tensor Product-Based Model Transformation Technique Applied to Servo Systems Modeling, Proceedings of 30th International Symposium on Industrial Electronics ISIE 2021, Kyoto, Japan, 1-6, indexed in IEEE Xplore (ieeexplore.ieee.org).
21. C.-A. Bojan-Dragoş, R.-E. Precup, S. Preitl, R.-C. Roman, E.-L. Hedrea and A.-I. Szedlak-Stînean, GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic Actuated Clutch Systems, Proceedings of 4th IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2021, Valenciennes, France, 2021, IFAC-PapersOnLine, vol. 54, no. 4, pp. 189-194, 2021 (www.sciencedirect.com).
22. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, R.-C. Roman and E. M. Petriu, Design of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity Based on Whale Optimization Algorithm, Proceedings of 2020 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2020, Glasgow, UK, pp. 1-6, 2020 (ieeexplore.ieee.org).
23. R.-C. Roman, R.-E. Precup, E.M. Petriu, R.-C. David, E.-L. Hedrea and A.-I. Szedlak-Stinean, "First-Order Active Disturbance Rejection-Virtual Reference Feedback Tuning Control of Tower Crane Systems," in Proc. of the 24th International Conference on System Theory Control and Computing (ICSTCC), Electr. Network, 2020, pp. 137-142, indexed in Clarivate Analytics Web of Science (link).
24. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, R.-C. Roman and Petriu E. M, "Fuzzy Control Systems with Reduced Parametric Sensitivity Design Based on Hybrid Grey Wolf Optimizer-Particle Swarm Optimization", 2020 24th International

Conference on System Theory, Control and Computing (ICSTCC), pp. 66-71, 2020 (link).

25. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stinean E. M. Petriu and R.-C. Roman, "Fuzzy Control Systems with Reduced Parametric Sensitivity Design Based on Hybrid Grey Wolf Optimizer–Particle Swarm Optimization," 24th International Conference on System Theory, Control and Computing (ICSTCC 2020), Sinaia, Romania, pp. 1-6, 2020, (https://ieeexplore.ieee.org).
26. R.-C. Roman, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragoş, V.-B. Vanya and M.-D. Rarinca, Second Order Active Disturbance Rejection Control - Virtual Reference Feedback Tuning for Twin Rotor Aerodynamic Systems, Proceedings of 2020 IEEE International Conference on Systems, Man, and Cybernetics SMC 2020, Toronto, ON, Canada, pp. 1693-1698, 2020 (ieeexplore.ieee.org).
27. R.-C. David, R.-E. Precup, S. Preitl, E. M. Petriu, A.-I. Szedlak-Stînean and R.-C. Roman, Whale Optimization Algorithm-Based Tuning of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity, Proceedings of 28th Mediterranean Conference on Control and Automation MED 2020, Saint-Raphael, France, pp. 440-445, 2020 (ieeexplore.ieee.org).
28. I. Panfilii, R.-E. Precup, R.-C. Roman and E. M. Petriu. "Wilt Dataset-based Comparative Analysis of Three Neural Networks," 12th International Conference on Electronics, Computers and Artificial Intelligence, Bucharest, Romania, pp. 1-6, 2020, (https://ieeexplore.ieee.org).
29. D. Komor, R.-C. Roman, R.-E. Precup, R.-C. David and I. Panfilii, "Models of Two-Wheeled Mobile Robots with Experimental Validation," 2020 IEEE 14th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, pp. 000211-000216, 2020, (https://ieeexplore.ieee.org).
30. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu and R.-C. Roman, Tensor Product-Based Model Transformation and Sliding Mode Control of Electromagnetic Actuated Clutch System, Proceedings of 2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019, Bari, Italy, pp. 1418-1423, 2019 (ieeexplore.ieee.org).
31. R.-C. Roman, R.-E. Precup, E. M. Petriu, E.-L. Hedrea, C.-A. Bojan-Dragoş and M.-B. Rădac, Model-Free Adaptive Control With Fuzzy Component for Tower Crane Systems, Proceedings of 2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019, Bari, Italy, pp. 1400-1405, 2019 (ieeexplore.ieee.org).
32. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Using Weighted Recursive Least Squares Algorithm for Identification, Proceedings of 2019 IEEE International Symposium on Robotic and Sensors Environments ROSE 2019, Ottawa, ON, Canada, pp. 164-169, 2019 (ieeexplore.ieee.org).
33. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, Hedrea, C, TP-Based Fuzzy Control Solutions for Magnetic Levitation Systems, 2019 23RD International Conference on System Theory, Control And Computing (ICSTCC), Sinaia, ROMANIA, pp. 809-814, 2019 (ieeexplore.ieee.org).
34. A.-I. Szedlak-Stînean, R.-E. Precup and R.-C. David, State Observers for Mechatronics Systems with Rigid and Flexible Drive Dynamics, Proceedings of 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 2, pp. 387-394, 2019 (www.insticc.org).
35. C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-E. Precup, A.-I. Szedlak-Stînean and R.-C. Roman, MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems, Proceedings of 16th International Conference on Informatics in Control,

Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 1, pp. 810-817, 2019 (www.insticc.org).

36. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş and O. Tănăsoiu, Tensor Product-Based Model Transformation Technique Applied to Modeling Magnetic Levitation Systems, Proceedings of 23rd IEEE International Conference on Intelligent Engineering Systems INES 2019, Gödöllõ, Hungary, pp. 179-184, 2019 (ieeexplore.ieee.org).
37. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, C. Hedrea, D. Ples, D. Popovici, Cascade Control Solutions for Level Control of Vertical Three Tank Systems, IEEE 13TH International Symposium On Applied Computational Intelligence And Informatics (SACI 2019), Timisoara, ROMANIA, pp. 353-358, 2019 (ieeexplore.ieee.org).
38. A.-I. Szedlak-Stînean, R.-E. Precup and R.-C. David, "Speed and Acceleration Control of BLDC Drives Using Different Types of Observers",Proceedings of 13th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2019), Timisoara, Romania, pp. 229-235, 2019 (link).
39. R.-E. Precup, T.-A. Teban, A. Albu, "Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control", Proccedings of ECAI 2019 - International Conference - 11th Edition Electronics, Computers and Artificial Intelligence, Pitesti, Romania, Jun., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/9042090).

Relevant publications before 2019

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals

1. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea and O.-M. Tănăsoiu, Gain-Scheduling Control Solutions for Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 15, no. 5, pp. 89-108, 2018, impact factor (IF) = 1.286, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.uni-obuda.hu/journal/).
2. R.-E. Precup, T.-A. Teban, A. Albu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiments in Incremental Online Identification of Fuzzy Models of Finger Dynamics, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 21, no. 4, pp. 358-376, 2018, impact factor (IF) = 0.661, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Article Influence Score (AIS) = 0.272, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.romjist.ro).
3. M.-B. Radac, R.-E. Precup and R.-C. Roman, "Data-driven model reference control of MIMO vertical tank systems with model-free VRFT and Q-learning," ISA Transactions, vol. 73, pp. 227-238, 2018, impact factor (IF) = 4.343, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.3, Article Influence Score (AIS) = 1.190, Q2 quartile AIS 2022 (conform JCR iunie 2023) (https://www.sciencedirect.com).
4. M.-B. Radac, R.-E. Precup and R.-C. Roman, "Model-Free control performance improvement using virtual reference feedback tuning and reinforcement Q-learning," International Journal of Systems Science, vol. 48, no. 5, pp. 1071-1083, 2017, impact factor (IF) = 2.185, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Article Influence Score (AIS) = 0.720, Q2 quartile AIS 2022 (conform JCR iunie 2023) (https://www.tandfonline.com).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

5. R.-E. Precup, M.-B. Radac and R.-C. Roman, "Model-free sliding mode control of nonlinear systems: Algorithms and experiments," Information Sciences, vol. 381, pp. 176-192, 2017, impact factor (IF) = 4.305, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Article Influence Score (AIS) = 1.333, Q1 quartile AIS 2022 (conform JCR iunie 2023) (link) (Highly Cited Papers according to Clarivate Analytics Web of Science).
6. C.-A. Bojan-Dragoş, R.-E. Precup, M. L. Tomescu, S. Preitl, O.-M. Tănăsoiu and S. Hergane, Proportional-Integral-Derivative Gain-Scheduling Control of a Magnetic Levitation System, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 12, no. 5, pp. 599-611, 2017, impact factor (IF) = 1.290, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro/jour/).
7. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, A.-I. Szedlak-Stînean, E.-L. Hedrea and R.-C. Roman, Automotive Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 15, no 2, pp. 231-244, 2017, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Article Influence Score (AIS) = 0.651, Q2 quartile AIS 2022 (conform JCR iunie 2023) (casopisi.junis.ni.ac.rs).
8. R.-C. Roman, M.-B. Radac and R.-E. Precup, "Multi-input-multi-output system experimental validation of model-free control and virtual reference feedback tuning techniques," IET Control Theory & Applications, vol. 10, no. 12, pp. 1395-1403, 2016, impact factor (IF) = 2.536, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Article Influence Score (AIS) = 0.717, Q2 quartile AIS 2022 (conform JCR iunie 2023) (https://digital-library.theiet.org).
9. R.-C. Roman, M.-B. Radac, R.-E. Precup and E. M. Petriu, "Data-driven model-free adaptive control tuned by virtual reference feedback tuning," Acta Polytechnica Hungarica, vol. 13, no. 1, pp. 83-96, 2016, impact factor (IF) = 0.745, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (http://uni-obuda.hu).
10. R.-E. Precup, E. M. Petriu, M.-B. Rădac, St. Preitl, L.-O. Fedorovici and C.-A. Dragoş, Cascade control system-based cost effective combination of tensor product model transformation and fuzzy control, Asian Journal of Control (John Wiley and Sons), vol. 17, no. 2, pp. 381-391, 2015, impact factor (IF) = 1.407, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Article Influence Score (AIS) = 0.390, Q3 quartile AIS 2022 (conform JCR iunie 2023) (onlinelibrary.wiley.com).
11. R.-E. Precup, H.-I. Filip, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Online Identification of Evolving Takagi-Sugeno-Kang Fuzzy Models for Crane Systems, Applied Soft Computing (Elsevier Science), vol. 24, pp. 1155-1163, 2014, impact factor (IF) = 2.810, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.7, Article Influence Score (AIS) = 1.265, Q2 quartile AIS 2022 (conform JCR iunie 2023) (www.sciencedirect.com).
12. R.-E. Precup, M.-L. Tomescu and C.-A. Dragoş, Stabilization of Rössler chaotic dynamical system using fuzzy logic control algorithm, International Journal of General Systems (Taylor & Francis), vol. 43, no. 5, pp. 413-433, 2014, impact factor (IF) = 1.637, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate

Analytics in 2023 = 2, Article Influence Score (AIS) = 0.418, Q3 quartile AIS 2022 (conform JCR iunie 2023) (www.tandfonline.com).

13. R.-E. Precup, M. L. Tomescu, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Iterative performance improvement of fuzzy control systems for three tank systems, Expert Systems with Applications (Elsevier Science), vol. 39, no. 9, pp. 8288-8299, 2012, impact factor (IF) = 1.854, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Article Influence Score (AIS) = 1.276, Q1 quartile AIS 2022 (conform JCR iunie 2023) (www.sciencedirect.com, dl.acm.org).
14. R.-E. Precup, C.-A. Dragoş, St. Preitl, M.-B. Rădac and E. M. Petriu, Novel tensor product models for automatic transmission system control, IEEE Systems Journal, vol. 6, no. 3, pp. 488-498, 2012, impact factor (IF) = 1.270, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.4, Article Influence Score (AIS) = 0.885, Q2 quartile AIS 2022 (conform JCR iunie 2023) (ieeexplore.ieee.org).
15. R.-E. Precup, St. Preitl, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş and J. K. Tar, Experiment-based teaching in advanced control engineering, IEEE Transactions on Education, vol. 54, no. 3, pp. 345-355, 2011, impact factor (IF) = 1.021, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Article Influence Score (AIS) = 0.453, Q3 quartile AIS 2022 (conform JCR iunie 2023) (ieeexplore.ieee.org, dl.acm.org).

Books

1. Adriana ALBU, "Computer Programming - The C Language", Conspress, Bucuresti, Romania, 2013, 263 pages, ISBN: 978-973-100-270-5.

Book chapters

2. R.-C. David, R.-E. Precup, St. Preitl, A.-I. Szedlak-Stînean and L.-O. Fedorovici, "Application of grey wolf optimization in fuzzy controller tuning for servo systems", Chapter 13 in Swarm Intelligence - Volume 2: Innovation, new algorithms and methods, Y. Tan, Ed. (IET Digital Library), pp. 363-387, 2018 (link, digital-library.theiet.org, www2.theiet.org).
3. St. Preitl, R.-E. Precup, Zs. Preitl, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, Pragmatic Design Methods Using Adaptive Controller Structures for Mechatronic Applications with Variable Parameters and Working Conditions, in: Complex Systems, G. M. Dimirovski, Ed., Studies in Systems, Decision and Control, vol. 55 (Springer International Publishing), pp. 619-647, 2016 (link.springer.com, link.springer.com).
4. St. Preitl, R.-E. Precup, Z. Preitl, A.-I. Stînean, M.-B. Rădac and C.-A. Dragoş, f, in: Advances in Soft Computing, Intelligent Robotics and Control, J. Fodor and R. Fuller, Eds., Topics in Intelligent Engineering and Informatics, vol. 8 (Springer-Verlag), pp. 3-39, 2014 (link.springer.com, link.springer.com).
5. R.-C. David, R.-B. Grad, R.-E. Precup, M.-B. Rădac, C.-A. Dragoş and E. M. Petriu, An Approach to Fuzzy Modeling of Anti-lock Braking Systems, in: Soft Computing in Industrial Applications, V. Snášel, P. Krömer, M. Köppen and G. Schaefer, Eds., Advances in Intelligent Systems and Computing, vol. 223 (Springer-Verlag), pp. 83-93, 2014 (link.springer.com, link.springer.com).
6. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, Classical and Fuzzy Approaches to 2-DOF Control Solutions for BLDC-m Drives, in: Intelligent Systems: Models and Applications, E. Pap, Ed., Topics in Intelligent Engineering and

Informatics, vol. 3 (Springer-Verlag), pp. 175-193, 2013 (link.springer.com, link.springer.com).

7. R.-E. Precup, F.-C. Enache, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Lead-Lag Controller-Based Iterative Learning Control Algorithms for 3D Crane Systems, in: Aspects of Computational Intelligence: Theory and Applications, L. Madarász and J. Živčák, Eds., Topics in Intelligent Engineering and Informatics, vol. 2 (Springer-Verlag), pp. 25-38, 2013 (link.springer.com, link.springer.com).
8. St. Preitl, A.-I. Stînean, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, 2-DOF and Fuzzy Control Extensions of Symmetrical Optimum Design Method: Applications and Perspectives, in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 19-37, 2012 (link.springer.com, link.springer.com).
9. C.-A. Dragoş, St. Preitl, R.-E. Precup and E. M. Petriu, Points of View on Magnetic Levitation System Laboratory-Based Control Education, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 261-275, 2012 (link.springer.com, link.springer.com).
10. R.-E. Precup, S. V. Spătaru, M.-B. Rădac, E. M. Petriu, St. Preitl, C.-A. Dragoş and R.-C. David, Experimental Results of Model-Based Fuzzy Control Solutions for a Laboratory Antilock Braking System, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 223-234, 2012 (link.springer.com, link.springer.com).
11. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Convergent Iterative Feedback Tuning of State Feedback-Controlled Servo Systems, in: Informatics in Control Automation and Robotics, J. Andrade Cetto, J. Filipe and J.-L. Ferrier, Eds., Lecture Notes in Electrical Engineering, vol. 85 (Springer-Verlag), pp. 99-111, 2011 (link.springer.com, link.springer.com).
12. C.-A. Dragoş, St. Preitl, R.-E. Precup, M. Creţiu and J. Fodor, Modern Control Solutions with Applications in Mechatronic Systems, in: Computational Intelligence in Engineering, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 313 (Springer-Verlag), pp. 87-102, 2010 (link.springer.com, link.springer.com).
13. St. Preitl, R.-E. Precup, M.-L. Tomescu, M.-B. Rădac, E. M. Petriu and C.-A. Dragoş, Model-Based Design Issues in Fuzzy Logic Control, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 137-152, 2009 (link.springer.com, link.springer.com).
14. R.-E. Precup, M.-B. Rădac, St. Preitl, E. M. Petriu and C.-A. Dragoş, Iterative Feedback Tuning in Linear and Fuzzy Control Systems, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 179-192, 2009 (link.springer.com, link.springer.com).

Papers in refereed journals / contributions to books

1. R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu, M.-B. Rădac and A.-I. Stînean, "Results on Optimal Tuning of Fuzzy Models of Magnetic Levitation Systems", International Journal of Artificial Intelligence (CESER Publications), vol. 13, no. 2, pp. 57-72, 2015 (pdf, link).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

2. C.-A. Dragoş, R.-E. Precup, St. Preitl, E. M. Petriu and A.-I. Stînean, "Takagi-Sugeno fuzzy control solutions for mechatronic applications", International Journal of Artificial Intelligence (CESER Publications), vol. 8, no. S12, pp. 45-65, 2012 (pdf, link).
3. R.-C. David, C.-A. Dragoş, R.-G. Bulzan, R.-E. Precup, E. M. Petriu and M.-B. Rădac, An approach to fuzzy modeling of magnetic levitation systems, International Journal of Artificial Intelligence (CESER Publications), vol. 9, no. A12, pp. 1-18, 2012 (pdf).

Published contributions in refereed academic conferences

1. A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, R.-E. Precup and M.-B. Rădac, Gain-Scheduling Control Solutions for a Strip Winding System with Variable Moment of Inertia, Proceedings of 3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018, Ghent, Belgium, 2018, IFAC-PapersOnLine, vol. 51, no. 4, pp. 370-375, 2018 (www.sciencedirect.com).
2. R.-C. Roman, R.-E. Precup and R.-C. David, "Second order intelligent proportional-integral fuzzy control of twin rotor aerodynamic systems," in Proc. Procedia Computer Science, vol. 139, Omaha, Nebraska, USA, pp. 372-380, 2018, (www.sciencedirect.com).
3. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea, A.-I. Szedlak-Stînean and S. Preitl, Gain-Scheduling Position Control Approaches for Electromagnetic Actuated Clutch Systems, Proceedings of 15th International Conference on Informatics in Control, Automation and Robotics ICINCO 2018, Porto, Portugal, vol. 2, pp. 411-418, 2018 (www.scitepress.org).
4. C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, R.-E. Precup, L. Gurgui, E.-L. Hedrea and I.-C Mituletu, "Control Solutions for Vertical Three-Tank Systems", Proceedings of 12th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2018), Timisoara, Romania, pp. 593-598, 2018 (link).
5. A.-I. Szedlak-Stinean, R.-E. Precup, C.-A. Bojan-Dragos, and I.-C Mituletu, "Feedback Control Solutions for an Electromechanical Process with Rigid Body Dynamics", Proceedings of 12th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2018), Timisoara, Romania, pp. 599-605, 2018 (link).
6. A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, R.-E. Precup and M.-B. Rădac, "Gain-Scheduling Control Solutions for a Strip Winding System with Variable Moment of Inertia", Proceedings of 3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018, Ghent, Belgium, 2018, IFAC-PapersOnLine, vol. 51, no. 4, pp. 370-375, 2018 (link).
7. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and E. M. Petriu, Comparative Study of Control Structures for Maglev Systems, Proceedings of 2018 IEEE 18th International Conference on Power Electronics and Motion Control PEMC 2018, Budapest, Hungary, pp. 657-662, 2018 (ieeexplore.ieee.org).
8. C.-A. Bojan-Dragoş, R.-E. Precup, E.-L. Hedrea, A. Simo and A. Daia, Discrete time Control Solutions for Inverted Pendulum Crane Mode Control, Proceedings of 18th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2018, Budapest, Hungary, pp. 295-300, 2018 (ieeexplore.ieee.org).
9. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragos, R.-C. Roman, O. Tanasoiu and M. Marinescu, "Cascade Control Solutions for Maglev Systems," in Proc. 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 20-26, 2018, (https://ieeexplore.ieee.org).
10. R.-C. Roman, M.-B. Radac, C. Tureac and R.-E. Precup, "Data-Driven Active Disturbance Rejection Control of Pendulum Cart Systems," in Proc. 2nd IEEE

Conference on Control Technology and Applications, Copenhagen, Denmark, pp. 933-938, 2018, (https://ieeexplore.ieee.org).

11. A. Albu, R.-E. Precup, T.-A. Teban, "Medical Applications of Artificial Neural Networks", XIV International SAUM Conference on Systems, Automatic Control and Measurements, Nis, Serbia, Nov., 2018, Plenary Session.
12. T.-A. Teban, R.-E. Precup, E.-C. Lunca, A. Albu, C.-A. Bojan-Dragos, E. M. Petriu, "Recurrent Neural Network Models for Myoelectric-based Control of a Prosthetic Hand", Proceedings of ICSTCC 2018 - 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, Oct., 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8540720).
13. R.-E. Precup, T.-A. Teban, E. M. Petriu, A. Albu, I.-C. Mituletu, "Structure and Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Systems", Proceedings of MED'18: The 26th Mediterranean Conference on Control and Automation, Zadar, Croatia, Jun., 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8442770).
14. A.-I. Szedlak-Stînean, R.-E. Precup and E.M. Petriu, "Fuzzy and 2-DOF Controllers for Processes with a Discontinuously Variable Parameter", Proceedings of 14th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2017), Madrid, Spain, vol. 2, pp. 431-438, 2017 (link).
15. C. Bumb, M.-B. Radac, R.-E. Precup and R.-C. Roman, "Data-driven nonlinear VRFT for dead-zone compensation in servo systems control," in Proc. 2017 21st International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 821-826, 2017, (link).
16. R.-C. Roman, R.-E. Precup, M.-B. Radac and E. M. Petriu, "Takagi-Sugeno fuzzy controller structures for twin rotor aerodynamic systems," in Proc. 2017 IEEE International Conference on Fuzzy Systems, Naples, Italy, pp. 1-6, 2017, (https://ieeexplore.ieee.org).
17. M.-B. Radac, R.-E. Precup and R.-C. Roman, "Multi input-multi output tank system data-driven model reference control," in Proc. 13th IEEE International Conference on Control & Automation, Ohrid, Macedonia, pp. 1078-1083, 2017, (https://ieeexplore.ieee.org).
18. M.-B. Radac, R.-E. Precup and R.-C. Roman, "Anti-lock braking systems data-driven control using Q-learning," in Proc. 26th IEEE International Symposium on Industrial Electronics, Edinburgh, Scotland, United Kingdom, pp. 418-423, 2017, (https://ieeexplore.ieee.org).
19. R.-C. Roman, R.-E. Precup and M.-B. Radac, "Model-free fuzzy control of twin rotor aerodynamic systems," in Proc. 25th Mediterranean Control Conference on Control and Automation, Valletta, Malta, pp. 559-564, 2017, (https://ieeexplore.ieee.org).
20. L.-E. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and C. Hedrea, Tensor Product-Based Model Transformation for Position Control of Magnetic Levitation Systems, Proceedings of 2017 IEEE International Symposium on Industrial Electronics ISIE 2017, Edinburgh, UK, pp. 1141-1146, 2017 (ieeexplore.ieee.org).
21. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and T.-A. Teban, Tensor Product-Based Model Transformation for Level Control of Vertical Three Tank Systems, Proceedings of 21st International Conference on Intelligent Engineering Systems INES 2017, Larnaca, Cyprus, pp. 113-118, 2017 (ieeexplore.ieee.org).
22. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, M.-D. Rarinca and E. M. Petriu, Evolving Fuzzy Models for the Position Control of Magnetic Levitation Systems, Proceedings of 2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017, Ljubljana, Slovenia, pp. 1-6, 2017 (ieeexplore.ieee.org).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

23. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, I.-D. Borlea and E. M. Petriu, Evolving Fuzzy Models for Anti-lock Braking Systems, Proceedings of 2017 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2017, Annecy, France, pp. 48-53, 2017 (ieeexplore.ieee.org).
24. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, M.-B. Radac, A.-I. Szedlak-Stinean, E.-L. Hedrea and R.-C. Roman, "Evolving Takagi-Sugeno fuzzy modeling applications of incremental online identification algorithms," in Proc. XIII International SAUM Conference on Systems, Automatic Control and Measurements, Nis, Serbia, pp. 1-8, 2016, (link).
25. R.-C. Roman, M.-B. Radac and R.-E. Precup, "Mixed MFC-VRFT approach for a multivariable aerodynamic system position control," in Proc. 2016 IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary, pp. 2615-2620, 2016, (https://ieeexplore.ieee.org).
26. R.-E. Precup, M.-B. Radac, E. M. Petriu, R.-C. Roman, T.-A. Teban and A.-I. Szedlak-Stinean, "Evolving fuzzy models for the position control of twin rotor aerodynamic systems," in Proc. 2016 IEEE 14th International Conference on Industrial Informatics, Poitiers, France, pp. 237-242, 2016, (https://ieeexplore.ieee.org).
27. R.-E. Precup, R.C. David, E.M. Petriu, and A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, "Grey wolf optimizer-based approach to the tuning of PI-fuzzy controllers with a reduced process parametric sensitivity", Proceedings of 4th IFAC Conference on Intelligent Control and Automation Sciences (ICONS 2016), Reims, France, vol. 49, no. 5, pp. 55-60, 2016 (link).
28. A.-I. Szedlak-Stinean, R.-E. Precup, St. Preitl, E. M. Petriu and C.-A. Bojan-Dragos, "State Feedback Control Solutions for a Mechatronics System with Variable Moment of Inertia", Proceedings of 13th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2016), Lisbon, Portugal, vol. 2, pp. 458-465, 2016 (link).
29. M.-B. Radac, R.-E. Precup and R.-C. Roman, "Data-driven virtual reference feedback tuning and reinforcement Q-learning for model-free position control of an aerodynamic system," in Proc. 2016 24th Mediterranean Conference on Control and Automation (MED), Athens, Greece, pp. 1126-1132, 2016, (https://ieeexplore.ieee.org).
30. R.-C. Roman, M.-B. Radac, R.-E. Precup and E. M. Petriu, "Virtual reference feedback tuning of MIMO data-driven model-free adaptive control algorithms," in Proc. 7th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, Caparica (Lisbon), Portugal, 2016, pp. 253-260, (https://link.springer.com).
31. C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl, A.-I. Szedlak-Stînean, "Particle swarm optimization of fuzzy models for electromagnetic actuated clutch systems", Proceedings of 18th Mediterranean Electrotechnical Conference: Intelligent and Efficient Technologies and Services for the Citizen (MELECON 2016), Limassol, Cipru, pp.1-6, 2016 (link).
32. C.-A. Bojan-Dragoş, St. Preitl, R.-E. Precup, S. Hergane, E.G. Hughiet and A.-I. Szedlak-Stînean, "State feedback and proportional-integral-derivative control of a magnetic levitation system", Proceedings of 14th IEEE International Symposium on Intelligent Systems and Informatics (SISY 2016), Subotica, Serbia, pp. 111-116, 2016 (link).
33. C.-A. Bojan-Dragos, R.-E. Precup, St. Preitl, S. Hergane, E.G. Hughiet and A.-I. Szedlak-Stînean, "Proportional-Integral Gain-Scheduling Control of a Magnetic Levitation System", Proceedings of 20th International Conference on System Theory, Control and Computing (ICSTCC 2016), Sinaia, Romania, pp. 1-6, 2016 (link).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

34. R.-C. Roman, M.-B. Radac, R.-E. Precup and A.-I. Stinean, "Two data-driven control algorithms for a MIMO aerodynamic system with experimental validation," in Proc. 2015 19th International Conference on System Theory, Control and Computing, Cheile Gradistei, Romania, pp. 736-741, 2015, (https://ieeexplore.ieee.org).
35. R.-C. Roman, M.-B. Radac, R.-E. Precup and E.M. Petriu, "Data-driven optimal model-free control of twin rotor aerodynamic systems," in Proc. 2015 IEEE International Conference on Industrial Technology, Seville, Spain, pp. 161-166, 2015, (https://ieeexplore.ieee.org).
36. C.-A. Bojan-Dragoş, A.-I. Stînean, R.-E. Precup, St. Preitl and E. M. Petriu, Model Predictive Control Solution for Magnetic Levitation Systems, Proceedings of 20th International Conference on Methods and Models in Automation & Robotics MMAR 2015, Miedzyzdroje, Poland, pp. 139-144, 2015 (ieeexplore.ieee.org).
37. A.-I. Stînean, St. Preitl, R.-E. Precup and C.-A. Bojan-Dragoş, "Model predictive control of a mechatronic system with variable inputs", Proceedings of 2015 IEEE 10th Jubilee International Symposium on Applied Computational Intelligence and Informatics (SACI 2015), Timisoara, Romania, pp. 271-276, 2015 (link).
38. S. Sgaverdea, C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl and A.-I. Stînean, "Model predictive controllers for magnetic levitation systems", Proceedings of 2015 IEEE 10th Jubilee International Symposium on Applied Computational Intelligence and Informatics (SACI 2015), Timisoara, Romania, pp. 171-176, 2015 (link).
39. A.-I. Stînean, C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl and E.M. Petriu,"Takagi-Sugeno PD+I fuzzy control of processes with variable moment of inertia", Proceedings of 2015 International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2015), Madrid, Spania, 2015 (link).
40. A.-I. Stînean, St. Preitl, R.-E. Precup, M. Crainic,"Study on experimental plant of positioning control solutions for processes with variable moment of inertia", Proceedings of 9th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2014), Timisoara, Romania, pp. 37- 42, 2014 (link).
41. R.-E. Precup, R.-C. David, A.-I. Stînean, M.-B. Rădac and E.M. Petriu, "Adaptive hybrid Particle Swarm Optimization-Gravitational Search Algorithm for fuzzy controller tuning", Proceedings of 2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2014), Alberobello, Italia, pp. 14-20, 2014 (link).
42. R.-E. Precup, D.C. Bota, C.-A. Dragoş, A.-I. Stînean, St. Preitl and M.-B. Rădac, "Frequency Domain Design of Fractional Order PI Controllers for Lambda Control", Proceedings of 18th International Conference on System Theory, Control and Computing (ICSTCC 2014), Sinaia, Romania, pp. 652-657, 2014 (link).
43. M.-B. Radac, R.-C. Roman, R.-E. Precup and E. M. Petriu, "Data-driven model-free control of twin rotor aerodynamic systems: algorithms and experiments," in Proc. 2014 IEEE International Symposium on Intelligent Control, Antibes, France, pp. 1889-1894, 2014, (https://ieeexplore.ieee.org).
44. R.-C. Roman, M.-B. Radac and R.-E. Precup, "Data-driven model-free adaptive control of twin rotor aerodynamic systems," in Proc. IEEE 9th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, pp. 25-30, 2014, (https://ieeexplore.ieee.org).
45. M.-B. Radac, R.-C. Roman, R.-E. Precup, E. M. Petriu, C.-A. Dragos and S. Preitl, "Data-based tuning of linear controllers for MIMO twin rotor systems," in Proc. 2013 IEEE EUROCON, Zagreb, Croatia, pp. 1915-1920, 2013, (https://ieeexplore.ieee.org).
46. M.-B. Rădac, R.-A. Achimescu, R.-E. Precup, St. Preitl, C.-A. Dragoş and A.-I. Stînean, "Design and Experiments for Model-Free PI Control of DC Drives", Proceedings of 8th

IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2013), Timisoara, Romania, pp. 103-108, 2013 (link).

47. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, E.M. Petriu and M.-B. Rădac, "2-DOF control solutions for an electric drive system under continuously variable conditions", Proceedings of 8th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2013), Timisoara, Romania, pp. 115-120, 2013 (link).
48. R.-E. Precup, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş, St. Preitl and A.-I. Stînean, "Data-Driven Performance Improvement of Control Systems for Three-Tank Systems", Proceedings of 2013 6th International Conference on Human System Interactions (HSI 2013), Gdansk, Sopot, Poland, pp. 306-311, 2013 (link).
49. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, "Modeling and Control of An Electric Drive System with Continuously Variable Reference, Moment of Inertia and Load Disturbance", Proceedings of 9th Asian Control Conference (ASCC 2013), Istanbul, Turkey, paper 585, 6 pp., 2013 (link).
50. C.-A. Dragoş, R.-E. Precup, R.-C. David, St. Preitl, A.-I. Stînean and E. M. Petriu, "Simulated annealing-based optimization of fuzzy models for magnetic levitation systems", Proceedings of 2013 Joint IFSA World Congress and NAFIPS Annual Meeting (IFSA/NAFIPS 2013), Edmonton, AB, Canada, pp. 286-291, 2013 (link).
51. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, E. M. Petriu and M.-B. Rădac, "Solutions to Avoid the Worst Case Scenario in Driving Systems Working Under Continuously Variable Conditions", Proceedings of IEEE 9th International Conference on Computational Cybernetics (ICCC 2013), Tihany, Hungary, pp. 339-344, 2013 (link).
52. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, "Low-Cost Neuro-Fuzzy Control Solution for Servo Systems with Variable Parameters", Proceedings of 2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA 2013), Milano, Italy, pp. 156-161, 2013 (link).
53. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and M. Crainic, "Adaptable fuzzy control solutions for driving systems working under continuously variable conditions", Proceedings of 14th IEEE International Symposium on Computational Intelligence and Informatics (CINTI 2013), Budapest, Hungary, pp. 231-237, 2013 (link).
54. C.-A. Dragoş, St. Preitl, R.-E. Precup, E. M. Petriu and A.-I. Stînean, Adaptive Control Solutions for the Position Control of Electromagnetic Actuated Clutch Systems, Proceedings of 2012 IEEE Intelligent Vehicles Symposium IEEE IV'12, Alcala de Henares, Spain, pp. 81-86, 2012 (ieeexplore.ieee.org).
55. A.-I. Stînean, St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "2-DOF PI(D) Takagi-Sugeno and Sliding Mode Controllers for BLDC Drives", Proceedings of 15th International Power Electronics and Motion Control Conference (EPE-PEMC 2012), ECCE Europe, Novi Sad, Serbia, pp. DS2a.7-1-DS2a.7-6, 2012 (link).
56. B.-S. Cerveneak, M.-B. Rădac, R.-E. Precup, A.-I. Stînean, E.M. Petriu, St. Preitl and C.-A. Dragoş, "Novel Iterative Formulation of Correlation-Based Tuning", Proceedings of IEEE International Conference on Industrial Technology (ICIT 2012), Athens, Greece, pp. 886-891, 2012 (link).
57. St. Preitl, R.-E. Precup, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, "Control Structures for Variable Inertia Output Coupled Drives", Proceedings of 4th IEEE International Symposium on Logistics and Industrial Informatics (LINDI 2012), Smolenice, Slovakia, pp. 179-184, 2012 (link).

8. LIST OF JOINT PUBLICATIONS OF THE MEMBERS OF THE RESEARCH TEAM

58. St. Preitl, A.-I. Stînean, R.-E. Precup, Zs. Preitl, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "Controller Design Methods for Driving Systems Based on Extensions of Symmetrical Optimum Method with DC and BLDC Motor Applications", Proceedings of 2nd IFAC Conference on Advances in PID Control PID'12, Brescia, Italy, Advances in PID Control, vol. 2, R. Vilanova and A. Visioli, Eds., pp. 264-269, 2012 (link).
59. R.-E. Precup, St. Preitl, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, "Hybrid fuzzy controllers for non-minimum phase system", Proceedings of 7th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2012), Timisoara, Romania, pp. 23-28, 2012 (link).
60. A.-I. Stînean, St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "Takagi-Sugeno Fuzzy Control Solutions for BLDC Drives", Proceedings of 2012 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM 2012), Sorrento, Italy, pp. 724-729, 2012 (link).
61. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "Hybrid Fuzzy Control Solutions for Brushless DC Drives with Variable Moment of Inertia", Proceedings of IEEE 10th Jubilee International Symposium on Intelligent Systems and Informatics (SISY 2012), Subotica, Serbia, pp. 317-322, 2012 (link).
62. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, E.M. Petriu and M.-B. Rădac, "Choosing a Proper Control Structure for a Mechatronic System with Variable Parameters", Proceedings of 2nd IFAC Workshop on Convergence of Information Technologies and Control Methods with Power System, Cluj-Napoca (ICPS'13), Romania, Convergence of Information Technologies and Control Methods with Power Systems, vol. 2, pp. 26-31, 2012 (link).
63. C.-A. Dragoş, St. Preitl, R.-E. Precup, E.M.Petriu and A.-I. Stînean, "A Comparative Case Study of Position Control Solutions for a Mechatronics Application", Proceedings of 2011 IEEE/ASME International Conference on Advanced Mechatronics (AIM 2011), Budapest, Hungary, pp. 814-819, 2011 (link).
64. C.-A. Dragoş, St. Preitl, R.-E. Precup, E.M. Petriu, A.-I. Stînean, "Alternative control solutions for vehicles with continuously variable transmission. A case study", Proceedings of 15th International Conference on System Theory and Computing (ICSTCC 2011), Sinaia, Romania, pp. 1-6, 2011 (link).
65. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E.M. Petriu, "State feedback fuzzy control solution for BLDC drives", Proceedings of 12th IEEE International Symposium on Computational Intelligence and Informatics (CINTI 2011), Budapest, Hungary, pp. 85-90, 2011 (link).
66. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "2-DOF Control Solutions for BLDC-m Drives", Proceedings of IEEE 9th International Symposium on Intelligent Systems and Informatics (SISY 2011), Subotica, Serbia, pp. 29-34, 2011 (link).
67. A.-I. Stînean, St. Preitl, R.-E. Precup, Cl. Pozna, C.-A. Dragoş and M.-B. Rădac, "Speed and position control of BLDC servo systems with low inertia", Proceedings of 2nd International Conference on Cognitive Infocommunications (CogInfoCom 2011), Budapest, Hungary, 10 pp., 2011 (link).
68. St. Preitl, R.-E. Precup, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, "Extensions in Symmetrical Optimum design method. Advantages, applications and perspectives", Proceedings of 6th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2011), Timisoara, Romania, pp. 17-22, 2011 (link).
69. R.-E. Precup, L.-T. Dioanca, E. M. Petriu, M.-B. Rădac, St. Preitl and C.-A. Dragoş, Tensor Product-Based Real-time Control of the Liquid Levels in a Three Tank System, Proceedings of 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2010, Montreal, Canada, pp. 768-773, 2010 (ieeexplore.ieee.org).

PUBLICATION LIST OF RADU-EMIL PRECUP (SHORT VERSION)

http://www.aut.upt.ro/~rprecup/public.html

A) Books published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/books.html):*

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., **CRC Press, Taylor & Francis**, Boca Raton, FL, USA, 289 pp., 2021, **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (link).
2. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, Fuzzy Control Systems with Mechatronics Applications (in Romanian: Sisteme de reglare fuzzy cu aplicatii mecatronice), Editura Politehnica, Timisoara, 162 pp., 2022.
3. R.-E. Precup and R.-C. David, Nature-Inspired Optimization Algorithms for Fuzzy Controlled Servo Systems, **Butterworth-Heinemann, Elsevier**, Oxford, UK, 148 pp., 2019.
4. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Advanced Control and Optimization Paradigms for Wind Energy Systems, Power Systems Series, **Springer** Singapore, Singapore, 257 pp., 2019.
5. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Solar Photovoltaic Power Plants - Advanced Control and Optimization Techniques, Power Systems Series, **Springer** Singapore, Singapore, 250 pp., 2019.

B) Book chapters published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/bookch.html):*

1. Albu, R.-E. Precup and T.-A. Teban, Intelligent Paradigms for Diagnosis, Prediction and Control in Healthcare Applications, in: Handbook of Artificial Intelligence in Healthcare, Vol. 2: Practicalities and Prospects, C.-P. Lim, Y.-W. Chen, A. Vaidya, C. Mahorkar and L. C. Jain, Eds., Springer, Cham, Intelligent Systems Reference Library, vol. 212, pp. 3-41, 2022.
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimal Tuning of Fuzzy Controllers, Chapter 20 in Handbook on Computer Learning and Intelligence, 2nd Edition, P. P. Angelov, Ed., World Scientific, Singapore, Volume 2: Deep Learning, Intelligent Control and Evolutionary Computation, pp. 775-808, 2022.
3. R.-E. Precup, E.-I. Voişan, R.-C. David, E.-L. Hedrea, E. M. Petriu, R.-C. Roman and A.-I. Szedlak-Stînean, Nature-inspired optimization algorithms for path planning and fuzzy tracking control of mobile robots, in: Applied Optimization and Swarm Intelligence, E. Osaba and X.-S. Yang, Eds., Springer Tracts in Nature-Inspired Computing, Springer, Singapore, pp. 129-148, 2021.
4. T. Azar, F. E. Serrano, A. Koubaa, H. A. Ibrahim, N. A. Kamal, A. Khamis, I. K. Ibraheem, A. J. Humaidi and R.-E. Precup, Robust fractional-order sliding mode control design for UAVs subjected to atmospheric disturbances, Chapter 5 in Unmanned Aerial Systems: Theoretical Foundation and Applications, A. Koubaa and A. T. Azar, Eds., Academic Press, Elsevier, London, San Diego, CA, Cambridge, MA, Oxford, pp. 103-128, 2021.

C) Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/isijournals.html):*

1. R.-C. Roman, R.-E. Precup (corresponding author) and E. M. Petriu, Hybrid Data-Driven Fuzzy Active Disturbance Rejection Control for Tower Crane Systems, **European Journal of Control** (Elsevier), vol. 58, pp. 373-387, 2021, impact factor (IF) = 2.395, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.4, Q3 quartile, Article Influence Score (AIS) = 0.696, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/EJC_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of July/August 2022 (http://www.aut.upt.ro/~rprecup/EJC_2021_Hot_Paper.png).
2. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).

3. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
4. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
5. C. Pozna, R.-E. Precup (corresponding author), E. Horvath and E. M. Petriu, Hybrid Particle Filter-Particle Swarm Optimization Algorithm and Application to Fuzzy Controlled Servo Systems, **IEEE Transactions on Fuzzy Systems**, vol. 30, no. 10, pp. 4286-4297, 2022, impact factor (IF) = 11.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 11.9, Q1 quartile, Article Influence Score (AIS) = 2.448, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TFS_2022_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of May/June 2023 (http://www.aut.upt.ro/~rprecup/TFS_2022_Hot_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).
7. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
8. R.-E. Precup, R.-C. David, R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, Slime mould algorithm-based tuning of cost-effective fuzzy controllers for servo systems, International Journal of Computational Intelligence Systems (Atlantis Press), vol. 14, no. 1, pp. 1042-1052, 2021, impact factor (IF) = 1.736, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.9, Q4 quartile, Article Influence Score (AIS) = 0.349, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJCIS_2021_Highly_Cited_Paper.png).
9. E.-L. Hedrea, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Tensor product-based model transformation approach to tower crane systems modeling, **Asian Journal of Control** (Wiley), vol. 23, no. 3, pp. 1313-1323, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390, **Top Cited Article in 2020-2021 and 2021-2022 according to Wiley** (http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2020-2021.pdf, http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2021-2022.pdf).

10. R.-E. Precup, A.-T. Nguyen and S. Blažič, A survey on fuzzy control for mechatronics applications, **International Journal of Systems Science** (Taylor & Francis), DOI: 10.1080/00207721.2023.2293486, pp. 1-43, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720.
11. M. Brezovan, R.-E. Precup (corresponding author), D. Selişteanu and L. Stănescu, Colored Petri nets-based control and experimental validation on three-tank system level control, **International Journal of General Systems** (Taylor & Francis), vol. 51, no. 1, pp. 1-47, 2023, impact factor (IF) = 2, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2, Q3 quartile, Article Influence Score (AIS) = 0.418.
12. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
13. A.-I. Borlea, R.-E. Precup (corresponding author) and R.-C. Roman, Discrete-time model-based sliding mode controllers for tower crane systems, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 21, no. 1, pp. 1-20, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
14. I. A. Zamfirache, R.-E. Precup (corresponding author) and E. M. Petriu, Q-learning, policy iteration and actor-critic reinforcement learning combined with metaheuristic algorithms in servo system control, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 21, no. 4, pp. 615-630, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
15. G. Duca, S. Travin, I. Zinicovscaia and R.-E. Precup (corresponding author), Approach to Evaluate the Data of Moss Biomonitoring Studies: Preprocessing and Preliminary Ranking, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 26, no. 3-4, pp. 276-288, 2023, impact factor (IF) = 3.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
16. S. M. Abramov, S. Travin, G. Duca and R.-E. Precup (corresponding author), New Opportunities Model for Monitoring, Analyzing and Forecasting the Official Statistics on Coronavirus Disease Pandemic, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 26, no. 1, pp. 49-64, 2023, impact factor (IF) = 3.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
17. R.-C. Roman, R.-E. Precup (corresponding author), E. M. Petriu and M. Muntyan, Fictitious Reference Iterative Tuning of Discrete-Time Model-Free Control for Tower Crane Systems, Studies in Informatics and Control (ICI Bucharest), vol. 32, no. 1, pp. 5-14, 2023, impact factor (IF) = 1.6, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204.
18. C. Pozna and R.-E. Precup, On the Use of Quaternions, in the Translated Reference Frame Formalism, Acta Polytechnica Hungarica, vol. 20, no. 6, pp. 195-214, 2023, impact factor (IF) = 1.806, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Q4 quartile, Article Influence Score (AIS) = 0.170.
19. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
20. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, A low-cost approach to data-driven fuzzy control of servo systems, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 20, no. 1, pp. 21-36, 2022, impact factor (IF) = 7.9, IF according

to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.

21. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, C.-A. Bojan-Dragoş, M.-M. Damian and M.-L. Nedelcea, Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems, International Journal of Computers Communications & Control, vol. 17, no. 1, 4623, pp. 1-18, 2022, impact factor (IF) = 2.7, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
22. R.-E. Precup, G. Duca, S. Travin and I. Zinicovscaia, Processing, neural network-based modeling of biomonitoring studies data and validation on Republic of Moldova data, Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science (Editura Academiei Romane, Bucharest), vol. 23, no. 4, pp. 403-410, 2022, impact factor (IF) = 0.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 0.3, Q4 quartile, Article Influence Score (AIS) = 0.097.
23. E.-L. Hedrea, R.-E. Precup (corresponding author), E. M. Petriu, C.-A. Bojan-Dragoş and C. Hedrea, Tensor product-based model transformation approach to cart position modeling and control in pendulum-cart systems, **Asian Journal of Control** (John Wiley and Sons), vol. 23, no. 3, pp. 1238-1248, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390.
24. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiment-Based Approach to Teach Optimization Techniques, **IEEE Transactions on Education**, vol. 64, no. 2, pp. 88-94, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Q3 quartile, Article Influence Score (AIS) = 0.453.
25. A. Topîrceanu and R.-E. Precup, A novel geo-hierarchical population mobility model for spatial spreading of resurgent epidemics, Scientific Reports (Nature), vol. 11, paper 14341, pp. 1-12, 2021, impact factor (IF) = 4.997, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.6, Q2 quartile, Article Influence Score (AIS) = 1.129.
26. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu and C.-A. Bojan-Dragoş, Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 16, no. 1, 4076, pp. 1-17, 2021, impact factor (IF) = 2.635, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
27. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 24, no. 4, pp. 353-365, 2021, impact factor (IF) = 0.852, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
28. R.-E. Precup, R.-C. Roman, T.-A. Teban, A. Albu, E. M. Petriu and C. Pozna, Model-Free Control of Finger Dynamics in Prosthetic Hand Myoelectric-based Control Systems, Studies in Informatics and Control (ICI Bucharest), vol. 29, no. 4, pp. 399-410, 2020, impact factor (IF) = 1.649, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204.
29. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M. L. Tomescu, R.-C. David, A.-I. Szedlak-Stînean and R.-C. Roman, Grey Wolf Optimizer-Based Approaches to Path Planning and Fuzzy Logic-based Tracking Control for Mobile Robots, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 15, no. 3, 3844, pp. 1-17, 2020, impact factor (IF) = 2.293, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
30. A. Topîrceanu and R.-E. Precup, A framework for improving electoral forecasting based on time-aware polling, Social Network Analysis and Mining (Springer), vol. 10, no. 1, 39, pp. 1-14, 2020, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.8.
31. R.-E. Precup, S. Preitl, E. M. Petriu, R.-C. Roman, C.-A. Bojan-Dragoş, E.-L. Hedrea and A.-I. Szedlak-Stînean, A center manifold theory-based approach to the stability analysis of state feedback Takagi-Sugeno-Kang fuzzy control systems, Facta Universitatis, Series: Mechanical Engineering

(University of Niš), vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.

32. E.-L. Hedrea, R.-E. Precup and C.-A. Bojan-Dragoş, Results on Tensor Product-based Model Transformation of Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 16, no. 9, pp. 93-111, 2019, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Q4 quartile, Article Influence Score (AIS) = 0.170.
33. A. Albu, R.-E. Precup and T.-A. Teban, Results and Challenges of Artificial Neural Networks Used for Decision-Making in Medical Applications, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 17, no. 4, pp. 285-308, 2019, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.

D) Papers in refereed journals / contributions to books published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/journals.html):*

1. R.-C. Roman, R.-E. Precup and E.-L. Hedrea, Intelligent Proportional Controller Tuned by Virtual Reference Feedback Tuning and Fictitious Reference Iterative Tuning, Procedia Computer Science (Elsevier), vol. 221, pp. 86-93, 2023.
2. C.-B. Gale-Cazan, C.-A. Bojan-Dragoş, R.-E. Precup (corresponding author), R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, GWO-based Modeling of an Unstable Transport System, Procedia Computer Science (Elsevier), vol. 214, pp. 195-202, 2022.
3. I.-D. Borlea, R.-E. Precup (corresponding author) and A.-B. Borlea, Improvement of K-means Cluster Quality by Post Processing Resulted Clusters (**Best Paper Award**), Procedia Computer Science (Elsevier), vol. 199, pp. 63-70, 2022.
4. R.-C. Roman, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragoş and E. M. Petriu, Iterative Feedback Tuning Algorithm for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 199, pp. 157-165, 2022.
5. R.-E. Precup, S. Preitl, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean, R.-C. Roman and E.-L. Hedrea, Model-Based Fuzzy Control Results for Networked Control Systems, Reports in Mechanical Engineering (Regional Association for Security and Crisis Management, European Centre for Operational Research), vol. 1, no. 1, pp. 10-25, 2020.
6. R.-C. Roman, R.-E. Precup, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems (**Best Paper Award**), Procedia Computer Science (Elsevier Science), vol. 162, pp. 267-274, 2019.
7. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, TP-based model transformation and gain-scheduling control of electromagnetic actuated clutch systems, Journal of Engineering Sciences and Innovation (Technical Sciences Academy of Romania), vol. 4, no. 3, pp. 301-312, 2019.

E) Published contributions to refereed academic conferences in 2019-2023 *(http://www.aut.upt.ro/~rprecup/confe.html):*

1. R.-C. Roman, R.-E. Precup, E. M. Petriu, M. Muntyan and E.-L. Hedrea, Fictitious Reference Iterative Tuning of Intelligent Proportional-Integral Controllers for Tower Crane Systems, Proceedings of **31st Mediterranean Conference on Control & Automation MED'23**, Limassol, Cyprus, pp. 740-746, 2023.
2. C.-A. Bojan-Dragoş, R.-E. Precup, A.-I. Szedlak-Stînean, R.-C. Roman, E.-L. Hedrea and E. M. Petriu, Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuators, Proceedings of **2023 European Control Conference ECC 2023**, Bucharest, Romania, pp. 1-6, 2023.
3. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems, Proceedings of **57th Annual Conference on Information Sciences and Systems CISS 2023**, Baltimore, MD, USA, pp. 1-6, 2023.
4. C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and M. Muntyan, PI and Super Twisting Sliding Mode with Smith Predictor Control Structures for SMA Actuators, Proceedings of **32nd International Symposium on Industrial Electronics ISIE 2023**, Helsinki-Espoo, Finland, pp. 1-7, 2023.

5. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman and E. M. Petriu, Discrete-time Observers for a Mechatronics System with PID Controllers Tuned Using SMA, Proceedings of **32nd International Symposium on Industrial Electronics ISIE 2023**, Helsinki-Espoo, Finland, pp. 1-8, 2023.
6. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman, E. M. Petriu and E.-L. Hedrea, SMA-Based Tuning of PI Controller Using Takagi-Sugeno Fuzzy Observers for an Electromechanical System with Variable Parameters, Proceedings of 9th International Conference on Control, Decision and Information Technologies CoDiT 2023, Rome, Italy, pp. 1761-1768, 2023.
7. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E.-M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and F.-C. Paulescu, AVOA-Based Tuning of Low-Cost Fuzzy Controllers for Tower Crane Systems, Proceedings of **2022 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2022**, Padova, Italy, pp. 1-8, 2022.
8. C.-A. Bojan-Dragoş, R.-E. Precup, E. M. Petriu, R.-C. Roman, E.-L. Hedrea and A.-I. Szedlak-Stînean, GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators, Proceedings of **6th IFAC International Conference on Intelligent Control and Automation Sciences ICONS'22**, Cluj-Napoca, Romania, 2022, IFAC-PapersOnLine, vol. 55, no. 15, pp. 39-44, 2022.
9. R.-E. Roman, R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and E.-L. Hedrea, Data-Driven Control Algorithms for Shape Memory Alloys, Proceedings of **2022 IEEE Conference on Control Technology and Applications CCTA 2022**, Trieste, Italy, pp. 1306-1312, 2022.
10. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and C. Hedrea, Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems, Proceedings of **48th Annual Conference of the IEEE Industrial Electronics Society IECON 2022**, Brussels, Belgium, pp. 1-6, 2022.
11. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, GWO-Based Performance Improvement of PD-Type Iterative Learning Fuzzy Control of Tower Crane Systems, Proceedings of **2022 IEEE 31st International Symposium on Industrial Electronics ISIE 2022**, Anchorage, AK, USA, pp. 1041-1046, 2022.
12. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and E.-L. Hedrea, Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control, Proceedings of **2022 IEEE Symposium Series on Computational Intelligence SSCI 2022**, Singapore, pp. 700-707, 2022.
13. R.-C. Roman, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, E.-L. Hedrea and E. M. Petriu, PI Controller Tuning via Data-Driven Algorithms for Shape Memory Alloy Systems, Proceedings of 1st IFAC Workshop on Control of Complex Systems COSY 2022, Bologna, Italy, 2022, IFAC-PapersOnLine, vol. 55, no. 40, pp. 181-186, 2022.
14. A.-I. Szedlak-Stînean, R.-E. Precup and R.-C. Roman, Linear and Nonlinear Observers Developed for Direct Current Electric Drive Systems, in: Intelligent Methods Systems and Applications in Computing, Communications and Control, 9th International Conference on Computers Communications and Control (ICCCC) 2022, Baile Felix, Romania, 2022, S. Dzitac, D. Dzitac, F. G. Filip, J. Kacprzyk, M. J. Manolescu and H. Oros (Eds.), Advances in Intelligent Systems and Computing, vol. 1435, Springer, Cham, pp. 107-119, 2023.
15. E.-L. Hedrea, R.-E. Precup, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and C. Hedrea, Tensor Product-Based Model Transformation Technique Applied to Servo Systems Modeling, Proceedings of **30th International Symposium on Industrial Electronics ISIE 2021**, Kyoto, Japan, pp. 1-6, 2021.
16. C.-A. Bojan-Dragoş, R.-E. Precup, S. Preitl, R.-C. Roman, E.-L. Hedrea and A.-I. Szedlak-Stînean, GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic Actuated Clutch Systems, Proceedings of **4th IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2021**, Valenciennes, France, 2021, IFAC-PapersOnLine, vol. 54, no. 4, pp. 189-194, 2021.
17. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, R.-C. Roman and E. M. Petriu, Design of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity Based on Whale Optimization Algorithm, Proceedings of **2020 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2020**, Glasgow, UK, pp. 1-6, 2020.
18. R.-C. Roman, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragoş, V.-B. Vanya and M.-D. Rarinca, Second Order Active Disturbance Rejection Control - Virtual Reference Feedback Tuning for Twin

Rotor Aerodynamic Systems, Proceedings of **2020 IEEE International Conference on Systems, Man, and Cybernetics SMC 2020**, Toronto, ON, Canada, pp. 1693-1698, 2020.

19. R.-E. Precup, A.-B. Borlea, E. M. Petriu and F. Drăgan, Iterative Feedback Tuning of Two-Degree-of-Freedom Controllers for Lighting Process Control, Proceedings of **14th Annual IEEE International Systems Conference SysCon 2020**, Montreal, QC, Canada, pp. 1-6, 2020.
20. R.-C. David, R.-E. Precup, S. Preitl, E. M. Petriu, A.-I. Szedlak-Stînean and R.-C. Roman, Whale Optimization Algorithm-Based Tuning of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity, Proceedings of **28th Mediterranean Conference on Control and Automation MED 2020**, Saint-Raphael, France, pp. 440-445, 2020.
21. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu and R.-C. Roman, Tensor Product-Based Model Transformation and Sliding Mode Control of Electromagnetic Actuated Clutch System, Proceedings of **2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019**, Bari, Italy, pp. 1418-1423, 2019.
22. R.-C. Roman, R.-E. Precup, E. M. Petriu, E.-L. Hedrea, C.-A. Bojan-Dragoş and M.-B. Rădac, Model-Free Adaptive Control With Fuzzy Component for Tower Crane Systems, Proceedings of **2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019**, Bari, Italy, pp. 1400-1405, 2019.
23. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Using Weighted Recursive Least Squares Algorithm for Identification, Proceedings of 2019 IEEE International Symposium on Robotic and Sensors Environments ROSE 2019, Ottawa, ON, Canada, pp. 164-169, 2019.
24. A. Topîrceanu and R.-E. Precup, A Novel Methodology for Improving Election Poll Prediction Using Time-Aware Polling, Proceedings of 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining ASONAM '19, Vancouver, BC, Canada, pp. 282-285, 2019.
25. A.-I. Szedlak-Stînean, R.-E. Precup and R.-C. David, State Observers for Mechatronics Systems with Rigid and Flexible Drive Dynamics, Proceedings of 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 2, pp. 387-394, 2019.
26. C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-E. Precup, A.-I. Szedlak-Stînean and R.-C. Roman, MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems, Proceedings of 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 1, pp. 810-817, 2019.
27. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş and O. Tănăsoiu, Tensor Product-Based Model Transformation Technique Applied to Modeling Magnetic Levitation Systems, Proceedings of 23rd IEEE International Conference on Intelligent Engineering Systems INES 2019, Gödöllő, Hungary, pp. 179-184, 2019.

F) Books published before 2019 *(http://www.aut.upt.ro/~rprecup/books.html):*

1. R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Applied Computational Intelligence in Engineering and Information Technology, the first book in the new Springer-Verlag series on Topics in Intelligent Engineering and Informatics (Editors-in-Chief: I. J. Rudas and J. Fodor), **Springer-Verlag**, Berlin, Heidelberg, New York, 356 pp., 2012.
2. A. Kovács, R.-E. Precup, B. Paláncz and L. Kovács, Modern Numerical Methods in Engineering (in English), Editura Politehnica, Timisoara, 482 pp., 2012.
3. St. Preitl, R.-E. Precup and Zs. Preitl, Process Control Structures and Algorithms, vol. 1 (in Romanian: Structuri si algoritmi pentru conducerea automata a proceselor, vol. 1), Editura Orizonturi Universitare, Timisoara, 214 pp., 2009.
4. St. Preitl, R.-E. Precup and Zs. Preitl, Process Control Structures and Algorithms, vol. 2 (in Romanian: Structuri si algoritmi pentru conducerea automata a proceselor, vol. 2), Editura Orizonturi Universitare, Timisoara, 272 pp., 2009.
5. St. Preitl and R.-E. Precup, Eds., Design Techniques for Automatic Control Structures. Applications (in Romanian: Tehnici de proiectare a structurilor de reglare automata. Aplicatii), Editura Orizonturi Universitare, Timisoara, 107 pp., 2008.
6. R.-E. Precup, Computer Assisted Mathematics. Algorithms (in Romanian: Matematici asistate de calculator. Algoritmuri), Editura Orizonturi Universitare, Timisoara, 231 pp., 2007.

7. St. Preitl and R.-E. Precup, Eds., Controllers for Servo Systems: Design Methods (in Romanian: Regulatoare pentru servosisteme: metode de proiectare), Editura Orizonturi Universitare, Timisoara, 128 pp., 2007.
8. St. Preitl and R.-E. Precup, Elements of Automatic Control. Applications to Voltage and Speed Control Systems of Synchronous Generators (in Romanian: Elemente de reglare automata. Aplicatii la sistemele de reglare automata a excitatiei si vitezei generatoarelor sincrone), Editura Orizonturi Universitare, Timisoara, 304 pp., 2005.
9. R.-E. Precup, L. Dragomir and I. Bulavitchi, Computer Assisted Mathematics. Applications (in Romanian: Matematici asistate de calculator. Aplicatii), Editura Politehnica, Timisoara, 298 pp., 2002.
10. St. Preitl and R.-E. Precup, Introduction to Control Engineering (in Romanian: Introducere in ingineria reglarii automate), Editura Politehnica, Timisoara, 334 pp., 2001.
11. St. Preitl and R.-E. Precup, Automatic Control (in Romanian: Automatizari), Editura Orizonturi Universitare, Timisoara, 206 pp., 2001.
12. R.-E. Precup, Solutions for Fuzzy Control of Non-minimum Phase Systems. Applications to Hydrogenerators Control (in Romanian: Solutii de conducere fuzzy a sistemelor cu faza neminima. Aplicatii la conducerea hidrogeneratoarelor), Editura Orizonturi Universitare, Timisoara, 124 pp., 2000.
13. St. Preitl and R.-E. Precup, Elements of Methodics of Teaching Courses of Automation and Computer Science (in Romanian: Elemente de metodica predarii disciplinelor de automatica si calculatoare), Editura Orizonturi Universitare, Timisoara, 144 pp., 1999.
14. R.-E. Precup, and St. Preitl, Fuzzy Controllers (in English), Editura Orizonturi Universitare, Timisoara, 212 pp., 1999.
15. St. Preitl and R.-E. Precup, Introduction to Fuzzy Control (in Romanian: Introducere in conducerea fuzzy a proceselor), Editura Tehnica, Bucharest, 151 pp., 1997.

G) Book chapters published before 2019 *(http://www.aut.upt.ro/~rprecup/bookch.html):*

1. R.-C. David, R.-E. Precup, St. Preitl, A.-I. Szedlak-Stînean and L.-O. Fedorovici, Application of grey wolf optimization in fuzzy controller tuning for servo systems, Chapter 13 in Swarm Intelligence - Volume 2: Innovation, new algorithms and methods, Y. Tan, Ed. (IET Digital Library), pp. 363-387, 2018.
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimization of Fuzzy Controllers and Fuzzy Models, Chapter 20 in Handbook on Computational Intelligence, P. P. Angelov, Ed., World Scientific, Singapore, Volume 2: Evolutionary Computation, Hybrid Systems, and Applications, pp. 697-729, 2016.
3. St. Preitl, R.-E. Precup, Zs. Preitl, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, Pragmatic Design Methods Using Adaptive Controller Structures for Mechatronic Applications with Variable Parameters and Working Conditions, in: Complex Systems, G. M. Dimirovski, Ed., Studies in Systems, Decision and Control, vol. 55 (Springer International Publishing), pp. 619-647, 2016.
4. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M.-B. Rădac and L.-O. Fedorovici, Gravitational Search Algorithm-Based Evolving Fuzzy Models of a Nonlinear Process, in: Informatics in Control, Automation and Robotics, J. Filipe, K. Madani, O. Gusikhin and J. Sasiadek, Eds., Lecture Notes in Electrical Engineering, vol. 383 (Springer International Publishing), pp. 51-62, 2016.
5. R.-C. Roman, M.-B. Rădac, R.-E. Precup and E. M. Petriu, Virtual Reference Feedback Tuning of MIMO Data-Driven Model-Free Adaptive Control Algorithms, in: Technological Innovation for Cyber-Physical Systems, L. M. Camarinha-Matos, A. J. Falcão, N. Vafaei and S. Najdi, Eds., IFIP Advances in Information and Communication Technology, vol. 470 (Springer International Publishing), pp. 253-260, 2016.
6. R.-C. David, R.-E. Precup, E. M. Petriu, St. Preitl, M.-B. Rădac and L.-O. Fedorovici, Adaptive Evolutionary Optimization Algorithms for Simple Fuzzy Controller Tuning Dedicated to Servo Systems, in: Fuzzy Modeling and Control: Theory and Applications, F. Matía, G. N. Marichal and E. Jiménez, Eds., Atlantis Computational Intelligence Systems, vol. 9 (Atlantis Press and Springer-Verlag), pp. 159-173, 2014.
7. St. Preitl, R.-E. Precup, Z. Preitl, A.-I. Stînean, M.-B. Rădac and C.-A. Dragoş, Control Algorithms for Plants Operating Under Variable Conditions, Applications, in: Advances in Soft Computing,

Intelligent Robotics and Control, J. Fodor and R. Fuller, Eds., Topics in Intelligent Engineering and Informatics, vol. 8 (Springer-Verlag), pp. 3-39, 2014.

8. R.-C. David, R.-B. Grad, R.-E. Precup, M.-B. Rădac, C.-A. Dragoş and E. M. Petriu, An Approach to Fuzzy Modeling of Anti-lock Braking Systems, in: Soft Computing in Industrial Applications, V. Snášel, P. Krömer, M. Köppen and G. Schaefer, Eds., Advances in Intelligent Systems and Computing, vol. 223 (Springer-Verlag), pp. 83-93, 2014.
9. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, Classical and Fuzzy Approaches to 2-DOF Control Solutions for BLDC-m Drives, in: Intelligent Systems: Models and Applications, E. Pap, Ed., Topics in Intelligent Engineering and Informatics, vol. 3 (Springer-Verlag), pp. 175-193, 2013.
10. R.-E. Precup, F.-C. Enache, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Lead-Lag Controller-Based Iterative Learning Control Algorithms for 3D Crane Systems, in: Aspects of Computational Intelligence: Theory and Applications, L. Madarász and J Živčák, Eds., Topics in Intelligent Engineering and Informatics, vol. 2 (Springer-Verlag), pp. 25-38, 2013.
11. St. Preitl, A.-I. Stînean, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, 2-DOF and Fuzzy Control Extensions of Symmetrical Optimum Design Method: Applications and Perspectives, in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 19-37, 2012.
12. R.-C. David, R.-E. Precup, St. Preitl, J. K. Tar and J. Fodor, Three Evolutionary Optimization Algorithms in PI Controller Tuning, in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 95-106, 2012.
13. Cl. Pozna and R.-E. Precup, Ideas on a Pattern of Human Knowledge, in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 273-286, 2012.
14. C.-A. Dragoş, St. Preitl, R.-E. Precup and E. M. Petriu, Points of View on Magnetic Levitation System Laboratory-Based Control Education, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 261-275, 2012.
15. R.-E. Precup, S. V. Spătaru, M.-B. Rădac, E. M. Petriu, St. Preitl, C.-A. Dragoş and R.-C. David, Experimental Results of Model-Based Fuzzy Control Solutions for a Laboratory Antilock Braking System, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 223-234, 2012.
16. L.-O. Fedorovici, R.-E. Precup, R.-C. David and F. Drăgan, GSA-Based Training of Convolutional Neural Networks for OCR Applications, in: Computational Intelligence Systems in Industrial Engineering, C. Kahraman, Ed., Atlantis Computational Intelligence Systems, vol. 6 (Atlantis Press and Springer-Verlag), pp. 481-504, 2012.
17. R.-E. Precup, R.-C. David, St. Preitl, E. M. Petriu and J. K. Tar, Optimal Control Systems with Reduced Parametric Sensitivity Based on Particle Swarm Optimization and Simulated Annealing, in: Intelligent Computational Optimization in Engineering Techniques and Applications, M. Köppen, G. Schaefer and A. Abraham, Eds., Studies in Computational Intelligence, vol. 366 (Springer-Verlag), pp. 177-207, 2011.
18. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and A. S. Paul, Gravitational Search Algorithm-Based Tuning of Fuzzy Control Systems with a Reduced Parametric Sensitivity, in: Soft Computing in Industrial Applications, A. Gaspar-Cunha, R. Takahashi, G. Schaefer and L. Costa, Eds., Advances in Intelligent and Soft Computing, vol. 96 (Springer-Verlag), pp. 141-150, 2011.
19. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Convergent Iterative Feedback Tuning of State Feedback-Controlled Servo Systems, in: Informatics in Control Automation and Robotics, J. Andrade Cetto, J. Filipe and J.-L. Ferrier, Eds., Lecture Notes in Electrical Engineering, vol. 85 (Springer-Verlag), pp. 99-111, 2011.
20. C.-A. Dragoş, St. Preitl, R.-E. Precup, M. Creţiu and J. Fodor, Modern Control Solutions with Applications in Mechatronic Systems, in: Computational Intelligence in Engineering, I. J. Rudas, J.

Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 313 (Springer-Verlag), pp. 87-102, 2010.
21. St. Preitl, R.-E. Precup, M. L. Tomescu, M.-B. Rădac, E. M. Petriu and C.-A. Dragoş, Model-Based Design Issues in Fuzzy Logic Control, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 137-152, 2009.
22. R.-E. Precup, M.-B. Rădac, St. Preitl, E. M. Petriu and C.-A. Dragoş, Iterative Feedback Tuning in Linear and Fuzzy Control Systems, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 179-192, 2009.
23. Cl. Pozna, R.-E. Precup, St. Preitl, F. Troester and J. K. Tar, Points of View on Building an Intelligent Robot, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 263-277, 2009.
24. R.-E. Precup and St. Preitl, On the Stability and Sensitivity Analysis of Fuzzy Control Systems for Servo-Systems, in: Fuzzy Systems Engineering, Theory and Practice, N. Nedjah and L. de Macedo Mourelle, Eds., Studies in Fuzziness and Soft Computing, vol. 181 (Springer-Verlag), pp. 131-161, 2005.
25. St. Preitl and R.-E. Precup, Fuzzy Controllers with Dynamics, a Systematic Design Approach, in: Advances in Automatic Control, M. Voicu, Ed., The Springer International Series in Engineering and Computer Science, vol. 754 (Kluwer Academic Publishers and Springer-Verlag), pp. 283-296, 2003.

H) Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals published before 2019 *(http://www.aut.upt.ro/~rprecup/isijournals.html):*

1. R.-E. Precup, R.-C. David and E. M. Petriu, Grey Wolf Optimizer Algorithm-Based Tuning of Fuzzy Control Systems with Reduced Parametric Sensitivity, **IEEE Transactions on Industrial Electronics**, vol. 64, no. 1, pp. 527-534, 2017, impact factor (IF) = 7.050, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.162, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/TIE_2017_Highly_Cited_Paper.png).
2. R.-E. Precup and H. Hellendoorn, A survey on industrial applications of fuzzy control, **Computers in Industry** (Elsevier), vol. 62, no. 3, pp. 213-226, 2011, impact factor (IF) = 1.529, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 11.245, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2021 (http://www.aut.upt.ro/~rprecup/CiI_2011_Highly_Cited_Paper.png).
3. R.-E. Precup, M.-B. Rădac, R.-C. Roman and E. M. Petriu, Model-Free Sliding Mode Control of Nonlinear Systems: Algorithms and Experiments, **Information Sciences** (Elsevier), vol. 381, pp. 176-192, 2017, impact factor (IF) = 4.305, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.233, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of May/June 2018 (http://www.aut.upt.ro/~rprecup/InfSci_2017_Highly_Cited_Paper.jpg).
4. R.-E. Precup, R.-C. David, E. M. Petriu, M.-B. Rădac, St. Preitl and J. Fodor, Evolutionary optimization-based tuning of low-cost fuzzy controllers for servo systems, **Knowledge-Based Systems** (Elsevier), vol. 38, pp. 74-84, 2013, impact factor (IF) = 3.058, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 8.038, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of November/December 2015 (http://www.aut.upt.ro/~rprecup/KBS_2013_Highly_Cited_Paper.jpg).
5. R.-E. Precup, P. Angelov, B. S. J. Costa and M. Sayed-Mouchaweh, An overview on fault diagnosis and nature-inspired optimal control of industrial process applications, **Computers in Industry** (Elsevier), vol. 74, pp. 75-94, 2015, impact factor (IF) = 1.685, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 11.245, **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2015 (http://www.aut.upt.ro/~rprecup/CiI_2015_Hot_Paper.jpg).
6. M.-B. Rădac and R.-E. Precup (corresponding author), Data-driven MIMO model-free reference tracking control with nonlinear state-feedback and fractional order controllers, **Applied Soft**

Computing (Elsevier Science), vol. 73, pp. 992-1003, 2018, impact factor (IF) = 4.873, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.725.

7. M.-B. Rădac and R.-E. Precup (corresponding author), Data-Driven Model-Free Slip Control of Anti-lock Braking Systems Using Reinforcement Q-Learning, **Neurocomputing** (Elsevier Science), vol. 275, pp. 317-329, 2018, impact factor (IF) = 4.072, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 5.719.
8. M.-B. Rădac, R.-E. Precup (corresponding author) and R.-C. Roman, Data-driven model reference control of MIMO vertical tank systems with model-free VRFT and Q-learning, **ISA Transactions** (Elsevier Science), vol. 73, pp. 227-238, 2018, impact factor (IF) = 4.343, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 5.468.
9. Cl. Pozna and R.-E. Precup (corresponding author), An Approach to the Design of Nonlinear State-Space Control Systems, Studies in Informatics and Control (ICI Bucharest), vol. 27, no. 1, pp. 5-14, 2018, impact factor (IF) = 1.347, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.649.
10. R.-E. Precup, T.-A. Teban, A. Albu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiments in Incremental Online Identification of Fuzzy Models of Finger Dynamics, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 21, no. 4, pp. 358-376, 2018, impact factor (IF) = 0.661, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 0.852.
11. Cl. Pozna and R.-E. Precup (corresponding author), On a translated frame-based approach to geometric modeling of robots, **Robotics and Autonomous Systems** (Elsevier Science), vol. 91, pp. 49-58, 2017, impact factor (IF) = 2.638, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.12.
12. E. Horvath, Cl. Pozna and R.-E. Precup, Robot Coverage Path Planning Based on Iterative Structured Orientation, Acta Polytechnica Hungarica (Óbuda University), vol. 15, no. 2, pp. 231-249, 2018, impact factor (IF) = 1.286, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
13. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea and O.-M. Tănăsoiu, Gain-Scheduling Control Solutions for Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 15, no. 5, pp. 89-108, 2018, impact factor (IF) = 1.286, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
14. M.-B. Rădac, R.-E. Precup (corresponding author) and R.-C. Roman, Model-free control performance improvement using virtual reference feedback tuning and reinforcement Q-learning, **International Journal of Systems Science** (Taylor & Francis), vol. 48, no. 5, pp. 1071-1083, 2017, impact factor (IF) = 2.185, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 2.281.
15. C.-A. Bojan-Dragoş, R.-E. Precup, M. L. Tomescu, S. Preitl, O.-M. Tănăsoiu and S. Hergane, Proportional-Integral-Derivative Gain-Scheduling Control of a Magnetic Levitation System, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 12, no. 5, pp. 599-611, 2017, impact factor (IF) = 1.290, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.635.
16. A. Tenescu, R.-E. Precup and N. Minculete, Evolving Fuzzy Models for Automated Translation, Acta Polytechnica Hungarica (Óbuda University), vol. 14, no. 2, pp. 27-46, 2017, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
17. I.-D. Borlea, R.-E. Precup, F. Drăgan and A.-B. Borlea, Centroid Update Approach to K-Means Clustering, Advances in Electrical and Computer Engineering (Ştefan cel Mare University of Suceava), vol. 17, no. 4, pp. 3-10, 2017, impact factor (IF) = 0.699, impact factor (IF) = 0.699, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.221.
18. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, A.-I. Szedlak-Stînean, E.-L. Hedrea and R.-C. Roman, Automotive Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 15, no 2, pp. 231-244, 2017, impact factor (IF) = 0.000, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 4.622.
19. M.-B. Rădac and R.-E. Precup (corresponding author), Three-level hierarchical model-free learning approach to trajectory tracking control, **Engineering Applications of Artificial Intelligence**

(Elsevier Science), vol. 55, pp. 103-118, 2016, impact factor (IF) = 2.894, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.212.

20. R.-C. Roman, M.-B. Rădac and R.-E. Precup (corresponding author), Multi-input-multi-output system experimental validation of model-free control and virtual reference feedback tuning techniques, **IET Control Theory & Applications**, vol. 10, no. 12, pp. 1395-1403, 2016, impact factor (IF) = 2.536, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.527.
21. M.-B. Rădac and R.-E. Precup (corresponding author), Model-free constrained data-driven iterative reference input tuning algorithm with experimental validation, **International Journal of General Systems** (Taylor & Francis), vol. 45, no. 4, pp. 455-476, 2016, impact factor (IF) = 2.490, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.435.
22. R.-C. Roman, M.-B. Rădac, R.-E. Precup and E. M. Petriu, Data-driven Model-Free Adaptive Control Tuned by Virtual Reference Feedback Tuning, Acta Polytechnica Hungarica, vol. 13, no. 1, pp. 83-96, 2016, impact factor (IF) = 0.745, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
23. M.-B. Rădac, R.-E. Precup (corresponding author) and E. M. Petriu, Model-Free Primitive-Based Iterative Learning Control Approach to Trajectory Tracking of MIMO Systems With Experimental Validation, **IEEE Transactions on Neural Networks and Learning Systems**, vol. 26, no. 11, pp. 2925-2938, 2015, impact factor (IF) = 4.854, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 10.451.
24. R.-E. Precup, M.-C. Sabău and E. M. Petriu, Nature-Inspired Optimal Tuning of Input Membership Functions of Takagi-Sugeno-Kang Fuzzy Models for Anti-lock Braking Systems, **Applied Soft Computing** (Elsevier Science), vol. 27, pp. 575-589, 2015, impact factor (IF) = 2.857, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.725.
25. M.-B. Rădac and R.-E. Precup (corresponding author), Data-based two-degree-of-freedom iterative control approach to constrained non-linear systems, **IET Control Theory & Applications**, vol. 9, no. 7, pp. 1000-1010, 2015, impact factor (IF) = 1.957, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.527.
26. R.-E. Precup and M. L. Tomescu, Stable fuzzy logic control of a general class of chaotic systems, **Neural Computing and Applications** (Springer), vol. 26, no. 3, pp. 541-550, 2015, impact factor (IF) = 1.492, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 5.606.
27. R.-E. Precup, H. Hellendoorn and P. Angelov, Editorial: Synergy of computers, cognition, communication and control with industrial applications, **Computers in Industry** (Elsevier Science), vol. 74, pp. 71-74, 2015, impact factor (IF) = 1.685, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 11.245.
28. M.-B. Rădac and R.-E. Precup (corresponding author), Optimal behaviour prediction using a primitive-based data-driven model-free iterative learning control approach, **Computers in Industry** (Elsevier Science), vol. 74, pp. 95-109, 2015, impact factor (IF) = 1.685, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 11.245.
29. Cl. Pozna, R.-E. Precup (corresponding author) and P. Földesi, A novel pose estimation algorithm for robotic navigation, **Robotics and Autonomous Systems** (Elsevier Science), vol 63, pp. 10-21, 2015, impact factor (IF) = 1.618, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.12.
30. R.-E. Precup, E. M. Petriu, M.-B. Rădac, St. Preitl, L.-O. Fedorovici and C.-A. Dragoş, Cascade control system-based cost effective combination of tensor product model transformation and fuzzy control, **Asian Journal of Control** (John Wiley and Sons), vol. 17, no. 2, pp. 381-391, 2015, impact factor (IF) = 1.407, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.452.
31. R.-E. Precup, M. L. Tomescu and E. M. Petriu, A Unified Anti-Windup Technique for Fuzzy and Sliding Mode Controllers, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 10, no. 6, pp. 843-855, 2015, impact factor (IF) = 0.627, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.635.
32. M.-B. Rădac, R.-E. Precup and E. M. Petriu, Constrained Data-Driven Model-Free ILC-based Reference Input Tuning Algorithm, Acta Polytechnica Hungarica, vol. 12, no. 1, pp. 137-160, 2015,

impact factor (IF) = 0.544, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.

33. Á. Takács, L. Kovács, I. J. Rudas, R.-E. Precup and T. Haidegger, Models for Force Control in Telesurgical Robot Systems, Acta Polytechnica Hungarica, vol. 12, no. 8, pp. 95-114, 2015, impact factor (IF) = 0.544, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
34. M.-B. Rădac, R.-E. Precup (corresponding author), E. M. Petriu and St. Preitl, Iterative Data-Driven Tuning of Controllers for Nonlinear Systems with Constraints, **IEEE Transactions on Industrial Electronics**, vol. 61, no. 11, pp. 6360-6368, 2014, impact factor (IF) = 6.498, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.162.
35. R.-E. Precup, R.-C. David, E. M. Petriu, M.-B. Rădac and St. Preitl, Adaptive GSA-Based Optimal Tuning of PI Controlled Servo Systems With Reduced Process Parametric Sensitivity, Robust Stability and Controller Robustness, **IEEE Transactions on Cybernetics**, vol. 44, no. 11, pp. 1997-2009, 2014, impact factor (IF) = 3.469, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 11.448.
36. R.-E. Precup, H.-I. Filip, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Online Identification of Evolving Takagi-Sugeno-Kang Fuzzy Models for Crane Systems, **Applied Soft Computing** (Elsevier Science), vol. 24, pp. 1155-1163, 2014, impact factor (IF) = 2.810, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.725.
37. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Novel Adaptive Charged System Search Algorithm for Optimal Tuning of Fuzzy Controllers, **Expert Systems with Applications** (Elsevier Science), vol. 41, no. 4, part 1, pp. 1168-1175, 2014, impact factor (IF) = 2.240, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.665.
38. R.-E. Precup, M.-L. Tomescu and C.-A. Dragoş, Stabilization of Rössler chaotic dynamical system using fuzzy logic control algorithm, **International Journal of General Systems** (Taylor & Francis), vol. 43, no. 5, pp. 413-433, 2014, impact factor (IF) = 1.637, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.435.
39. Cl. Pozna and R.-E. Precup, Applications of Signatures to Expert Systems Modelling, Acta Polytechnica Hungarica (Óbuda University), vol. 11, no. 2, pp. 21-39, 2014, impact factor (IF) = 0.649, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
40. R. S. Fantana, N. Minculete and R.-E. Precup, Extension of Liskov Substitution Principle and Application to Curriculum Management, Acta Polytechnica Hungarica, vol. 11, no. 7, pp. 25-42, 2014, impact factor (IF) = 0.649, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
41. M.-B. Rădac, R.-E. Precup (corresponding author), E. M. Petriu and St. Preitl, Iterative Data-Driven Controller Tuning with Actuator Constraints and Reduced Sensitivity, **Journal of Aerospace Information Systems** (The American Institute of Aeronautics and Astronautics), vol. 11, no. 9, pp. 551-564, 2014, impact factor (IF) = 0.213, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.185.
42. R.-C. David, R.-E. Precup (corresponding author), E. M. Petriu, M.-B. Rădac and St. Preitl, Gravitational Search Algorithm-Based Design of Fuzzy Control Systems with a Reduced Parametric Sensitivity, **Information Sciences** (Elsevier Science), vol. 247, pp. 154-173, 2013, impact factor (IF) = 3.893, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.233.
43. M.-B. Rădac, R.-E. Precup (corresponding author), E. M. Petriu, St. Preitl and C.-A. Dragoş, Data-driven reference trajectory tracking algorithm and experimental validation, **IEEE Transactions on Industrial Informatics**, vol. 9, no. 4, pp. 2327-2336, 2013, impact factor (IF) = 8.785, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 10.215.
44. R.-E. Precup, M.-B. Rădac, M. L. Tomescu, E. M. Petriu and St. Preitl, Stable and convergent iterative feedback tuning of fuzzy controllers for discrete-time SISO systems, **Expert Systems with Applications** (Elsevier Science), vol. 40, no. 1, pp. 188-199, 2013, impact factor (IF) = 1.965, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.665.
45. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Fuzzy logic-based adaptive gravitational search algorithm for optimal tuning of fuzzy controlled servo systems, **IET Control**

Theory & Applications, vol. 7, no. 1, pp. 99-107, 2013, impact factor (IF) = 1.844, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.527.

46. R.-E. Precup, M.-L. Tomescu, St. Preitl, E. M. Petriu, J. Fodor and Cl. Pozna, Stability analysis and design of a class of MIMO fuzzy control systems, **Journal of Intelligent & Fuzzy Systems** (IOS Press), vol. 25, no. 1, pp. 145-155, 2013, impact factor (IF) = 0.936, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 0.000.
47. M.-B. Rădac, R.-E. Precup (corresponding author), E. M. Petriu and St. Preitl, Experiment-based Performance Improvement of State Feedback Control Systems for Single Input Processes, Acta Polytechnica Hungarica (Óbuda University), vol. 10, no. 1, pp. 5-24, 2013, impact factor (IF) = 0.471, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
48. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Experiments in fuzzy controller tuning based on an adaptive gravitational search algorithm, Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science (Editura Academiei Romane, Bucharest), vol. 14, no. 4, pp. 360-367, 2013, impact factor (IF) = 1.115, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 0.734.
49. C.-A. Dragoş, R.-E. Precup, M. L. Tomescu, St. Preitl, E. M. Petriu and M.-B. Rădac, An Approach to Fuzzy Modeling of Electromagnetic Actuated Clutch Systems, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 8, no. 3, pp. 395-406, 2013, impact factor (IF) = 0.694, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.635.
50. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Fuzzy control systems with reduced parametric sensitivity based on simulated annealing, **IEEE Transactions on Industrial Electronics**, vol. 59, no. 8, pp. 3049-3061, 2012, impact factor (IF) = 5.165, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.162.
51. R.-E. Precup, M. L. Tomescu, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Iterative performance improvement of fuzzy control systems for three tank systems, **Expert Systems with Applications** (Elsevier Science), vol. 39, no. 9, pp. 8288-8299, 2012, impact factor (IF) = 1.854, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.665.
52. Cl. Pozna, N. Minculete, R.-E. Precup (corresponding author), L. T. Kóczy and Á. Ballagi, Signatures: Definitions, operators and applications to fuzzy modeling, **Fuzzy Sets and Systems** (Elsevier Science), vol. 201, pp. 86-104, 2012, impact factor (IF) = 1.749, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.343.
53. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Novel adaptive gravitational search algorithm for fuzzy controlled servo systems, **IEEE Transactions on Industrial Informatics**, vol. 8, no. 4, pp. 791-800, 2012, impact factor (IF) = 3.381, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 10.215.
54. N. Minculete, Cl. Pozna and R.-E. Precup (corresponding author), A refinement of Sandor-Toth's inequality, **Journal of Inequalities and Applications** (SpringerOpen), 2012: 4, pp. 1-16, DOI: 10.1186/1029-242X-2012-4, 2012, impact factor (IF) = 0.820, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 2.491.
55. R.-E. Precup, C.-A. Dragoş, St. Preitl, M.-B. Rădac and E. M. Petriu, Novel tensor product models for automatic transmission system control, **IEEE Systems Journal**, vol. 6, no. 3, pp. 488-498, 2012, impact factor (IF) = 1.270, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.931.
56. T. Haidegger, L. Kovács, R.-E. Precup, B. Benyó, Z. Benyó and St. Preitl, Simulation and control for telerobots in space medicine, **Acta Astronautica** (Elsevier Science), vol. 181, no. 1, pp. 390-402, 2012, impact factor (IF) = 0.701, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 2.413.
57. R.-E. Precup, T. Haidegger, St. Preitl, Z. Benyó, A. S. Paul and L. Kovács, Fuzzy control solution for telesurgical applications, Applied and Computational Mathematics (Ministry of Communications and Information Technology, Azerbaijan National Academy of Sciences and Institute of Applied Mathematics of Baku State University), vol. 11, no. 3, pp. 378-397, 2012, impact factor (IF) = 0.750, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 3.898.
58. Cl. Pozna and R.-E. Precup, Aspects concerning the observation process modelling in the framework of cognition processes, Acta Polytechnica Hungarica (Óbuda University), vol. 9, no. 1, pp. 203-223,

2012, impact factor (IF) = 0.588, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.

59. R.-E. Precup, M. L. Tomescu, E. M. Petriu, St. Preitl and C.-A. Dragoş, Stable design of a class of nonlinear discrete-time MIMO fuzzy control systems, Acta Polytechnica Hungarica (Óbuda University), vol. 9, no. 2, pp. 57-76, 2012, impact factor (IF) = 0.588, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
60. M.-B. Rădac, R.-E. Precup (corresponding author), E. M. Petriu and St. Preitl, Application of IFT and SPSA to servo system control, **IEEE Transactions on Neural Networks**, vol. 22, no. 12, part 2, pp. 2363-2375, 2011, impact factor (IF) = 2.952, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 10.451 (IEEE Transactions on Neural Networks and Learning Systems starting with 2012).
61. R.-E. Precup, St. Preitl, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş and J. K. Tar, Experiment-based teaching in advanced control engineering, **IEEE Transactions on Education**, vol. 54, no. 3, pp. 345-355, 2011, impact factor (IF) = 1.021, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 2.116.
62. Cl. Pozna, R.-E. Precup (corresponding author), J. K. Tar, I. Škrjanc and St. Preitl, New results in modelling derived from Bayesian filtering, **Knowledge-Based Systems** (Elsevier Science), vol. 23, no. 2, pp. 182-194, 2010, impact factor (IF) = 1.574, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 8.038.
63. Cl. Pozna, F. Troester, R.-E. Precup (corresponding author), J. K. Tar and St. Preitl, On the Design of an Obstacle Avoiding Trajectory: Method and Simulation, **Mathematics and Computers in Simulation** (Elsevier Science), vol. 79, no. 7, pp. 2211-2226, 2009, impact factor (IF) = 0.946, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 2.463.
64. R.-E. Precup, St. Preitl, E. M. Petriu, J. K. Tar, M. L. Tomescu and Cl. Pozna, Generic two-degree-of-freedom linear and fuzzy controllers for integral processes, **Journal of The Franklin Institute** (Elsevier Science), vol. 346, no. 10, pp. 980-1003, 2009, impact factor (IF) = 1.130, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 4.504.
65. R.-E. Precup, M. L. Tomescu and St. Preitl, Fuzzy Logic Control System Stability Analysis Based on Lyapunov's Direct Method, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. IV, no. 4, pp. 415-426, 2009, impact factor (IF) = 0.373, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.635.
66. R.-E. Precup, St. Preitl, J. K. Tar, M. L. Tomescu, M. Takács, P. Korondi and P. Baranyi, Fuzzy Control System Performance Enhancement by Iterative Learning Control, **IEEE Transactions on Industrial Electronics**, vol. 55, no. 9, pp. 3461-3475, 2008, impact factor (IF) = 5.468, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.162.
67. R.-E. Precup, St. Preitl, I. J. Rudas, M. L. Tomescu and J. K. Tar, Design and Experiments for a Class of Fuzzy Controlled Servo Systems, **IEEE/ASME Transactions on Mechatronics**, vol. 13, no. 1, pp. 22-35, 2008, impact factor (IF) = 1.614, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 5.303.
68. R.-E. Precup, W. S. Lee, M. V. C. Rao and Zs. Preitl, Linear and fuzzy control solutions for tape drives, **Electrical Engineering** (Springer), vol. 90, no. 5, pp. 361-377, 2008, impact factor (IF) = 0.378, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.836.
69. R.-E. Precup and St. Preitl, PI-Fuzzy Controllers for Integral Plants to Ensure Robust Stability, **Information Sciences** (Elsevier Science), vol. 177, no. 20, pp. 4410-4429, 2007, impact factor (IF) = 2.147, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.233.
70. R.-E. Precup, St. Preitl and P. Korondi, Fuzzy Controllers with Maximum Sensitivity for Servosystems, **IEEE Transactions on Industrial Electronics**, vol. 54, no. 3, pp. 1298-1310, 2007, impact factor (IF) = 2.216, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 8.162.
71. R.-E. Precup, M. L. Tomescu and St. Preitl, Lorenz System Stabilization Using Fuzzy Controllers, International Journal of Computers Communications & Control (Agora University, CCC Publishing, EBSCO Publishing), vol. II, no. 3, pp. 279-287, 2007, impact factor (IF) = 0.000, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 2.635.

72. R.-E. Precup and St. Preitl, PI and PID controllers tuning for integral-type servo systems to ensure robust stability and controller robustness, **Electrical Engineering** (Springer), vol. 88, no. 2, pp. 149-156, 2006, impact factor (IF) = 0.068, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.836.
73. R.-E. Precup and St. Preitl, Stability and Sensitivity Analysis of Fuzzy Control Systems. Mechatronics Applications, Acta Polytechnica Hungarica (Óbuda University), vol. 3, no. 1, pp. 61-76, 2006, impact factor (IF) = 0.000, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.806.
74. R.-E. Precup and St. Preitl, Optimisation Criteria in Development of Fuzzy Controllers with Dynamics, **Engineering Applications of Artificial Intelligence** (Elsevier Science), vol. 17, no. 6, pp. 661-674, 2004, impact factor (IF) = 0.421, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.212.
75. R.-E. Precup, St. Preitl and G. Faur, PI Predictive Fuzzy Controllers for Electrical Drive Speed Control: Methods and Software for Stable Development, **Computers in Industry** (Elsevier Science), vol. 52, no. 3, pp. 253-270, 2003, impact factor (IF) = 0.692, IF according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022 = 11.245.
76. R.-E. Precup and St. Preitl, Development of Fuzzy Controllers with Non-homogeneous Dynamics for Integral-type Plants, **Electrical Engineering** (Springer), vol. 85, no. 3, pp. 155-168, 2003, impact factor (IF) = 0.099, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.836.
77. R.-E. Precup, S. Doboli and St. Preitl, Stability Analysis and Development of a Class of Fuzzy Control Systems, **Engineering Applications of Artificial Intelligence** (Elsevier Science), vol. 13, no. 3, pp. 237-247, 2000, impact factor (IF) = 0.231, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 6.212.
78. St. Preitl and R.-E. Precup, An Extension of Tuning Relations after Symmetrical Optimum Method for PI and PID Controllers, **Automatica** (Elsevier Science), vol. 35, no. 10, pp. 1731-1736, 1999, impact factor (IF) = 0.911, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 5.944.

I) Papers in refereed journals / contributions to books published before 2019
(http://www.aut.upt.ro/~rprecup/journals.html):

1. R.-C. Roman, R.-E. Precup and R.-C. David, Second Order Intelligent Proportional-Integral Fuzzy Control of Twin Rotor Aerodynamic Systems, Procedia Computer Science (Elsevier Science), vol. 139, pp. 372-380, 2018.
2. G. Rigatos, P. Siano, D. Selişteanu and R. E. Precup, Nonlinear Optimal Control of Oxygen and Carbon Dioxide Contents in Blood, Intelligent Industrial Systems (Springer-Verlag), vol. 3, no. 2, pp. 61-75, 2017.
3. R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu, M.-B. Rădac and A.-I. Stînean, Results on Optimal Tuning of Fuzzy Models of Magnetic Levitation Systems, International Journal of Artificial Intelligence (CESER Publications), vol. 13, no. 2, pp. 57-72, 2015.
4. R.-E. Precup, T. Haidegger and L. Kovács, Stable Hybrid Fuzzy Controller-based Architecture for Robotic Telesurgery Systems, International Journal of Computational Intelligence and Pattern Recognition (Columbia International Publishing), vol. 1, no. 1, pp. 61-76, 2014.
5. R.-E. Precup, C.-A. Dragoş, S. Preitl, E. M. Petriu and M.-B. Rădac, A simple fuzzy control design for powertrain systems with three inertias, Memoirs of the Scientific Sections of the Romanian Academy (Editura Academiei Romane, Bucharest), Tome XXXVI, pp. 97-110, 2013.
6. C. Purcaru, R.-E. Precup, D. Iercan, L.-O. Fedorovici, R.-C. David and F. Drăgan, Optimal Robot Path Planning Using Gravitational Search Algorithm, International Journal of Artificial Intelligence (CESER Publications), vol. 10, no. S13, pp. 1-20, 2013.
7. R.-C. David, C.-A. Dragoş, R.-G. Bulzan, R.-E. Precup, E. M. Petriu and M.-B. Rădac, An approach to fuzzy modeling of magnetic levitation systems, International Journal of Artificial Intelligence (CESER Publications), vol. 9, no. A12, pp. 1-18, 2012.
8. C.-A. Dragoş, R.-E. Precup, St. Preitl, E. M. Petriu and A.-I. Stînean, Takagi-Sugeno fuzzy control solutions for mechatronic applications, International Journal of Artificial Intelligence (CESER Publications), vol. 8, no. S12, pp. 45-65, 2012.

9. Cl. Pozna, R.-E. Precup, L. T. Kóczy and Á. Ballagi, Potential field-based approach for obstacle avoidance trajectories, The IPSI BgD Transactions on Internet Research (IPSI Bgd Internet Research Society), vol. 8, no. 2, pp. 40-45, 2012.
10. T. Haidegger, L. Kovács, St. Preitl, R.-E. Precup, B. Benyó and Z. Benyó, Controller design solutions for long distance telesurgical applications, International Journal of Artificial Intelligence (CESER Publications), vol. 6, no. S11, pp. 48-71, 2011.
11. R.-E. Precup, M.-L. Tomescu, St. Preitl, E. M. Petriu, J. Fodor and A. S. Paul, Stable design of Takagi-Sugeno fuzzy controllers for a laboratory three-tank system, International Journal of Nuclear Knowledge Management (Inderscience Publishers), vol. 5, no. 2, pp. 126-147, 2011.
12. R.-E. Precup, M.-L. Tomescu, E. M. Petriu and L.-E. Dragomir, Stable fuzzy logic control of generalized van der Pol oscillator, International Journal of Artificial Intelligence (CESER Publications), vol. 7, no. A11, pp. 36-46, 2011.
13. Cl. Pozna, R-E. Precup, N. Minculete and C. Alexandru, Modelling the Intelligence Phenomenon, Acta Technica Jaurinensis (Széchenyi István University), vol. 4, no. 1, pp. 13-21, 2011.
14. R.-E. Precup, M. L. Tomescu, St. Preitl and E. M. Petriu, Fuzzy logic-based stabilization of a magnetic ball suspension system, International Journal of Artificial Intelligence (CESER Publications), vol. 5, no. A10, pp. 56-66, 2010.
15. R.-E. Precup, M. L. Tomescu, St. Preitl and E. M. Petriu, Fuzzy Logic-based Stabilization of Nonlinear Time-varying Systems, International Journal of Artificial Intelligence (CESER Publications), vol. 3, no. A09, pp. 24-36, 2009.
16. R.-E. Precup, R.-C. David, St. Preitl and E. M. Petriu, Design aspects of optimal PI controllers with reduced sensitivity for a class of servo systems using PSO algorithms, Facta Universitatis, Series Automatic Control and Robotics (University of Niš), vol. 8, no. 1, pp. 1-12, 2009.
17. R.-E. Precup, M. L. Tomescu, St. Preitl and I. Škrjanc, Stable Fuzzy Logic Control Solution for Lorenz Chaotic System Stabilization, International Journal of Artificial Intelligence (CESER Publications), vol. 1, no. A08, pp. 23-33, 2008.
18. M.-L. Tomescu, St. Preitl, R.-E. Precup and J. K. Tar, Stability Analysis Method for Fuzzy Control Systems Dedicated Controlling Nonlinear Processes, Acta Polytechnica Hungarica (Óbuda University), vol. 4, no. 3, pp. 127-141, 2007.
19. Cl. Pozna and R.-E. Precup, Plausible Reasoning in Modular Robotics and Human Reasoning, Acta Polytechnica Hungarica (Óbuda University), vol. 4, no. 4, pp. 133-147, 2007.
20. R.-E. Precup and St. Preitl, On a Class of Control Systems with Takagi-Sugeno PI-Fuzzy Controllers, Studies in Informatics and Control (National Institute for R&D in Informatics ICI Bucharest), vol. 15, no. 3, pp. 323-332, 2006.
21. St. Preitl and R.-E. Precup, Sensitivity study of a class of fuzzy control systems, Periodica Polytechnica, Electrical Engineering (Budapest University of Technology and Economics), vol. 50, no. 3-4, pp. 255-268, 2006.
22. St. Preitl, R.-E. Precup, J. Fodor and B. Bede, Iterative Feedback Tuning in Fuzzy Control Systems. Theory and Applications, Acta Polytechnica Hungarica (Óbuda University), vol. 4, no. 3, pp. 81-96, 2006.
23. Zs. Preitl, R.-E. Precup, J. K. Tar and M. Takács, Use of Multi-parametric Quadratic Programming in Fuzzy Control Systems, Acta Polytechnica Hungarica (Óbuda University), vol. 3, no. 3, pp. 29-43, 2006.
24. R.-E. Precup, St. Preitl, Cs. Szabo, P. Korondi and P. Szemes, On Some Low-Cost Tracking Controllers for Mobile Robots, Control and Intelligent Systems (Acta Press), vol. 33, no. 1, pp. 1-12, 2005.
25. R.-E. Precup and St. Preitl, Control Solutions in Mechatronics Systems, Facta Universitatis, Series Electronics and Energetics (University of Niš), vol. 18, no. 3, pp. 379-394, 2005.
26. St. Preitl, R.-E. Precup and Zs. Preitl, Development of Conventional and Fuzzy Controllers and Takagi-Sugeno Fuzzy Models Dedicated for Control of Low Order Benchmarks with Time Variable Parameters, Acta Polytechnica Hungarica (Óbuda University), vol. 2, no. 1, pp. 75-92, 2005.
27. R.-E. Precup, St. Preitl and P. Korondi, Development of Fuzzy Controllers with Dynamics Regarding Stability Conditions and Sensitivity Analysis, Journal of Advanced Computational Intelligence and Intelligent Informatics (Fuji Technology Press), vol. 8, no. 5, pp. 499-506, 2004.

28. St. Preitl and R.-E. Precup, Points of View in Controller Design by Means of Extended Symmetrical Optimum Method, in: Control Systems Design 2003 (CSD '03), S. Kozak and M. Huba, Eds. (Elsevier), pp. 95-100, 2004.
29. R.-E. Precup and St. Preitl, Popov-type Stability Analysis Method for Fuzzy Control Systems with PI Fuzzy Controllers, Revue Roumaine de Sciences Techniques, Serie Electrotechnique et Energetique (Editura Academiei Romane, Bucharest), vol. 48, no. 4, pp. 505-522, 2003.
30. R.-E. Precup and St. Preitl, Multiobjective Optimisation Criteria in Development of Fuzzy Controllers with Dynamics, in: Control Applications of Optimisation 2003, R. Bars and E. Gyurkovics, Eds. (Elsevier Science), pp. 257-262, 2003.
31. St. Preitl, Zs. Preitl and R.-E. Precup, Low Cost Fuzzy Controllers for Classes of Second-order Systems, in: Proceedings of the 15th IFAC World Congress, E. F. Camacho, Ed. (Elsevier), CD-ROM, paper index 416, 6 pp., 2003.
32. R.-E. Precup and St. Preitl, Development Method for a Takagi-Sugeno PI-fuzzy Controller, in: Proceedings of the 15th IFAC World Congress, E. F. Camacho, Ed. (Elsevier), CD-ROM, paper index 390, 6 pp., 2003.
33. R.-E. Precup and St. Preitl, On Some Low Cost Fuzzy Control Solutions for Third-Order Integral Actuators, in: Cost Oriented Automation (Low Cost Automation 2001), R. Bernhardt and H.-H. Erbe, Eds. (Elsevier Science), pp. 65-70, 2002.
34. St. Preitl, R.-E. Precup, St. Solyom and L. Kovacs, Development of Conventional and Fuzzy Controllers for Output Coupled Drive Systems and Variable Inertia, in: Large Scale Systems: Theory and Applications 2001 (LSS'01), F. G. Filip, I. Dumitrache and S. Iliescu, Eds. (Elsevier Science), pp. 261-269, 2002.
35. R.-E. Precup, St. Preitl and Zs. Preitl, Robustness Analysis of a Class of Fuzzy Systems, in: Large Scale Systems: Theory and Applications 2001 (LSS'01), F. G. Filip, I. Dumitrache and S. Iliescu, Eds. (Elsevier Science), pp. 249-254, 2002.
36. St. Preitl, R.-E. Precup and St. Kilyeni, State Space Approach to the Stability Analysis of a Class of Fuzzy Control Systems Meant for Third-order Plants, in: Artificial Intelligence in Real Time Control (AIRTC-2000), I. J. Rudas, and J. K. Tar, Eds. (Elsevier Science), pp. 259-264, 2001.
37. St. Preitl and R.-E. Precup, Cross-optimization Aspects Concerning the Extended Symmetrical Optimum Method, in: Digital Control 2000: Past, Present and Future of PID Control, J. Quevedo and T. Escobet, Eds. (Elsevier Science), pp. 223-228, 2000.
38. R.-E. Precup, St. Preitl and St. Solyom, Center Manifold Theory Approach to the Stability Analysis of Fuzzy Control Systems, in: Computational Intelligence. Theory and Applications, B. Reusch, Ed., Lecture Notes in Computer Science (Springer-Verlag), vol. 1625, pp. 382-390, 1999.
39. R.-E. Precup and St. Preitl, Development of a Quasi-PI Fuzzy Controller Based on the Principle of Minimum Guaranteed Phase Margin, in: Proceedings of the 14th World Congress of International Federation of Automatic Control, H.-F. Chen, D.-Z. Cheng and J.-F. Zhang, Eds. (Elsevier Science), vol. 12, pp. 183-188, 1999.
40. S. Doboli and R.-E. Precup, Stability Analysis and Design of a Class of Fuzzy Control Systems, in: System Structure and Control 1997, Vl. Ionescu and D. Popescu, Eds. (Elsevier Science), pp. 333-338, 1998.
41. R.-E. Precup and St. Preitl, On Some Predictive and Adaptive Fuzzy Controllers Based on Ensuring the Maximum Phase Reserve, in: System Structure and Control 1997, Vl. Ionescu and D. Popescu, Eds. (Elsevier Science), pp. 321-326, 1998.
42. R.-E. Precup, St. Preitl and P. Vukovic, On a Combination of Sliding Mode Control and Fuzzy Control, Facta Universitatis, Series Mechanics, Automatic Control and Robotics (University of Niš), vol. 6, no. 2, pp. 133-142, 1996.
43. R.-E. Precup and St. Preitl, Fuzzy Control Algorithms Implementation for a Synchronous Generator Connected to a Power System, in: Integrated Systems Engineering, G. Johannsen, Ed. (Elsevier Science), pp. 377-386, 1995.
44. St. Preitl and R.-E. Precup, On the Opportunity of ARW Measures in Fuzzy Control, in: Real World Applications of Intelligent Technologies, H.-J. Zimmermann, M. Gh. Negoita and D. Dascalu, Eds. (Editura Academiei Romane, Bucharest), pp. 149-153, 1995.

J) Published contributions to refereed academic conferences before 2019
(http://www.aut.upt.ro/~rprecup/confe.html):

8. Publication List – team leader – Radu-Emil Precup

1. A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, R.-E. Precup and M.-B. Rădac, Gain-Scheduling Control Solutions for a Strip Winding System with Variable Moment of Inertia, Proceedings of **3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018**, Ghent, Belgium, 2018, IFAC-PapersOnLine, vol. 51, no. 4, pp. 370-375, 2018.
2. R.-C. Roman, M.-B. Rădac, C. Tureac and R.-E. Precup, Data-Driven Active Disturbance Rejection Control of Pendulum Cart Systems, Proceedings of **2018 IEEE Conference on Control Technology and Applications CCTA 2018**, Copenhagen, Denmark, pp. 933-938, 2018.
3. R.-E. Precup, T.-A. Teban, E. M. Petriu, A. Albu and I.-C. Mituleţu, Structure and Evolving Fuzzy Models for Prosthetic Hand Myoelectric-Based Control Systems, Proceedings of **26th Mediterranean Conference on Control and Automation MED'18**, Zadar, Croatia, pp. 625-630, 2018.
4. M.-B. Rădac, R.-E. Precup, E.-L. Hedrea and I.-C. Mituleţu, Data-Driven Model-Free Model-Reference Nonlinear Virtual State-Feedback Control from Input-Output Data, Proceedings of **26th Mediterranean Conference on Control and Automation MED'18**, Zadar, Croatia, pp. 332-338, 2018.
5. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea, A.-I. Szedlak-Stînean and S. Preitl, Gain-Scheduling Position Control Approaches for Electromagnetic Actuated Clutch Systems, Proceedings of 15th International Conference on Informatics in Control, Automation and Robotics ICINCO 2018, Porto, Portugal, vol. 2, pp. 411-418, 2018.
6. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and E. M. Petriu, Comparative Study of Control Structures for Maglev Systems, Proceedings of 2018 IEEE 18th International Conference on Power Electronics and Motion Control PEMC 2018, Budapest, Hungary, pp. 657-662, 2018.
7. C.-A. Bojan-Dragoş, R.-E. Precup, E.-L. Hedrea, A. Simo and A. Daia, Discrete time Control Solutions for Inverted Pendulum Crane Mode Control, Proceedings of 18th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2018, Budapest, Hungary, pp. 295-300, 2018.
8. R.-C. Roman, R.-E. Precup, M.-B. Rădac and E. M. Petriu, Takagi-Sugeno Fuzzy Controller Structures for Twin Rotor Aerodynamic Systems, Proceedings of **2017 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2017**, Naples, Italy, pp. 1-6, 2017.
9. R.-C. Roman, R.-E. Precup and M.-B. Rădac, Model-Free Fuzzy Control of Twin Rotor Aerodynamic Systems, Proceedings of **25th Mediterranean Conference on Control and Automation MED 2017**, Valletta, Malta, pp. 559-564, 2017.
10. M.-B. Rădac, R.-E. Precup and R.-C. Roman, Anti-lock Braking Systems Data-Driven Control Using Q-Learning, Proceedings of **2017 IEEE International Symposium on Industrial Electronics ISIE 2017**, Edinburgh, UK, pp. 418-423, 2017.
11. L.-E. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and C. Hedrea, Tensor Product-Based Model Transformation for Position Control of Magnetic Levitation Systems, Proceedings of **2017 IEEE International Symposium on Industrial Electronics ISIE 2017**, Edinburgh, UK, pp. 1141-1146, 2017.
12. M.-B. Rădac, R.-E. Precup and R.-C. Roman, Multi Input-Multi Output Tank System Data-Driven Model Reference Control, Proceedings of **13th IEEE International Conference on Control & Automation ICCA 2017**, Ohrid, Macedonia, pp. 1078-1083, 2017.
13. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, I.-D. Borlea and E. M. Petriu, Evolving Fuzzy Models for Anti-lock Braking Systems, Proceedings of **2017 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2017**, Annecy, France, pp. 48-53, 2017.
14. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, M.-D. Rarinca and E. M. Petriu, Evolving Fuzzy Models for the Position Control of Magnetic Levitation Systems, Proceedings of **2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017**, Ljubljana, Slovenia, pp. 1-6, 2017.
15. A.-I. Szedlak-Stînean, R.-E. Precup and E. M. Petriu, Fuzzy and 2-DOF Controllers for Processes with a Discontinuously Variable Parameter, Proceedings of 14th International Conference on Informatics in Control, Automation and Robotics ICINCO 2017, Madrid, Spain, vol. 2, pp. 431-438, 2017.
16. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and T.-A. Teban, Tensor Product-Based Model Transformation for Level Control of Vertical Three Tank Systems, Proceedings of 21st

International Conference on Intelligent Engineering Systems INES 2017, Larnaca, Cyprus, pp. 113-118, 2017.

17. C.-A. Bojan-Dragoş, R.-E. Precup, S. Hergane, T.-A. Teban and E. M. Petriu, Fuzzy Logic-Based Adaptive Control Scheme for Magnetic Levitation Systems, Proceedings of 2017 IEEE International Symposium on Robotics and Intelligent Sensors IRIS 2017, Ottawa, Canada, pp. 160-165, 2017.
18. D.-A. Dutescu, M.-B. Rădac and R.-E. Precup, Model Predictive Control of a Nonlinear Laboratory Twin Rotor Aero-dynamical System, Proceedings of IEEE 15th International Symposium on Applied Machine Intelligence and Informatics SAMI 2017, Herl'any, Slovakia, pp. 37-42, 2017.
19. R.-E. Precup, T.-A. Teban, T. E. Alves de Oliveira and E. M. Petriu, Evolving Fuzzy Models for Myoelectric-based Control of a Prosthetic Hand, Proceedings of **2016 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2016**, Vancouver, Canada, pp. 72-77, 2016.
20. R.-C. Roman, M.-B. Rădac and R.-E. Precup, Mixed MFC-VRFT Approach for a Multivariable Aerodynamic System Position Control, Proceedings of **2016 IEEE International Conference on Systems, Man, and Cybernetics SMC 2016**, Budapest, Hungary, pp. 2615-2620, 2016.
21. M.-B. Rădac and R.-E. Precup, Hierarchical Data-Driven Model-Free Iterative Learning Control Using Primitives, Proceedings of **2016 IEEE International Conference on Systems, Man, and Cybernetics SMC 2016**, Budapest, Hungary, pp. 2785-2790, 2016.
22. M.-B. Rădac, R.-E. Precup and R.-C. Roman, Data-Driven Virtual Reference Feedback Tuning and Reinforcement Q-learning for Model-Free Position Control of an Aerodynamic System, Proceedings of **24th Mediterranean Conference on Control and Automation MED'2016**, Athens, Greece, pp. 1126-1132, 2016.
23. T.-A. Teban, R.-E. Precup, E.-I. Voişan, T. E. Alves de Oliveira and E. M. Petriu, Recurrent Dynamic Neural Network Model for Myoelectric-based Control of a Prosthetic Hand, Proceedings of **10th Annual IEEE International Systems Conference SysCon 2016**, Orlando, FL, USA, pp. 1-6, 2016.
24. R.-E. Precup, R.-C. David, E. M. Petriu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Grey Wolf Optimizer-Based Approach to the Tuning of PI-Fuzzy Controllers with a Reduced Process Parametric Sensitivity, Proceedings of **4th IFAC International Conference on Intelligent Control and Automation Sciences ICONS 2016**, Reims, France, 2016, IFAC-PapersOnLine, vol. 49, no. 5, pp. 55-60, 2016.
25. R.-E. Precup, M.-B. Rădac, E. M. Petriu, R.-C. Roman, T.-A. Teban and A.-I. Szedlak-Stînean, Evolving Fuzzy Models for the Position Control of Twin Rotor Aerodynamic Systems, Proceedings of **2016 IEEE 14th International Conference on Industrial Informatics INDIN 2016**, Poitiers, France, pp. 237-242, 2016.
26. A.-I. Szedlak-Stînean, R.-E. Precup, St. Preitl, E. M. Petriu and C.-A. Bojan-Dragoş, State Feedback Control Solutions for a Mechatronics System with Variable Moment of Inertia, Proceedings of 13th International Conference on Informatics in Control, Automation and Robotics ICINCO 2016, Lisbon, Portugal, vol. 2, pp. 458-465, 2016.
27. C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl, A.-I. Szedlak-Stînean and E. M. Petriu, Particle Swarm Optimization of Fuzzy Models for Electromagnetic Actuated Clutch Systems, Proceedings of 18th Mediterranean Electromechanical Conference MELECON 2016, Limassol, Cyprus, pp. 1-6, 2016.
28. R.-E. Precup, R.-C. David, E. M. Petriu, M.-B. Rădac and E.-I. Voişan, Experiment-Based Comparison of Nature-Inspired Algorithms for Optimal Tuning of PI-Fuzzy Controlled Nonlinear DC Servo Systems, Proceedings of 2016 International Symposium on Power Electronics, Electrical Drives, Automation and Motion SPEEDAM 2016, Capri, Italy, pp. 1261-1266, 2016.
29. G. Rigatos, P. Siano, D. Selişteanu and R.-E. Precup, An H-infinity approach to optimal control of oxygen and carbon dioxide contents in blood, Proceedings of International Conference of Computational Methods in Sciences and Engineering ICCMSE 2016, Athens, Greece, AIP Publishing, AIP Conference Proceedings, vol. 1790, pp. 060005-1-060005-8, 2016.
30. C.-A. Bojan-Dragoş, St. Preitl, R.-E. Precup, St. Hergane, E. G. Hughiet and A.-I. Szedlak-Stînean, State Feedback and Proportional-Integral-Derivative Control of a Magnetic Levitation System, Proceedings of IEEE 14th International Symposium on Intelligent Systems and Informatics SISY 2016, Subotica, Serbia, pp. 111-116, 2016.
31. R.-E. Precup, E. M. Petriu, M.-B. Rădac, E.-I. Voişan and F. Drăgan, Adaptive Charged System Search Approach to Path Planning for Multiple Mobile Robots, Proceedings of **2nd IFAC**

Conference on Embedded Systems, Computer Intelligence and Telematics CESCIT 2015, Maribor, Slovenia, 2015, IFAC-PapersOnLine, vol. 48, no. 10, pp. 294-299, 2015.

32. R.-C. Roman, M.-B. Rădac, R.-E. Precup and E. M. Petriu, Data-Driven Optimal Model-Free Control of Twin Rotor Aerodynamic Systems, Proceedings of **2015 IEEE International Conference on Industrial Technology ICIT 2015**, Seville, Spain, pp. 161-166, 2015.
33. M.-B. Rădac, R.-E. Precup and E. M. Petriu, Optimal Motion Prediction Using a Primitive-based Model-Free Iterative Control Approach for Crane Systems, Proceedings of **2015 IEEE International Conference on Industrial Technology ICIT 2015**, Seville, Spain, pp. 366-372, 2015.
34. R.-E. Precup, A.-D. Balint, M.-B. Rădac and E. M. Petriu, Backtracking Search Optimization Algorithm-based approach to PID controller tuning for torque motor systems, Proceedings of **2015 9th Annual IEEE International Systems Conference SysCon 2015**, Vancouver, BC, Canada, pp. 127-132, 2015.
35. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M.-B. Rădac and L.-O. Fedorovici, Implementation of Evolving Fuzzy Models of a Nonlinear Process (**Best Paper Nomination**), Proceedings of 12th International Conference on Informatics in Control, Automation and Robotics ICINCO 2015, Colmar, Alsace, France, vol. 1, pp. 5-14, 2015.
36. C.-A. Bojan-Dragoş, A.-I. Stînean, R.-E. Precup, St. Preitl and E. M. Petriu, Model Predictive Control Solution for Magnetic Levitation Systems, Proceedings of 20th International Conference on Methods and Models in Automation & Robotics MMAR 2015, Miedzyzdroje, Poland, pp. 139-144, 2015.
37. A.-I. Stînean, C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl and E. M. Petriu, Takagi-Sugeno PD+I Fuzzy Control of Processes with Variable Moment of Inertia, Proceedings of 2015 International Symposium on Innovations in Intelligent SysTems and Applications INISTA 2015, Madrid, Spain, 8 pp., 2015.
38. M.-B. Rădac, R.-E. Precup and E. M. Petriu, Design and Testing of a Constrained Data-Driven Iterative Reference Input Tuning Algorithm, Proceedings of **2014 European Control Conference ECC 2014**, Strasbourg, France, pp. 2034-2039, 2014.
39. R.-E. Precup, E. M. Petriu, L.-O. Fedorovici, M.-B. Rădac and F. Drăgan, Multi-Robot Charged System Search-Based Optimal Path Planning in Static Environments, Proceedings of 2014 IEEE International Symposium on Intelligent Control ISIC 2014 Part of **2014 IEEE Multi-conference on Systems and Control IEEE MSC 2014**, Antibes, France, pp. 1912-1917, 2014.
40. M.-B. Rădac, R.-C. Roman, R.-E. Precup and E. M. Petriu, Data-Driven Model-Free Control of Twin Rotor Aerodynamic Systems: Algorithms and Experiments, Proceedings of 2014 IEEE International Symposium on Intelligent Control ISIC 2014 Part of **2014 IEEE Multi-conference on Systems and Control IEEE MSC 2014**, Antibes, France, pp. 1889-1894, 2014.
41. C. Pozna, P. Földesi, R.-E. Precup and L. T. Kóczy, On the development of signatures for artificial intelligence applications, Proceedings of **2014 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2014**, Beijing, China, pp. 1304-1310, 2014.
42. R.-E. Precup, A.-L. Borza, M.-B. Rădac and E. M. Petriu, Bacterial Foraging Optimization Approach to the Controller Tuning for Automotive Torque Motors, Proceedings of **IEEE 23rd International Symposium on Industrial Electronics ISIE 2014**, Istanbul, Turkey, pp. 972-977, 2014.
43. R.-E. Precup, M.-C. Sabău, C.-A. Dragoş, M.-B. Rădac, L.-O. Fedorovici and E. M. Petriu, Particle swarm optimization of fuzzy models for anti-lock braking systems, Proceedings of **IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2014**, Linz, Austria, paper index 05, 6 pp., 2014.
44. R.-E. Precup, M.-B. Rădac, C.-A. Dragoş, St. Preitl and E. M. Petriu, Model-Free Tuning Solution for Sliding Mode Control of Servo Systems, Proceedings of **8th Annual IEEE International Systems Conference SysCon 2014**, Ottawa, ON, Canada, pp. 30-35, 2014.
45. R.-E. Precup, A.-L. Borza, M.-B. Rădac and E. M. Petriu, Performance Analysis of Torque Motor Systems with PID Controllers Tuned by Bacterial Foraging Optimization Algorithms, Proceedings of **2014 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2014**, Ottawa, ON, Canada, pp. 141-146, 2014.

46. R.-E. Precup, R.-C. David, A.-I. Stînean, M.-B. Rădac and E. M. Petriu, Adaptive Hybrid Particle Swarm Optimization-Gravitational Search Algorithm for Fuzzy Controller Tuning, Proceedings of **2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications INISTA 2014**, Alberobello, Italy, pp. 14-20, 2014.
47. Á. Takács, S. Jordán, R.-E. Precup, L. Kovács, J. K. Tar, I. J. Rudas and T. Haidegger, Review of Tool-Tissue Interaction Models for Robotic Surgery Applications, Proceedings of IEEE 12th International Symposium on Applied Machine Intelligence and Informatics SAMI 2014, Herl'any, Slovakia, pp. 339-344, 2014.
48. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Constrained Data-Driven Controller Tuning for Nonlinear Systems (**Certificate of Appreciation for the Best Paper in the Session TT07 1 Control Theory**), **Proceedings of 39th Annual Conference of the IEEE Industrial Electronics Society IECON 2013**, Vienna, Austria, pp. 3402-3407, 2013.
49. R.-E. Precup, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş and St. Preitl, Simulated Annealing Approach to Fuzzy Modeling of Servo Systems, Proceedings of **2013 IEEE International Conference on Cybernetics CYBCONF 2013**, Lausanne, Switzerland, pp. 267-272, 2013.
50. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, Modeling and Control of An Electric Drive System with Continuously Variable Reference, Moment of Inertia and Load Disturbance, Proceedings of **9th Asian Control Conference ASCC 2013**, Istanbul, Turkey, 2013, paper 585, 6 pp., 2013.
51. C.-A. Dragoş, R.-E. Precup, R.-C. David, S. Preitl, A.-I. Stînean and E. M. Petriu, Simulated annealing-based optimization of fuzzy models for magnetic levitation systems, Proceedings of **2013 Joint IFSA World Congress and NAFIPS Annual Meeting IFSA/NAFIPS 2013**, Edmonton, AB, Canada, pp. 286-291, 2013.
52. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, Low-Cost Neuro-Fuzzy Control Solution for Servo Systems with Variable Parameters, Proceedings of **2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2013**, Milano, Italy, pp. 156-161, 2013.
53. C. Purcaru, R.-E. Precup, D. Iercan, L.-O. Fedorovici, E. M. Petriu and E.-I. Voişan, Multi-Robot GSA- and PSO-Based Optimal Path Planning in Static Environments, Proceedings of **9th International Workshop on Robot Motion and Control RoMoCo '13**, Wasowo, Poland, pp. 197-202, 2013.
54. R.-E. Precup, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş, St. Preitl and A.-I. Stînean, Data-Driven Performance Improvement of Control Systems for Three-Tank Systems, Proceedings of 2013 6th International Conference on Human System Interactions (HSI 2013), Gdansk, Sopot, Poland, pp. 306-311, 2013.
55. M.-B. Rădac, R.-C. Roman, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and St. Preitl, Data-based Tuning of Linear Controllers for MIMO Twin Rotor Systems, Proceedings of IEEE Region 8 EuroCon 2013 Conference, Zagreb, Croatia, pp. 1915-1920, 2013.
56. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, E. M. Petriu and M.-B. Rădac, Solutions to Avoid the Worst Case Scenario in Driving Systems Working Under Continuously Variable Conditions, Proceedings of IEEE 9th International Conference on Computational Cybernetics ICCC 2013, Tihany, Hungary, pp. 339-344, 2013.
57. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and M. Crainic, Adaptable fuzzy control solutions for driving systems working under continuously variable conditions, Proceedings of 14th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2013, Budapest, Hungary, pp. 231-237, 2013.
58. M.-B. Rădac, R.-E. Precup, E. M. Petriu, B.-S. Cerveneak, C.-A. Dragoş and St. Preitl, Stable Iterative Correlation-Based Tuning Algorithm for Servo Systems, Proceedings of **38th Annual Conference of the IEEE Industrial Electronics Society IECON 2012**, Montreal, QC, Canada, pp. 2500-2505, 2012.
59. R.-E. Precup, M.-B. Rădac, H.-I. Filip, St. Preitl, C.-A. Dragoş and E. M. Petriu, Signal Processing in Iterative Improvement of Inverted Pendulum Crane Mode Control System Performance, Proceedings of **2012 IEEE International Instrumentation and Measurement Technology Conference I2MTC 2012**, Graz, Austria, pp. 812-815, 2012.
60. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Experiment-Based Approach to Reference Trajectory Tracking, Proceedings of **2012 IEEE International Conference on**

Control Applications (CCA), Part of 2012 IEEE Multi-Conference on Systems and Control, Dubrovnik, Croatia, pp. 470-475, 2012.

61. C.-A. Dragoş, St. Preitl, R.-E. Precup, E. M. Petriu and A.-I. Stînean, Adaptive Control Solutions for the Position Control of Electromagnetic Actuated Clutch Systems, Proceedings of **2012 IEEE Intelligent Vehicles Symposium IEEE IV'12**, Alcala de Henares, Spain, pp. 81-86, 2012.
62. B.-S. Cerveneak, M.-B. Rădac, R.-E. Precup, A.-I. Stînean, E. M. Petriu, St. Preitl and C.-A. Dragoş, Novel Iterative Formulation of Correlation-Based Tuning, Proceedings of **2012 IEEE International Conference on Industrial Technology ICIT 2012**, Athens, Greece, pp. 898-903, 2012.
63. St. Preitl, A.-I. Stînean, R.-E. Precup, Zs. Preitl, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, Controller Design Methods for Driving Systems Based on Extensions of Symmetrical Optimum Method with DC and BLDC Motor Applications, Proceedings of 2nd IFAC Conference on Advances in PID Control PID'12, Brescia, Italy, Advances in PID Control, vol. 2, R. Vilanova and A. Visioli, Eds. pp. 264-269, 2012.
64. A.-I. Stînean, St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, 2-DOF PI(D) Takagi-Sugeno and Sliding Mode Controllers for BLDC Drives, Proceedings of 15th International Power Electronics and Motion Control Conference EPE-PEMC 2012 ECCE Europe, Novi Sad, Serbia, pp. DS2a.7-1-DS2a.7-6, 2012.
65. R.-C. David, R.-E. Precup, E. M. Petriu, M.-B. Rădac, C. Purcaru, C.-A. Dragoş and St. Preitl, Adaptive Gravitational Search Algorithm for PI-fuzzy Controller Tuning, Proceedings of 9th International Conference on Informatics in Control, Automation and Robotics ICINCO 2012, Rome, Italy, vol. 1, pp. 136-141, 2012.
66. M.-B. Rădac, B.-A. Bigher, R.-E. Precup, E. M. Petriu, C.-A. Dragoş, St. Preitl and A.-I. Stînean, Data-based Tuning of PI Controllers for Vertical Three-Tank Systems, Proceedings of 9th International Conference on Informatics in Control, Automation and Robotics ICINCO 2012, Rome, Italy, vol. 1, pp. 31-39, 2012.
67. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Charged System Search Algorithms for Optimal Tuning of PI Controllers, Proceedings of 1st IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2012, Würzburg, Germany, K. Schilling and E. Leutert, Eds., pp. 115-120, 2012.
68. A.-I. Stînean, St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, Takagi-Sugeno Fuzzy Control Solutions for BLDC Drives, Proceedings of 2012 International Symposium on Power Electronics, Electrical Drives, Automation and Motion SPEEDAM 2012, Sorrento, Italy, pp. 724-729, 2012.
69. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, Hybrid Fuzzy Control Solutions for Brushless DC Drives with Variable Moment of Inertia, Proceedings of IEEE 10th Jubilee International Symposium on Intelligent Systems and Informatics SISY 2012, Subotica, Serbia, pp. 317-322, 2012.
70. St. Preitl, R.-E. Precup, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, Control structures for variable inertia output coupled drives, Proceedings of 4th IEEE International Symposium on Logistics and Industrial Informatics LINDI 2012, Smolenice, Slovakia, pp. 179-184, 2012.
71. Cl. Pozna and R.-E. Precup, Novel design of cognitive system strategies, Proceedings of 4th IEEE International Symposium on Logistics and Industrial Informatics LINDI 2012, Smolenice, Slovakia, pp. 205-214, 2012.
72. R.-E. Precup, H.-I. Filip, M.-B. Rădac, Cl. Pozna, C.-A. Dragoş and St. Preitl, Experimental results of evolving Takagi-Sugeno fuzzy models for a nonlinear benchmark, Proceedings of 2012 IEEE 3rd International Conference on Cognitive Infocommunications CogInfoCom 2012, Kosice, Slovakia, pp. 567-572, 2012.
73. Cl. Pozna and R.-E. Precup, A general formulation of abduction algorithms, Proceedings of 2012 IEEE 3rd International Conference on Cognitive Infocommunications CogInfoCom 2012, Kosice, Slovakia, pp. 573-578, 2012.
74. R.-E. Precup, M.-L. Tomescu, St. Preitl, E. M. Petriu and C.-A. Dragoş, Stability Analysis of Fuzzy Logic Control Systems for a Class of Nonlinear SISO Discrete-Time Systems, Proceedings of **18th IFAC World Congress**, Milano, Italy, pp. 13612-13617, 2011.

75. R.-E. Precup, R.-C. David, E. M. Petriu, St. Preitl and M.-B. Rădac, Gravitational Search Algorithms in Fuzzy Control Systems Tuning, Proceedings of **18th IFAC World Congress**, Milano, Italy, pp. 13624-13629, 2011.
76. T. Haidegger, L. Kovács, R.-E. Precup, St. Preitl, B. Benyó and Z. Benyó, Cascade Control for Telerobotic Systems Serving Space Medicine, Proceedings of **18th IFAC World Congress**, Milano, Italy, pp. 3759-3764, 2011.
77. R.-E. Precup, P. A. Ianc, E. M. Petriu, C.-A. Dragoş, St. Preitl and M.-B. Rădac, Low-Cost Fuzzy Control Approaches to a Class of State Feedback-Controlled Servo Systems, Proceedings of **2011 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2011**, Budapest, Hungary, pp. 1022-1027, 2011.
78. C.-A. Dragoş, St. Preitl, R.-E. Precup, E. M. Petriu and A.-I. Stînean, A Comparative Case Study of Position Control Solutions for a Mechatronics Application, Proceedings of **2011 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2011**, Budapest, Hungary, pp. 814-819, 2011.
79. M.-B. Rădac, R.-B. Grad, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Mixed Virtual Reference Feedback Tuning - Iterative Feedback Tuning: Method and Laboratory Assessment, Proceedings of **20th IEEE International Symposium on Industrial Electronics ISIE 2011**, Gdansk, Poland, pp. 649-654, 2011.
80. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and R.-C. David, Stable Iterative Feedback Tuning Method for Servo Systems, Proceedings of **20th IEEE International Symposium on Industrial Electronics ISIE 2011**, Gdansk, Poland, pp. 1943-1948, 2011.
81. M.-B. Rădac, R.-E. Precup, E. M. Petriu, P. A. Ianc, St. Preitl and C.-A. Dragoş, Low-Cost Optimal State Feedback Fuzzy Control of Nonlinear Second-Order Servo Systems, Proceedings of **2011 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA 2011**, Ottawa, ON, Canada, pp. 103-106, 2011.
82. C.-A. Dragoş, R.-E. Precup, E. M. Petriu, M. L. Tomescu, St. Preitl, R.-C. David and M.-B. Rădac, 2-DOF PI-Fuzzy Controllers for a Magnetic Levitation System, Proceedings of 8th International Conference on Informatics in Control, Automation and Robotics ICINCO 2011, Noordwijkerhout, The Netherlands, vol. 1, pp. 111-116, 2011.
83. R.-E. Precup, F.-C. Enache, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş and St. Preitl, Iterative Learning Control Application to a 3D Crane System, Proceedings of 8th International Conference on Informatics in Control, Automation and Robotics ICINCO 2011, Noordwijkerhout, The Netherlands, vol. 1, pp. 117-122, 2011.
84. M.-B. Rădac, F.-C. Enache, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Previous and Current Cycle Learning Approach to a 3D Crane System Laboratory Equipment, Proceedings of 15th International Conference on Intelligent Engineering Systems INES 2011, Poprad, Slovakia, pp. 197-202, 2011.
85. Cl. Pozna and R.-E. Precup, New Results in Abduction Process Modeling, Proceedings of 15th International Conference on Intelligent Engineering Systems INES 2011, Poprad, Slovakia, pp. 203-208, 2011.
86. T. A. Várkonyi, J. K. Tar, I. J. Rudas, St. Preitl, R.-E. Precup and A. R. Várkonyi-Kóczy, A Novel Approach to Robust Fixed Point Transformation, Proceedings of 5th International Symposium on Computational Intelligence and Intelligent Informatics ISCIII 2011, Floriana, Malta, pp. 13-18, 2011.
87. M.-B. Rădac, R.-B. Grad, R.-E. Precup, St. Preitl, C.-A. Dragoş, E. M. Petriu and A. Kilyeni, Mixed Virtual Reference Feedback Tuning - Iterative Feedback Tuning Approach to the Position Control of a Laboratory Servo System, Proceedings of International Conference on Computer as a Tool EUROCON 2011, Lisbon, Portugal, paper index 453, 4 pp., 2011.
88. Cl. Pozna, L. T. Kóczy, R.-E. Precup, N. Minculete and Á. Ballagi, A cooperation scenario for multiagent systems, Proceedings of IEEE Region 8 Conference AFRICON 2011, Livingstone, Zambia, paper index 205, 6 pp., 2011.
89. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragos and M.-B. Rădac, 2-DOF Control Solutions for BLDC-m Drives, Proceedings of IEEE 9th International Symposium on Intelligent Systems and Informatics SISY 2011, Subotica, Serbia, pp. 29-34, 2011.

90. Cl. Pozna, R.-E. Precup, J. Kovacs and P. Foldesi, Cooperation in Multiagent Systems, Proceedings of IEEE 9th International Symposium on Intelligent Systems and Informatics SISY 2011, Subotica, Serbia, pp. 195-200, 2011.
91. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, State feedback fuzzy control solution for BLDC drives, Proceedings of 12th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2011, Budapest, Hungary, pp. 85-90, 2011.
92. A.-I. Stînean, St. Preitl, R.-E. Precup, Cl. Pozna, C.-A. Dragoş and M.-B. Rădac, Speed and position control of BLDC servo systems with low inertia, Proceedings of 2nd International Conference on Cognitive Infocommunications CogInfoCom 2011, Budapest, Hungary, 10 pp., 2011.
93. Cl. Pozna and R.-E. Precup, Results concerning a new pattern of human knowledge, Proceedings of 2nd International Conference on Cognitive Infocommunications CogInfoCom 2011, Budapest, Hungary, 18 pp., 2011.
94. Cl. Pozna, L. T. Kóczy, R.-E. Precup, N. Minculete and Á. Ballagi, Cooperation of agents in fuzzy environments, Proceedings of World Conference on Soft Computing WConSC 2011, San Francisco, CA, USA, 6 pp., 2011.
95. T. Haidegger, L. Kovács, R.-E. Precup, B. Benyó and Z. Benyó, Enabling Control Technologies for Telesurgery, Proceedings of 62th International Astronautical Congress IAC 2011, Cape Town, South Africa, paper index 9589, 8 pp., 2011.
96. R.-E. Precup, M. L. Tomescu, E. M. Petriu, St. Preitl, J. Fodor and D. Bărbulescu, Stability Analysis of a Class of MIMO Fuzzy Control Systems, Proceedings of **2010 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2010**, Barcelona, Spain, pp. 2885-2890, 2010.
97. R.-E. Precup, S. V. Spătaru, E. M. Petriu, St. Preitl, M.-B. Rădac and C.-A. Dragoş, Stable and Optimal Fuzzy Control of a Laboratory Antilock Braking System, Proceedings of **2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2010**, Montreal, Canada, pp. 593-598, 2010.
98. R.-E. Precup, L.-T. Dioanca, E. M. Petriu, M.-B. Rădac, St. Preitl and C.-A. Dragoş, Tensor Product-Based Real-time Control of the Liquid Levels in a Three Tank System, Proceedings of **2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2010**, Montreal, Canada, pp. 768-773, 2010.
99. R.-E. Precup, C. Borchescu, M.-B. Rădac, St. Preitl, C.-A. Dragoş, E. M. Petriu and J. K. Tar, Implementation and Signal Processing Aspects of Iterative Regression Tuning, Proceedings of **2010 IEEE International Symposium on Industrial Electronics ISIE 2010**, Bari, Italy, pp. 1657-1662, 2010.
100. R.-E. Precup, S. V. Spătaru, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Model-based Fuzzy Control Solutions for a Laboratory Antilock Braking System, Proceedings of 3rd International Conference on Human System Interaction HSI 2010, Rzeszow, Poland, pp. 133-138, 2010.
101. C.-A. Dragoş, St. Preitl, R.-E. Precup and E. M. Petriu, Magnetic Levitation System Laboratory-based Education in Control Engineering, Proceedings of 3rd International Conference on Human System Interaction HSI 2010, Rzeszow, Poland, pp. 496-501, 2010.
102. Cl. Pozna, V. Prahovean and R.-E. Precup, A New Pattern of Knowledge Based on Experimenting the Causality Relation, Proceedings of 14th International Conference on Intelligent Engineering Systems INES 2010, Las Palmas of Gran Canaria, Spain, pp. 61-66, 2010.
103. R.-E. Precup, I. Moşincat, M.-B. Rădac, St. Preitl, St. Kilyeni, E. M. Petriu and C.-A. Dragoş, Experiments in Iterative Feedback Tuning for Level Control of Three-Tank System, Proceedings of 15th IEEE Mediterranean Electromechanical Conference MELECON 2010, Valletta, Malta, pp. 564-569, 2010.
104. C.-A. Dragoş, St. Preitl, R.-E. Precup, C.-A. Neş, D. Pîrlea and A. S. Paul, Control Solutions for Vehicles with Continuously Variable Transmission, Proceedings of 11th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2010, Budapest, Hungary, pp. 157-162, 2010.
105. St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, Tuning of 2-DOF Fuzzy PI(D) Controllers. Laboratory Applications, Proceedings of 11th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2010, Budapest, Hungary, pp. 237-242, 2010.
106. C.-A. Dragoş, R.-E. Precup, St. Preitl, E. M. Petriu and M.-B. Rădac, Simulation and Experimental Results for a Magnetic Levitation Laboratory System, Proceedings of 7th EUROSIM Congress on

Modelling and Simulation EUROSIM 2010, Prague, Czech Republic, vol. 2: Full Papers (CD), paper index 155, 8 pp., 2010.

107. Cl. Pozna, L.-T. Kóczy, R.-E. Precup and Á. Ballagi, A Kantian Pattern of Knowledge, the Observation Representation, Proceedings of 8th IEEE International Symposium on Intelligent Systems and Informatics SISY 2010, Subotica, Serbia, pp. 405-412, 2010.
108. C.-A. Dragoş, St. Preitl, R.-E. Precup, R.-G. Bulzan, E. M. Petriu and J. K. Tar, Experiments in Fuzzy Control of a Magnetic Levitation System Laboratory Equipment, Proceedings of 8th IEEE International Symposium on Intelligent Systems and Informatics SISY 2010, Subotica, Serbia, pp. 601-606, 2010.
109. Cl. Pozna, R.-E. Precup, N. Minculete, Cs. Antonya and C.-A. Dragoş, Properties of Classes, Subclasses and Objects in an Abstraction Model, Proceedings of 19th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2010, Budapest, Hungary, pp. 291-296, 2010.
110. C.-A. Dragoş, St. Preitl, R.-E. Precup, D. Pîrlea, C.-S. Neş, E. M. Petriu and Cl. Pozna, Modeling of a Vehicle with Continuously Variable Transmission, Proceedings of 19th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2010, Budapest, Hungary, pp. 441-446, 2010.
111. Cl. Pozna, R.-E. Precup, N. Minculete and Cs. Antonya, Cognition Aspects Concerning an Abstraction Model, Proceedings of 10th IASTED International Conference on Artificial Intelligence and Applications AIA 2010, Innsbruck, Austria, pp. 414-419, 2010.
112. M.-B. Rădac, R.-E. Precup, St. Preitl, J. K. Tar and K. J. Burnham, Tire Slip Fuzzy Control of a Laboratory Anti-lock Braking System, Proceedings of the **European Control Conference 2009 ECC'09**, Budapest, Hungary, pp. 940-945, 2009.
113. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Iterative Feedback Tuning Approach to a Class of State Feedback-Controlled Servo Systems, Proceedings of 6th International Conference on Informatics in Control, Automation and Robotics ICINCO 2009, Milan, Italy, vol. 1 Intelligent Control Systems and Optimization, pp. 41-48, 2009.
114. R.-E. Precup, M.-B. Rădac, St. Preitl, M.-L. Tomescu, E. M. Petriu and A. S. Paul, IFT-based PI-fuzzy Controllers: Signal Processing and Implementation, Proceedings of 6th International Conference on Informatics in Control, Automation and Robotics ICINCO 2009, Milan, Italy, vol. 1 Intelligent Control Systems and Optimization, pp. 207-212, 2009.
115. R.-E. Precup, St. Preitl, E. M. Petriu, J. K. Tar, M.-B. Rădac and C.-A. Dragoş, Stable Design of Fuzzy Controllers for Robotic Telemanipulation Applications, Proceedings of **2009 IEEE Workshop on Computational Intelligence in Virtual Environments CIVE 2009**, Nashville, TN, USA, pp. 1-6, 2009.
116. M.-B. Rădac, R.-E. Precup, St. Preitl, E. M. Petriu, C.-A. Dragoş, A. S. Paul ans St. Kilyeni, Signal Processing Aspects in State Feedback Control Based on Iterative Feedback Tuning, Proceedings of **2nd International Conference on Human System Interaction HSI'09**, Catania, Italy, pp. 40-45, 2009.
117. C.-A. Dragoş, St. Preitl and R.-E. Precup, Electromagnetic Actuator in Mechatronic System, Proceedings of 15th International Conference on Electrical Drives and Power Electronics EDPE 2009, Dubrovnik, Croatia, CD-ROM, paper index T03-003, 6 pp., 2009.
118. R.-E. Precup, M.-B. Rădac, St. Preitl, E. M. Petriu and J. Fodor, On the Optimal Design of Low-Cost Fuzzy Controllers for Ship Course Control, Proceedings of 51st International Symposium ELMAR-2009, Zadar, Croatia, pp. 163-166, 2009.
119. R.-E. Precup, C. Gavriluţă, M.-B. Rădac, St. Preitl, C.-A. Dragoş, J. K. Tar and E. M. Petriu, Iterative Learning Control Experimental Results for Inverted Pendulum Crane Mode Control, Proceedings of 7th International Symposium on Intelligent Systems and Informatics SISY 2009, Subotica, Serbia, pp. 323-328, 2009.
120. C.-A. Dragoş, St. Preitl and R.-E. Precup, Model Predictive Control Solutions for an Electromagnetic Actuator, Proceedings of 7th International Symposium on Intelligent Systems and Informatics SISY 2009, Subotica, Serbia, pp. 59-64, 2009.
121. R.-E. Precup, M. L. Tomescu, St. Preitl, E. M. Petriu, St. Kilyeni and C. Bărbulescu, Stability Analysis Approach to a Class of Fuzzy Controlled Nonlinear Time-varying Systems, Proceedings of IEEE Region 8 EUROCON 2009 Conference, Saint-Petersburg, Russia, pp. 970-975, 2009.
122. C. Bărbulescu, St. Kilyeni, Gh. Vuc, B. Luştrea, R.-E. Precup and St. Preitl, Software Tool for Power Transfer Distribution Factors (PTDF) Computing within the Power Systems, Proceedings of IEEE Region 8 EUROCON 2009 Conference, Saint-Petersburg, Russia, pp. 532-539, 2009.

123. Cl. Pozna and R.-E. Precup, Modeling Derived from Bayesian Filtering: Analysis of Estimation Process, Proceedings of **13th International Conference on Intelligent Engineering Systems INES 2009**, Barbados, pp. 73-78, 2009.
124. Cl. Pozna, R.-E. Precup, N. Minculete and Cs. Antonya, Characteristics of a New Abstraction Model, Proceedings of 4th International Symposium on Computational Intelligence and Intelligent Informatics ISCIII 2009, Egypt, pp. 129-134, 2009.
125. Cl. Pozna, R.-E. Precup, St. Preitl, E. M. Petriu and J. K. Tar, Structure for Behaviourist Representation of Knowledge, Proceedings of 10th International Symposium of Hungarian Researchers on Computational Intelligence and Informatics CINTI 2009, Budapest, Hungary, pp. 55-68, 2009.
126. C.-A. Dragoş, St. Preitl, R.-E. Precup, M. Creţiu and J. Fodor, Modern Control Solutions for Mechatronic Servosystems. Comparative Case Studies, Proceedings of 10th International Symposium of Hungarian Researchers on Computational Intelligence and Informatics CINTI 2009, Budapest, Hungary, pp. 69-82, 2009.
127. R.-E. Precup, St. Preitl, J. Fodor, I.-B. Ursache, P. A. Clep and St. Kilyeni, Experimental Validation of Iterative Feedback Tuning Solutions for Inverted Pendulum Crane Mode Control (**Best Paper Award in the Area of Intelligent Control**), Proceedings of 2008 Conference on Human System Interaction HSI 2008, Krakow, Poland, pp. 536-541, 2008.
128. R.-E. Precup, St. Preitl, M. L. Tomescu, E. M. Petriu, J. K. Tar and C. Bărbulescu, Stable Iterative Feedback Tuning-based Design of Takagi-Sugeno PI-Fuzzy Controllers (**Best Paper Award in the Area of Intelligent Control**), Proceedings of 2008 Conference on Human System Interaction HSI 2008, Krakow, Poland, pp. 542-547, 2008.
129. R.-E. Precup, St. Preitl, E. M. Petriu, J. K. Tar and J. Fodor, Iterative Learning-Based Fuzzy Control System, Proceedings of **IEEE International Workshop on Robotic and Sensors Environments ROSE 2008**, Ottawa, ON, Canada, pp. 25-28, 2008.
130. M.-B. Rădac, R.-E. Precup, St. Preitl, J. K. Tar, J. Fodor and E. M. Petriu, Gain-Scheduling and Iterative Feedback Tuning of PI Controllers for Longitudinal Slip Control, Proceedings of **6th IEEE International Conference on Computational Cybernetics ICCC 2008**, Stara Lesna, Slovakia, pp. 183-188, 2008.
131. J. K. Tar, I. J. Rudas, J. F. Bito, St. Preitl and R.-E. Precup, Dynamic Friction Compensation in the Slotine-Li and in an SVD-Based Adaptive Control, Proceedings of 17th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2008, Ancona, Italy, Alexa Edizioni, CD-ROM, paper index 5, 8 pp., 2008.
132. St. Preitl, R.-E. Precup, P. A. Clep, I.-B. Ursache, J. Fodor and I. Škrjanc, Pole Placement Approaches for Linear and Fuzzy Systems, Proceedings of 6th International Symposium on Intelligent Systems and Informatics SISY 2008, Subotica, Serbia, CD-ROM, paper index 77, 6 pp., 2008.
133. M.-B. Rădac, R.-E. Precup, St. Preitl, J. K. Tar and E. M. Petriu, Linear and Fuzzy Control Solutions for a Laboratory Anti-lock Braking System, Proceedings of 6th International Symposium on Intelligent Systems and Informatics SISY 2008, Subotica, Serbia, CD-ROM, paper index 49, 6 pp., 2008.
134. R.-E. Precup, St. Preitl, J. K. Tar, J. Fodor, I.-B. Ursache and P. A. Clep, Low-Cost Fuzzy Logic Approach to Ship Course Control, Proceedings of 50th International Symposium ELMAR-2008, Zadar, Croatia, vol. 2, pp. 423-426, 2008.
135. St. Preitl, R.-E. Precup, Gy. Kártyás and J. Gáti, Model Based Concept for Higher Education on the Way Towards Highly Integrated Solutions in Computer Systems, Proceedings of **12th International Conference on Intelligent Engineering Systems INES 2008**, Miami, FL, USA, pp. 99-102, 2008.
136. Cl. Pozna and R.-E. Precup, Using Plausible Reasoning in Modular Robots Kinematics, Proceedings of **12th International Conference on Intelligent Engineering Systems INES 2008**, Miami, FL, USA, pp. 243-248, 2008.
137. R.-E. Precup, St. Preitl, P. A, Clep, I.-B. Ursache, J. K. Tar and J. Fodor, Stable Fuzzy Control Systems with Iterative Feedback Tuning, Proceedings of **12th International Conference on Intelligent Engineering Systems INES 2008**, Miami, FL, USA, pp. 287-292, 2008.
138. St. Preitl, R.-E. Precup, M.-B. Rădac, C.-A. Dragoş, J. K. Tar and J. Fodor, On the Stable Design of Stable Fuzzy Control Systems with Iterative Learning Control, Proceedings of 9th International

Symposium of Hungarian Researchers on Computational Intelligence and Informatics CINTI 2008, Budapest, Hungary, pp. 345-360, 2008.

139. R.-E. Precup, Zs. Preitl and St. Preitl, Iterative Feedback Tuning Approach to Development of PI-Fuzzy Controllers, **Proceedings of 2007 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2007**, London, UK, pp. 199-204, 2007.
140. R.-E. Precup, St. Preitl and E. M. Petriu, PI-fuzzy Controller Design Based on an Optimization Approach, Preprints of **Third IFAC Workshop on Advanced Fuzzy and Neural Control AFNC 07**, Valenciennes, France, CD-ROM, paper index TU 3-2, 6 pp., 2007.
141. St. Preitl, R.-E. Precup, J. Fodor and M. Takács, Hints in Low Cost Solutions for Networked Control Systems, Proceedings of **5th IEEE International Conference on Computational Cybernetics ICCC 2007**, Gammarth, Tunisia, pp. 275-280, 2007.
142. Cl. Pozna and R.-E. Precup, Plausible Reasoning and Fuzzy Logic, Proceedings of **5th IEEE International Conference on Computational Cybernetics ICCC 2007**, Gammarth, Tunisia, pp. 51-56, 2007.
143. R.-E. Precup, Zs. Preitl and E. M. Petriu, Delta Domain Design of Low-Cost Fuzzy Controlled Servosystems, Proceedings of **2007 IEEE International Symposium on Intelligent Signal Processing WISP 2007**, Alcala de Henares (Madrid), Spain, CD-ROM, paper index 884, 6 pp., 2007.
144. R.-E. Precup, St. Preitl, St. Kilyeni, J. K. Tar and B. Luştrea, Iterative Learning Control Approach to Fuzzy Control Systems Development, Proceedings of IEEE Region 8 EUROCON 2007 Computer as a Tool Conference, Warsaw, Poland, pp. 692-697, 2007.
145. R.-E. Precup, St. Preitl, St. Kilyeni, Zs. Preitl and C. Bărbulescu, Fuzzy Control Systems Dedicated to Electro-hydraulic Servo-systems. IFT Techniques and Sensitivity Analysis, Proceedings of IEEE Region 8 EUROCON 2007 Computer as a Tool Conference, Warsaw, Poland, pp. 1409-1416, 2007.
146. J. K. Tar, I. J. Rudas, St. Preitl and R.-E. Precup, Experiments in Fuzzy Control of a Class of Servo Systems for Mobile Robots, Proceedings of 16th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2007, Ljubljana, Slovenia, pp. 263-270, 2007.
147. R.-E. Precup, St. Preitl, J. K. Tar and M. Takács, Optimization Aspects in a Class of Fuzzy Controlled Servosystems, Proceedings of **11th International Conference on Intelligent Engineering Systems INES 2007**, Budapest, Hungary, pp. 235-240, 2007.
148. St. Preitl, R.-E. Precup and Zs. Preitl, Case Studies in Teaching Fuzzy and Advanced Control Strategies, Proceedings of 8th International Symposium of Hungarian Researchers on Computational Intelligence and Informatics CINTI 2007, Budapest, Hungary, pp. 457-473, 2007.
149. R.-E. Precup and St. Preitl, Development Method for Low Cost Fuzzy Controlled Servosystems, Proceedings of **2006 IEEE International Symposium on Intelligent Control ISIC**, Munchen, Germany, pp. 2707-2712, 2006.
150. R.-E. Precup and St. Preitl, Low Cost Fuzzy Controlled Servo Systems in Mechatronic Systems, Preprints of **4th IFAC Symposium on Mechatronic Systems MECHATRONICS 2006**, Heidelberg, Germany, pp. 247-252, 2006.
151. R.-E. Precup and St. Preitl, A Genetic Iterative Feedback Tuning (GIFT) Method for Fuzzy Control System Development, Proceedings of **2006 International Symposium on Evolving Fuzzy Systems**, Ambleside, Lake District, UK, pp. 144-149, 2006.
152. R.-E. Precup, St. Preitl and Zs. Preitl, Fuzzy Control Solution for a Class of Tricycle Mobile Robots, Proceedings of **3rd IEEE International Conference on Mechatronics ICM 2006**, Budapest, Hungary, pp. 208-213, 2006.
153. St. Preitl and R.-E. Precup, Experiments in Fuzzy Control of a Class of Servo Systems for Mobile Robots, Proceedings of 15th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2006, Balatonfüred, Hungary, CD-ROM, paper index 51, 7 pp., 2006.
154. J. K. Tar, J. F. Bito, St. Preitl and R.-E. Precup, The Effect of the Static Striebeck Friction in the Robust VS / Sliding Mode Control of a Ball-Beam System, Proceedings of 15th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD 2006, Balatonfüred, Hungary, CD-ROM, paper index 5, 6 pp., 2006.
155. R.-E. Precup, St. Peitl, I. J. Rudas and J. K. Tar, On the Use of Iterative Learning Control in Fuzzy Control System Structures, Proceedings of 7th International Symposium of Hungarian Researchers on Computational Intelligence, Budapest, Hungary, pp. 69-82, 2006.

156. St. Preitl, R.-E. Precup and Zs. Preitl, Sensitivity Analysis of Low Cost Fuzzy Controlled Systems, Preprints of **16th IFAC World Congress**, P. Horacek, M. Simandl and P. Zitek, Eds. (International Federation of Automatic Control), Prague, Czech Republic, DVD, paper index 1794, 6 pp., 2005.
157. R.-E. Precup and St. Preitl, Stability Analysis of Fuzzy Control Systems. Multivariable Point of View, Preprints of **16th IFAC World Congress**, P. Horacek, M. Simandl and P. Zitek, Eds. (International Federation of Automatic Control), Prague, Czech Republic, DVD, paper index 1793, 6 pp., 2005.
158. R.-E. Precup, Zs. Preitl and St. Kilyeni, Fuzzy Control Solution for Hydro Turbine Generators, Proceedings of **2005 IEEE International Conference on Control and Automation ICCA2005**, Budapest, Hungary, vol. 1, pp. 83-88, 2005.
159. R.-E. Precup and St. Preitl, Stability and Sensitivity Analysis of Fuzzy Control Systems. Mechatronics Applications, Proceedings of 6th International Symposium of Hungarian Researchers on Computational Intelligence, Budapest, Hungary, pp. 130-143, 2005.
160. St. Preitl, R.-E. Precup and Zs. Preitl, Two Degree of Freedom Takagi-Sugeno Fuzzy Controllers in Trajectory Tracking, Proceedings of 6th International Carpathian Control Conference, Miskolc-Lillafüred, Hungary, vol. 2, pp. 273-278, 2005.
161. R.-E. Precup, St. Preitl, M. Balas and V. Balas, Fuzzy Controllers for Tire Slip Control in Anti-lock Braking Systems, Proceedings of **IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2004**, Budapest, Hungary, vol. 3, pp. 1317-1322, 2004.
162. R.-E. Precup and St. Preitl, Sensitivity Analysis of a Class of Fuzzy Controlled Mobile Robots, Proceedings of **2nd IFAC Workshop on Advanced Fuzzy/Neural Control AFNC'04**, K. Leiviska, Ed., Oulu, Finland, pp. 115-120, 2004.
163. R.-E. Precup, St. Preitl, Cs. Czabo, P. Korondi and P. Szemes, On the Development of Mamdani PI-Fuzzy Controllers for a Class of Mobile Robots, Proceedings of IEEE 4th International Conference on Intelligent Systems Design and Application ISDA 2004, Budapest, Hungary, vol. 1, pp. 277-282, 2004.
164. St. Preitl, R.-E. Precup and St. Kilyeni, Fuzzy Controllers with Dynamics for Hydro-generators: Voltage and Speed Control, Proceedings of 6th International Conference "Control of Power Systems'04", V. Vesely, Ed., Strbske Pleso, High Tatras, Slovakia, CD-ROM, paper index A3-04, 10 pp., 2004.
165. G. Kovacs, R.-E. Precup, St. Preitl and Z. Gyurko, Time Delay Compensation for Networked Control Systems, Proceedings of 3rd International Conference on Global Research and Education in Intelligent Systems INTER-ACADEMIA 2004, Budapest, Hungary, vol. 1, pp. 207-214, 2004.
166. St. Preitl and R.-E. Precup, Sensitivity Study of a Class of Fuzzy Controlled Servo Systems, Proceedings of 3rd International Conference on Global Research and Education in Intelligent Systems INTER-ACADEMIA 2004, Budapest, Hungary, vol. 1, pp. 47-56, 2004.
167. R.-E. Precup and St. Preitl, Fuzzy Controllers for Speed Control of Hydroelectric Power Turbines, Proceedings of 2nd Slovakian-Hungarian Joint Symposium on Applied Machine Intelligence SAMI 2004, Herl'any, Slovakia, pp. 77-87, 2004.
168. St. Preitl and R.-E. Precup, Development of TS Fuzzy Controllers with Dynamics for Low Order Benchmarks with Time Variable Parameters, Proceedings of 5th International Symposium of Hungarian Researchers on Computational Intelligence, Budapest, Hungary, pp. 239-248, 2004.
169. St. Preitl and R.-E. Precup, Low Cost Fuzzy Control Solutions for Embedded Systems, Proceedings of Budapest Tech International Jubilee Conference – Science in Engineering, Economics and Education, Budapest, Hungary, pp. 151-162, 2004.
170. St. Preitl and R.-E. Precup, Points of View in Controller Design by Means of Extended Symmetrical Optimum Method, Preprints of **2nd IFAC Conference on Control Systems Design**, St. Kozak and M. Huba, Eds., Bratislava, Slovak Republic, CD-ROM, paper index 048-3-4, 6 pp., 2003.
171. R.-E. Precup, St. Preitl, Cs. Szabo, Z. Gyurko and P. Szemes, Sliding Mode Navigation Control in Intelligent Space, Proceedings of **2003 IEEE International Symposium on Intelligent Signal Processing WISP 2003**, Budapest, Hungary, pp. 225-230, 2003.
172. R.-E. Precup and St. Preitl, Aspects Concerning the Development of Fuzzy Controllers with Dynamics Subject to Conditions of Stability and Sensitivity Analysis, Proceedings of IEEE International Conference on Computational Cybernetics ICCC 2003, I. J. Rudas and A. Szakal, Eds., Siofok, Hungary, pp. 169-174, 2003.

173. R.-E. Precup and St. Preitl, Multiobjective Optimisation Criteria in Development of Fuzzy Controllers with Dynamics, Preprints of IFAC Workshop on Control Applications of Optimisation CAO 2003, R. Bars and E. Gyurkovics, Eds., Visegrad, Hungary, pp. 261-266, 2003.
174. St. Preitl, R.-E. Precup and Zs. Preitl, Two Degree of Freedom Fuzzy Controllers: Structure and Development, Proceedings of International Conference in Memoriam John von Neumann, Budapest, Hungary, pp. 49-60, 2003.
175. St. Preitl, R.-E. Precup and P. Korondi, Aspects Concerning the Development of Fuzzy Controllers for Servo Systems, Proceedings of 4th International Symposium of Hungarian Researchers on Computational Intelligence, Budapest, Hungary, pp. 89-100, 2003.
176. St. Preitl, R.-E. Precup, Zs. Preitl and L. Kovacs, Development Methods of Fuzzy Controllers for Low Order Benchmarks (Electrical Drives), Proceedings of **2002 First International IEEE Symposium "Intelligent Systems" IS'2002**, Varna, Bulgaria, vol. II Invited Sessions EUNITE, pp. 13-18, 2002.
177. St. Preitl, Zs. Preitl and R.-E. Precup, Low Cost Fuzzy Controllers for Classes of Second-order Systems, Preprints of **15th IFAC World Congress b'02**, E. F. Camacho, L. Basanez and J. A. de la Puente, Eds. (Pergamon, Elsevier Science Ltd), Barcelona, Spain, CD-ROM, paper index 416, 6 pp., 2002.
178. R.-E. Precup and St. Preitl, Development Method for a Takagi-Sugeno PI-fuzzy Controller. Preprints of **15th IFAC World Congress b'02**, E. F. Camacho, L. Basanez and J. A. de la Puente, Eds. (Pergamon, Elsevier Science Ltd), Barcelona, Spain, CD-ROM, paper index 390, 6 pp., 2002.
179. St. Preitl and R.-E. Precup, Research Results in Fuzzy Controllers with Dynamics, Proceedings of Third International Symposium of Hungarian Researchers on Computational Intelligence, Budapest, Hungary, pp. 197-208, 2002.
180. R.-E. Precup and St. Preitl, On Some Low Cost Fuzzy Control Solutions for Third-Order Integral Actuators, Preprints of 6th IFAC Symposium on Cost Oriented Automation – Low Cost Automation 2001, R. Bernhardt and H.-H. Erbe, Eds., Berlin, Germany, pp. 68-73, 2001.
181. St. Preitl, R.-E. Precup, St. Solyom and L. Kovacs, Development of Conventional and Fuzzy Controllers for Output Coupled Drive Systems and Variable Inertia, Preprints of **6th IFAC / IFORS / IMACS / IFIP Symposium on Large Scale Systems: Theory and Applications LSS2001**, F. G. Filip, I. Dumitrache and S. Iliescu, Eds. (Editura ICI Publishers), Bucharest, Romania, pp. 267-274, 2001.
182. R.-E. Precup, St. Preitl and Zs. Preitl, Robustness Analysis of a Class of Fuzzy Systems, Preprints of 6th IFAC / IFORS / IMACS / IFIP Symposium on Large Scale Systems: Theory and Applications LSS2001, F. G. Filip, I. Dumitrache and S. Iliescu, Eds. (Editura ICI Publishers), Bucharest, Romania, pp. 255-260, 2001.
183. St. Preitl and R.-E. Precup, Extended Symmetrical Optimum (ESO) Method: A New Tuning Strategy for PI/PID Controllers, Preprints of **IFAC Workshop on Digital Control: Past, Present and Future of PID Control**, J. Quevedo and T. Escobet, Eds., Terrassa, Spain, pp. 421-426, 2000.
184. St. Preitl and R.-E. Precup, Cross Optimization Aspects Concerning the Extended Symmetrical Optimum Method, Preprints of IFAC Workshop on Digital Control: Past, Present and Future of PID Control, J. Quevedo and T. Escobet, Eds., Terrassa, Spain, pp. 254-259, 2000.
185. D. Todinca, A.-M. Badulescu and R.-E. Precup, VHDL Approach to Performance Analysis of Fuzzy Logic Controllers, Proceedings of 8th Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems IPMU 2000, Madrid, Spain, vol. II, pp. 896-901, 2000.
186. St. Preitl, R.-E. Precup and St. Kilyeni, State Space Approach to the Stability Analysis of a Class of Fuzzy Control Systems Meant for Third-order Plants, Preprints of IFAC Symposium on Artificial Intelligence in Real Time Control AIRTC-2000, I. J. Rudas and J. K. Tar, Eds., Budapest, Hungary, pp. 263-268, 2000.
187. R.-E. Precup and St. Preitl, Development of Some Fuzzy Controllers with Non-Homogenous Dynamics with Respect to the Input Channels Meant for a Class of Systems, Proceedings of **European Control Conference ECC'99**, Karlsruhe, Germany, pp. 61-66, 1999.
188. R.-E. Precup and St. Preitl, Development of a Quasi-PI Fuzzy Controller Based on the Principle of Minimum Guaranteed Phase Margin, Proceedings of **14th World Congress of International Federation of Automatic Control IFAC'99**, H. F. Chen, K. J. Hunt, Y. Hashimoto, I. Farkas and H. Murase, Eds. (Elsevier Science), Beijing, China, vol. K, pp. 183-188, 1999.

189. St. Preitl, R.-E. Precup and St. Kilyeni, Variable Structure Fuzzy Controllers for Speed and Voltage Control of Synchronous Generators, Proceedings of **34th Conference on Universities Power Engineering UPEC'99**, Leicester, UK, vol. 1, pp. 185-188, 1999.
190. R.-E. Precup and St. Preitl, On a Hybrid PI-Neuro-Fuzzy Controller Meant for a Class of Non-Minimum Phase Systems, Proceedings of Seventh European Congress on Intelligent Technologies and Soft Computing EUFIT'99, H.-J. Zimmermann, Ed. (Verlag Mainz), Aachen, Germany, CD-ROM, paper index BA8-12793-P, 6 pp., 1999.
191. R.-E. Precup and St. Preitl, On a Design Method for PI Fuzzy Controllers Meant for Minimum Phase Systems, Proceedings of "CONTROLO'98" Conference, A. Dourado et al., Eds., Coimbra, Portugal, vol. 2, pp. 697-702, 1998.
192. St. Preitl, R.-E. Precup and T.-L. Dragomir, Inter-Regional Co-operation in Higher Education as Stabilisation Element, Preprints of **IFAC Conference on Supplemental Ways for Improving International Stability SWIIS'98**, I. Dumitrache and P. Kopacek, Eds., Sinaia, Romania, pp. 135-140, 1998.
193. R.-E. Precup, D. Todinca and St. Preitl, VHDL Implementation of PID Fuzzy Controller Applied to Control of Non-minimum Phase Systems, Proceedings of 6th Conference on Systems, Automatic Control and Measurements SAUM'98, Z. Bucevac, Ed., Nis, Serbia, pp. 369-374, 1998.
194. S. Doboli and R.-E. Precup, The Application of a Stability Analysis Method to Fuzzy Control Systems, Proceedings of **Seventh World Congress of International Fuzzy Systems Association IFSA'97**, M. Mares, R. Mesiar, V. Novak, J. Ramik and A. Stupnanova, Eds. (Academia), Prague, Czech Republic, vol. 3, pp. 452-457, 1997.
195. R.-E. Precup and St. Preitl, Two-level Fuzzy Control of a Hydrogenerator, Proceedings of **32nd Conference on Universities Power Engineering UPEC'97**, Manchester, UK, vol. 1, pp. 539-542, 1997.
196. R.-E. Precup and St. Preitl, Overview on Some Predictive and Adaptive Fuzzy Controllers Applied to Nonminimum-phased Systems, Proceedings of 12th Conference on Systems Engineering ICSE'97, Coventry, UK, vol. 2, pp. 556-559, 1997.
197. R.-E. Precup and St. Preitl, Popov-type Stability Analysis Method for Fuzzy Control Systems, Proceedings of Fifth European Congress on Intelligent Technologies and Soft Computing EUFIT'97, H.-J. Zimmermann, Ed. (Verlag Mainz), Aachen, Germany, vol. 2, pp. 1306-1310, 1997.
198. S. Doboli and R.-E. Precup, Stability Analysis and Design of a Class of Fuzzy Control Systems, Preprints of **Fourth IFAC Conference on System Structure and Control SSC'97**, Vl. Ionescu and D. Popescu, Eds. (Editura Tehnica), Bucharest, Romania, pp. 361-366, 1997.
199. R.-E. Precup and St. Preitl, On Some Predictive and Adaptive Fuzzy Controllers Based on Ensuring the Maximum Phase Reserve, Preprints of Fourth IFAC Conference on System Structure and Control SSC'97, Vl. Ionescu and D. Popescu, Eds. (Editura Tehnica), Bucharest, Romania, pp. 349-354, 1997.
200. R.-E. Precup and St. Preitl, Intelligent Sliding Mode Controller with Fuzzy Logic Blocks, Proceedings of Second World Congress on Intelligent Manufacturing Processes & Systems IMP&S'97, L. Monostori, Ed. (Springer), Budapest, Hungary, pp. 402-407, 1997.
201. R.-E. Precup and St. Preitl, Some Results in Fuzzy Control of Nonminimum-phased Systems, Proceedings of Second Workshop on Fuzzy Based Expert Systems FUBEST'96, D. V. Lakov, Ed., Sofia, Bulgaria, pp. 6-13, 1996.
202. R.-E. Precup and St. Preitl, Stability Analysis of Minimum- and Nonminimum- Phased Fuzzy Control Systems, Proceedings of Fourth European Congress on Intelligent Technologies and Soft Computing EUFIT'96, H.-J. Zimmermann, Ed. (Verlag Mainz), Aachen, Germany, vol. 2, pp. 1065-1069, 1996.
203. St. Preitl and R.-E. Precup, Stability Analysis of a Hydrogenerator Speed Control System Containing a Fuzzy Controller with Dynamics, Proceedings of Second Conference on Applications of Fuzzy Systems ICAFS'96, Siegen, Germany, pp. 400-405, 1996.
204. R.-E. Precup, On a Stability Procedure Concerning Fuzzy Control Systems Containing Fuzzy Controllers with Dynamics, Proceedings of Second Conference on Applications of Fuzzy Systems ICAFS'96, Siegen, Germany, pp. 285-291, 1996.

205. R.-E. Precup and St. Preitl, On the Predictive Component Treatment for PID Fuzzy Controllers, Proceedings of **Sixth World Congress of International Fuzzy Systems Association IFSA'95**, Sao Paulo, Brazil, vol. 1, pp. 573-576, 1995.
206. R.-E. Precup, On the Parameter Adaptation of a Fuzzy Controller Meant for the Speed Control of Hydrogenerators, Proceedings of Third European Congress on Intelligent Technologies and Soft Computing EUFIT'95, H.-J. Zimmermann, Ed. (Verlag Mainz), Aachen, Germany, vol. 2, pp. 1105-1109, 1995.
207. St. Preitl and R.-E. Precup, Approach to the Predictive Component Treatment for Fuzzy Controllers, Proceedings of Third European Congress on Intelligent Technologies and Soft Computing EUFIT'95, H.-J. Zimmermann, Ed. (Verlag Mainz), Aachen, Germany, vol. 2, pp. 1082-1086, 1995.
208. R.-E. Precup and St. Preitl, On a Fuzzy Digital PID Predictor Controller, Proceedings of **Second IEEE Mediterranean Symposium on New Directions in Control and Automation**, Chania, Crete, Greece, pp. 569-573, 1994.
209. R.-E. Precup, St. Preitl, St. Kilyeni and B. Lustrea, Fuzzy Speed and Voltage Control of a Hydrogenerator, Preprints of **Fifth Symposium on Application of Multivariable System Techniques AMST'94**, R. Whalley, Ed. (Mechanical Engineering Publications Limited), London, UK, pp. 151-158, 1994.
210. St. Preitl and R.-E. Precup, Comparison of Three State Feedback Controllers. Why Fuzzy Control ?, Proceedings of Second European Congress on Intelligent Technologies and Soft Computing EUFIT'94, H.-J. Zimmermann, Ed. (Verlag der Augustinus Buchhandlung), Aachen, Germany, vol. 3, pp. 1383-1387, 1994.
211. R.-E. Precup and St. Preitl, Fuzzy Controller Equivalent to the Digital PID Predictor Controller, Proceedings of Second European Congress on Intelligent Technologies and Soft Computing EUFIT'94, H.-J. Zimmermann, Ed. (Verlag der Augustinus Buchhandlung), Aachen, Germany, vol. 2, pp. 968-971, 1994.
212. R.-E. Precup and St. Preitl, Fuzzy Control Algorithms Implementation for a Synchronous Generator Connected to a Power System, Preprints of IFAC Conference on Integrated Systems Engineering ISE'94, Baden-Baden, Germany (Pergamon), pp. 83-92, 1994.
213. St. Preitl and R.-E. Precup, Fuzzy Control and Fuzzy Optimization Aspects for a Hydrogenerator Connected to a Power System, Proceedings of First Workshop on Fuzzy Based Expert Systems FUBEST'94, Sofia, Bulgaria, pp. 8-10, 1994.
214. R.-E. Precup and St. Preitl, Fuzzy Control of an Electrohydraulic Servosystem under Nonlinearity Constraints, Proceedings of **First European Congress on Fuzzy and Intelligent Technologies EUFIT'93**, H.-J. Zimmermann, Ed. (Verlag der Augustinus Buchhandlung), Aachen, Germany, vol. 3, pp. 1524-1530, 1993.
215. St. Preitl, R.-E. Precup and A. Fogarasi, Control Algorithms for the Electrohydraulic Servosystem of a Speed Governor, Proceedings of Hydrodynamic Machines in Power Engineering HYDROTURBO'93 Conference, Brno, Czech Republic, vol. 2, pp. 321-330, 1993.
216. St. Preitl and R.-E. Precup, Aspects Concerning Tuning and Implementation of Some Controllers and Control Algorithms for Speed Control of Hydrogenerators in Hydroelectric Power Stations, Proceedings of "Automation'92" Conference, Budapest, Hungary, vol. 3, pp. 504-513, 1992.

Publications in 2019 – 2023

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals (https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. A.-I. Szedlak-Stinean, R.-E. Precup, E. M Petriu, R.-C. Roman, E.-L. Hedrea, C.-A. Bojan-Dragos, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, Expert Systems with Applications, vol. 208, pp. 118-215, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5 (Computer Science, Artificial Intelligence, red zone (Q1)), Article Influence Score (AIS) = 1.276, Q2 quartile AIS 2022 (conform JCR iunie 2023) (www.sciencedirect.com).
2. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, A low-cost approach to data-driven fuzzy control of servo systems, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 20, no. 1, pp. 21-36, 2022, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9 (Engineering, Mechanical, red zone (Q1)), Article Influence Score (AIS) = 0.551,Q2 quartile AIS 2022 (conform JCR iunie 2023) (casopisi.junis.ni.ac.rs).
3. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, C.-A. Bojan-Dragoş, M.-M. Damian and M.-L. Nedelcea, Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems, International Journal of Computers Communications &Control, vol. 17, no. 1, 4623, pp. 1-18, 2022, impact factor (IF) = 2.7, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro).
4. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 24, no. 4, pp. 353-365, 2021, impact factor (IF) = 0.852, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5 (Computer Science, Theory & Methods, yellow zone (Q2)), Article Influence Score (AIS) = 0.272, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.romjist.ro).
5. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiment-Based Approach to Teach Optimization Techniques, IEEE Transactions on Education, vol. 64, no. 2, pp. 88-94, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Article Influence Score (AIS) = 0.453, Q3 quartile AIS 2022 (conform JCR iunie 2023)(ieeexplore.ieee.org).
6. E.-L. Hedrea, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragoş and C. Hedrea, Tensor product-based model transformation approach to cart position modeling and control in pendulum-cart systems, Asian Journal of Control (John Wiley and Sons), vol. 23, no. 3, pp. 1238-1248, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Article Influence Score (AIS) = 0.390, Q3 quartile AIS 2022 (conform JCR iunie 2023) (onlinelibrary.wiley.com).
7. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu and C.-A. Bojan-Dragoş, Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation,

International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 16, no. 1, 4076, pp. 1-17, 2021, impact factor (IF) = 2.635, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro).

8. R.-E. Precup, S. Preitl, E. M. Petriu, R.-C. Roman, C.-A. Bojan-Dragoş, E.-L. Hedrea and A.-I. Szedlak-Stînean, A center manifold theory-based approach to the stability analysis of state feedback Takagi-Sugeno-Kang fuzzy control systems, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9(Engineering, Mechanical, red zone (Q1)), Article Influence Score (AIS) = 0.551,Q2 quartile AIS 2022 (conform JCR iunie 2023) (casopisi.junis.ni.ac.rs).
9. E.-L. Hedrea, R.-E. Precup and C.-A. Bojan-Dragoş, Results on Tensor Product-based Model Transformation of Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 16, no. 9, pp. 93-111, 2019, impact factor (IF) = 1.219, IF according to 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021 = 1.7, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (uni-obuda.hu).

Books (https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, Fuzzy Control Systems with Mechatronics Applications (in Romanian: Sisteme de reglare fuzzy cu aplicatii mecatronice), Editura Politehnica, Timisoara, 162 pp., 2022.

Papers in refereed journals / contributions to Books
(https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. C.-B. Gale-Cazan, C.-A. Bojan-Dragoş, R.-E. Precup (corresponding author), R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, GWO-based Modeling of an Unstable Transport System, Proceedings of 9th International Conference on Information Technology and Quantitative Management ITQM 2022, Beijing and Zhangjiakou, China, 2022, Procedia Computer Science (Elsevier), vol. 214, pp. 195-202, 2022, indexed in sciencedirect (www.sciencedirect.com).
2. R.-C. Roman, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragoş and E. M. Petriu, Iterative Feedback Tuning Algorithm for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 199, pp. 157-165, 2022 (www.sciencedirect.com).
3. R.-E. Precup, S. Preitl, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean, R.-C. Roman and E.-L. Hedrea, Model-Based Fuzzy Control Results for Networked Control Systems, Reports in Mechanical Engineering (Regional Association for Security and Crisis Management, European Centre for Operational Research), vol. 1, no. 1, pp. 10-25, 2020 (link).
4. R.-C. Roman, R.-E. Precup, C.-A. Bojan-Dragoş and A.-I. Szedlak-Stînean, Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 162, pp. 267-274, 2019 (www.sciencedirect.com).
5. C.-A. Bojan-Dragoş, R.-E. Precup and E.-L. Hedrea, TP-based model transformation and gain-scheduling control of electromagnetic actuated clutch systems, Journal of

Engineering Sciences and Innovation (Technical Sciences Academy of Romania), vol. 4, no. 3, pp. 301-312, 2019 (jesi.astr.ro).

Published contributions in refereed academic conferences
(https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. C.-A. Bojan-Dragoş, R.-E. Precup, A.-I. Szedlak-Stînean, R.-C. Roman, E.-L. Hedrea and E. M. Petriu, Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuators, Proceedings of 2023 European Control Conference ECC 2023, Bucharest, Romania, pp. 1-6, 2023, indexed in Clarivate Analytics Web of Science (ieeexplore.ieee.org).
2. C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and M. Muntyan, PI and Super Twisting Sliding Mode with Smith Predictor Control Structures for SMA Actuators, Proceedings of 32nd International Symposium on Industrial Electronics ISIE 2023, Helsinki-Espoo, Finland, pp. 1-7, 2023, indexed in Scopus (ieeexplore.ieee.org).
3. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M Petriu, C.-A. Bojan-Dragos, Alexandra-Iulia Szedlak-Stinean, Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems, Proceedings of 57th Annual Conference on Information Sciences and Systems, pp. 1-6, 2023 (ieeexplore.ieee.org).
4. A.-I. Szedlak-Stînean, R.-E. Precup, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and E.-L. Hedrea, Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control, Proceedings of 2022 IEEE Symposium Series on Computational Intelligence SSCI 2022, Singapore, pp. 700-707, 2022, indexed in Clarivate Analytics Web of Science (ieeexplore.ieee.org).
5. R.-E. Roman, R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and E.-L. Hedrea, Data-Driven Control Algorithms for Shape Memory Alloys, Proceedings of 2022 IEEE Conference on Control Technology and Applications CCTA 2022, Trieste, Italy, pp. 1306-1312, 2022, indexed in INSPEC and Scopus (ieeexplore.ieee.org).
6. E.-L. Hedrea, R.-E. Precup, R.-C. Roman, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, C. Hedrea, Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems, Proceedings of 26th International Conference on System Theory, Control and Computing, pp. 195-200, 2022 (ieeexplore.ieee.org).
7. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, F.-C. Paulescu, AVOA-based tuning of low-cost fuzzy controllers for tower crane systems, Proceedings of IEEE International Conference on Fuzzy Systems, pp. 1-8, 2022 (ieeexplore.ieee.org).
8. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş, A.-I. Szedlak-Stînean and C. Hedrea, Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems, Proceedings of 48th Annual Conference of the IEEE Industrial Electronics Society IECON 2022, Brussels, Belgium, pp. 1-6, 2022, indexed in INSPEC and Scopus (ieeexplore.ieee.org).
9. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, GWO-based performance improvement of PD-type iterative learning fuzzy control of tower crane systems, Proceedings of IEEE 31st International Symposium on Industrial Electronics, pp. 1041-1046, 2022 (ieeexplore.ieee.org).
10. R.-C. Roman, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, E.-L. Hedrea and E. M. Petriu, PI Controller Tuning via Data-Driven Algorithms for Shape Memory Alloy Systems, Proceedings of 1st IFAC Workshop on Control of

Complex Systems COSY 2022, Bologna, Italy, 2022, IFAC-PapersOnLine, vol. 55, no. 40, pp. 181-186, 2022, indexed in Clarivate Analytics Web of Science (www.sciencedirect.com).

11. C.-A. Bojan-Dragos, R.-E. Precup, E. M Petriu, R.-C. Roman, E.-L. Hedrea, A.-I. Szedlak-Stinean, GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators, IFAC-PapersOnLine, vol. 55, no. 15, pp. 39-44, 2022 (www.sciencedirect.com).
12. C.-A. Bojan-Dragoş, R.-E. Precup, S. Preitl, R.-C. Roman, E.-L. Hedrea and A.-I. Szedlak-Stînean, GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic Actuated Clutch Systems, Proceedings of 4th IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2021, Valenciennes, France, 2021, IFAC-PapersOnLine, vol. 54, no. 4, pp. 189-194, 2021 (www.sciencedirect.com).
13. Hedrea, E.-L., Precup, R.-E., Roman, R.-C., Petriu, E. M., Bojan-Dragoş, C.-A. and Hedrea, C. (2021). Tensor Product-Based Model Transformation Technique Applied to Servo Systems Modeling, Proceedings of 30th International Symposium on Industrial Electronics ISIE 2021, Kyoto, Japan, 1-6, indexed in IEEE Xplore (ieeexplore.ieee.org).
14. R.-C. Roman, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragoş, V.-B. Vanya and M.-D. Rarinca, Second Order Active Disturbance Rejection Control - Virtual Reference Feedback Tuning for Twin Rotor Aerodynamic Systems, Proceedings of 2020 IEEE International Conference on Systems, Man, and Cybernetics SMC 2020, Toronto, ON, Canada, pp. 1693-1698, 2020 (ieeexplore.ieee.org).
15. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, Hedrea, C, TP-Based Fuzzy Control Solutions for Magnetic Levitation Systems, 2019 23RD International Conference on System Theory, Control And Computing (ICSTCC), Sinaia, ROMANIA, pp. 809-814, 2019 (ieeexplore.ieee.org).
16. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, O. Tanasoiu, Tensor Product-Based Model Transformation Technique Applied to Modeling Magnetic Levitation Systems, 2019 IEEE 23RD International Conference on Intelligent Engineering Systems (INES 2019), Godollo, HUNGARY, pp. 179-184, 2019 (ieeexplore.ieee.org).
17. C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-E. Precup, A.-I. Szedlak-Stînean, R.-C. Roman, MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems, Proceedings of The 16TH International Conference On Informatics In Control, Automation And Robotics, VOL 1, Prague, CZECH REPUBLIC, pp. 810-817, 2019 (www.insticc.org).
18. R.-C. Roman, R.-E. Precup, E. M. Petriu, E.-L. Hedrea, C.-A. Bojan-Dragoş and M.-B. Rădac, Model-Free Adaptive Control With Fuzzy Component for Tower Crane Systems, Proceedings of 2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019, Bari, Italy, pp. 1400-1405, 2019 (ieeexplore.ieee.org).
19. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu and R.-C. Roman, Tensor Product-Based Model Transformation and Sliding Mode Control of Electromagnetic Actuated Clutch System, Proceedings of 2019 IEEE International Conference on Systems, Man and Cybernetics SMC 2019, Bari, Italy, pp. 1418-1423, 2019 (ieeexplore.ieee.org).
20. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragoş, C. Hedrea, D. Ples, D. Popovici, Cascade Control Solutions for Level Control of Vertical Three Tank Systems, IEEE 13TH International Symposium On Applied Computational Intelligence And Informatics (SACI 2019), Timisoara, ROMANIA, pp. 353-358, 2019 (ieeexplore.ieee.org).

Relevant Publications in 2009 – 2018

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals (https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea and O.-M. Tănăsoiu, Gain-Scheduling Control Solutions for Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 15, no. 5, pp. 89-108, 2018, impact factor (IF) = 1.286, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.uni-obuda.hu/journal/).
2. R.-E. Precup, T.-A. Teban, A. Albu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiments in Incremental Online Identification of Fuzzy Models of Finger Dynamics, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 21, no. 4, pp. 358-376, 2018, impact factor (IF) = 0.661, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Article Influence Score (AIS) = 0.272, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.romjist.ro).
3. C.-A. Bojan-Dragoş, R.-E. Precup, M. L. Tomescu, S. Preitl, O.-M. Tănăsoiu and S. Hergane, Proportional-Integral-Derivative Gain-Scheduling Control of a Magnetic Levitation System, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 12, no. 5, pp. 599-611, 2017, impact factor (IF) = 1.290, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Article Influence Score (AIS) = 0.302, Q4 quartile AIS 2022 (conform JCR iunie 2023) (univagora.ro/jour/).
4. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, A.-I. Szedlak-Stînean, E.-L. Hedrea and R.-C. Roman, Automotive Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 15, no 2, pp. 231-244, 2017, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Article Influence Score (AIS) = 0.651, Q2 quartile AIS 2022 (conform JCR iunie 2023) (casopisi.junis.ni.ac.rs).
5. R.-E. Precup, E. M. Petriu, M.-B. Rădac, St. Preitl, L.-O. Fedorovici and C.-A. Dragoş, Cascade control system-based cost effective combination of tensor product model transformation and fuzzy control, Asian Journal of Control (John Wiley and Sons), vol. 17, no. 2, pp. 381-391, 2015, impact factor (IF) = 1.407, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Article Influence Score (AIS) = 0.390, Q3 quartile AIS 2022 (conform JCR iunie 2023) (onlinelibrary.wiley.com).
6. R.-E. Precup, H.-I. Filip, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Online Identification of Evolving Takagi-Sugeno-Kang Fuzzy Models for Crane Systems, Applied Soft Computing (Elsevier Science), vol. 24, pp. 1155-1163, 2014, impact factor (IF) = 2.810, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.7, Article Influence Score (AIS) = 1.265, Q2 quartile AIS 2022 (conform JCR iunie 2023) (www.sciencedirect.com).
7. R.-E. Precup, M.-L. Tomescu and C.-A. Dragoş, Stabilization of Rössler chaotic dynamical system using fuzzy logic control algorithm, International Journal of General Systems (Taylor & Francis), vol. 43, no. 5, pp. 413-433, 2014, impact factor (IF) = 1.637, IF according to 2022 Journal Citation Reports (JCR) released by

Clarivate Analytics in 2023 = 2, Article Influence Score (AIS) = 0.418, Q3 quartile AIS 2022 (conform JCR iunie 2023) (www.tandfonline.com).

8. R.-E. Precup, M. L. Tomescu, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Iterative performance improvement of fuzzy control systems for three tank systems, Expert Systems with Applications (Elsevier Science), vol. 39, no. 9, pp. 8288-8299, 2012, impact factor (IF) = 1.854, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Article Influence Score (AIS) = 1.276, Q1 quartile AIS 2022 (conform JCR iunie 2023) (www.sciencedirect.com, dl.acm.org).
9. R.-E. Precup, C.-A. Dragoş, St. Preitl, M.-B. Rădac and E. M. Petriu, Novel tensor product models for automatic transmission system control, IEEE Systems Journal, vol. 6, no. 3, pp. 488-498, 2012, impact factor (IF) = 1.270, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.4, Article Influence Score (AIS) = 0.885, Q2 quartile AIS 2022 (conform JCR iunie 2023) (ieeexplore.ieee.org).
10. R.-E. Precup, St. Preitl, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş and J. K. Tar, Experiment-based teaching in advanced control engineering, IEEE Transactions on Education, vol. 54, no. 3, pp. 345-355, 2011, impact factor (IF) = 1.021, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Article Influence Score (AIS) = 0.453, Q3 quartile AIS 2022 (conform JCR iunie 2023) (ieeexplore.ieee.org, dl.acm.org).

Book chapters (https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. St. Preitl, R.-E. Precup, Zs. Preitl, A.-I. Stînean, C.-A. Dragoş and M.-B. Rădac, Pragmatic Design Methods Using Adaptive Controller Structures for Mechatronic Applications with Variable Parameters and Working Conditions, in: Complex Systems, G. M. Dimirovski, Ed., Studies in Systems, Decision and Control, vol. 55 (Springer International Publishing), pp. 619-647, 2016 (link.springer.com, link.springer.com).
2. St. Preitl, R.-E. Precup, Z. Preitl, A.-I. Stînean, M.-B. Rădac and C.-A. Dragoş, Control Algorithms for Plants Operating Under Variable Conditions, Applications, in: Advances in Soft Computing, Intelligent Robotics and Control, J. Fodor and R. Fuller, Eds., Topics in Intelligent Engineering and Informatics, vol. 8 (Springer-Verlag), pp. 3-39, 2014 (link.springer.com, link.springer.com).
3. R.-C. David, R.-B. Grad, R.-E. Precup, M.-B. Rădac, C.-A. Dragoş and E. M. Petriu, An Approach to Fuzzy Modeling of Anti-lock Braking Systems, in: Soft Computing in Industrial Applications, V. Snášel, P. Krömer, M. Köppen and G. Schaefer, Eds., Advances in Intelligent Systems and Computing, vol. 223 (Springer-Verlag), pp. 83-93, 2014 (link.springer.com, link.springer.com).
4. A.-I. Stînean, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, Classical and Fuzzy Approaches to 2-DOF Control Solutions for BLDC-m Drives, in: Intelligent Systems: Models and Applications, E. Pap, Ed., Topics in Intelligent Engineering and Informatics, vol. 3 (Springer-Verlag), pp. 175-193, 2013 (link.springer.com, link.springer.com).
5. R.-E. Precup, F.-C. Enache, M.-B. Rădac, E. M. Petriu, St. Preitl and C.-A. Dragoş, Lead-Lag Controller-Based Iterative Learning Control Algorithms for 3D Crane Systems, in: Aspects of Computational Intelligence: Theory and Applications, L. Madarász and J. Živčák, Eds., Topics in Intelligent Engineering and Informatics, vol. 2 (Springer-Verlag), pp. 25-38, 2013 (link.springer.com, link.springer.com).

6. St. Preitl, A.-I. Stînean, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, 2-DOF and Fuzzy Control Extensions of Symmetrical Optimum Design Method: Applications and Perspectives, in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 19-37, 2012 (link.springer.com, link.springer.com).
7. C.-A. Dragoş, St. Preitl, R.-E. Precup and E. M. Petriu, Points of View on Magnetic Levitation System Laboratory-Based Control Education, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 261-275, 2012 (link.springer.com, link.springer.com).
8. R.-E. Precup, S. V. Spătaru, M.-B. Rădac, E. M. Petriu, St. Preitl, C.-A. Dragoş and R.-C. David, Experimental Results of Model-Based Fuzzy Control Solutions for a Laboratory Antilock Braking System, in: Human-Computer Systems Interaction: Backgrounds and Applications 2, Part 2, Z. S. Hippe, J. L. Kulikowski and T. Mroczek, Eds., Advances in Intelligent and Soft Computing, vol. 99 (Springer-Verlag), pp. 223-234, 2012 (link.springer.com, link.springer.com).
9. M.-B. Rădac, R.-E. Precup, E. M. Petriu, St. Preitl and C.-A. Dragoş, Convergent Iterative Feedback Tuning of State Feedback-Controlled Servo Systems, in: Informatics in Control Automation and Robotics, J. Andrade Cetto, J. Filipe and J.-L. Ferrier, Eds., Lecture Notes in Electrical Engineering, vol. 85 (Springer-Verlag), pp. 99-111, 2011 (link.springer.com, link.springer.com).
10. C.-A. Dragoş, St. Preitl, R.-E. Precup, M. Creţiu and J. Fodor, Modern Control Solutions with Applications in Mechatronic Systems, in: Computational Intelligence in Engineering, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 313 (Springer-Verlag), pp. 87-102, 2010 (link.springer.com, link.springer.com).
11. St. Preitl, R.-E. Precup, M.-L. Tomescu, M.-B. Rădac, E. M. Petriu and C.-A. Dragoş, Model-Based Design Issues in Fuzzy Logic Control, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 137-152, 2009 (link.springer.com, link.springer.com).
12. R.-E. Precup, M.-B. Rădac, St. Preitl, E. M. Petriu and C.-A. Dragoş, Iterative Feedback Tuning in Linear and Fuzzy Control Systems, in: Towards Intelligent Engineering and Information Technology, I. J. Rudas, J. Fodor and J. Kacprzyk, Eds., Studies in Computational Intelligence, vol. 243 (Springer-Verlag), pp. 179-192, 2009 (link.springer.com, link.springer.com).

Papers in refereed journals / contributions to books
(https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. R.-C. David, C.-A. Dragoş, R.-G. Bulzan, R.-E. Precup, E. M. Petriu and M.-B. Rădac, An approach to fuzzy modeling of magnetic levitation systems, International Journal of Artificial Intelligence (CESER Publications), vol. 9, no. A12, pp. 1-18, 2012 (pdf, www.ceser.in).

Published contributions in refereed academic conferences
(https://www.aut.upt.ro/~claudia.dragos/Publications.html)

1. A.-I. Szedlak-Stînean, C.-A. Bojan-Dragoş, R.-E. Precup and M.-B. Rădac, Gain-Scheduling Control Solutions for a Strip Winding System with Variable Moment of Inertia, Proceedings of 3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018, Ghent, Belgium, 2018, IFAC-PapersOnLine, vol. 51, no. 4, pp. 370-375, 2018 (www.sciencedirect.com).
2. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea, A.-I. Szedlak-Stînean and S. Preitl, Gain-Scheduling Position Control Approaches for Electromagnetic Actuated Clutch Systems, Proceedings of 15th International Conference on Informatics in Control, Automation and Robotics ICINCO 2018, Porto, Portugal, vol. 2, pp. 411-418, 2018 (www.scitepress.org).
3. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and E. M. Petriu, Comparative Study of Control Structures for Maglev Systems, Proceedings of 2018 IEEE 18th International Conference on Power Electronics and Motion Control PEMC 2018, Budapest, Hungary, pp. 657-662, 2018 (ieeexplore.ieee.org).
4. C.-A. Bojan-Dragoş, R.-E. Precup, E.-L. Hedrea, A. Simo and A. Daia, Discrete time Control Solutions for Inverted Pendulum Crane Mode Control, Proceedings of 18th IEEE International Symposium on Computational Intelligence and Informatics CINTI 2018, Budapest, Hungary, pp. 295-300, 2018 (ieeexplore.ieee.org).
5. L.-E. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup, R.-C. Roman, E. M. Petriu and C. Hedrea, Tensor Product-Based Model Transformation for Position Control of Magnetic Levitation Systems, Proceedings of 2017 IEEE International Symposium on Industrial Electronics ISIE 2017, Edinburgh, UK, pp. 1141-1146, 2017 (ieeexplore.ieee.org).
6. E.-L. Hedrea, C.-A. Bojan-Dragoş, R.-E. Precup and T.-A. Teban, Tensor Product-Based Model Transformation for Level Control of Vertical Three Tank Systems, Proceedings of 21st International Conference on Intelligent Engineering Systems INES 2017, Larnaca, Cyprus, pp. 113-118, 2017 (ieeexplore.ieee.org).
7. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, M.-D. Rarinca and E. M. Petriu, Evolving Fuzzy Models for the Position Control of Magnetic Levitation Systems, Proceedings of 2017 IEEE Conference on Evolving and Adaptive Intelligent Systems EAIS 2017, Ljubljana, Slovenia, pp. 1-6, 2017 (ieeexplore.ieee.org).
8. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, I.-D. Borlea and E. M. Petriu, Evolving Fuzzy Models for Anti-lock Braking Systems, Proceedings of 2017 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2017, Annecy, France, pp. 48-53, 2017 (ieeexplore.ieee.org).
9. C.-A. Bojan-Dragoş, A.-I. Stînean, R.-E. Precup, St. Preitl and E. M. Petriu, Model Predictive Control Solution for Magnetic Levitation Systems, Proceedings of 20th International Conference on Methods and Models in Automation & Robotics MMAR 2015, Miedzyzdroje, Poland, pp. 139-144, 2015 (ieeexplore.ieee.org).
10. C.-A. Dragoş, St. Preitl, R.-E. Precup, E. M. Petriu and A.-I. Stînean, Adaptive Control Solutions for the Position Control of Electromagnetic Actuated Clutch Systems, Proceedings of 2012 IEEE Intelligent Vehicles Symposium IEEE IV'12, Alcala de Henares, Spain, pp. 81-86, 2012 (ieeexplore.ieee.org).
11. R.-E. Precup, L.-T. Dioanca, E. M. Petriu, M.-B. Rădac, St. Preitl and C.-A. Dragoş, Tensor Product-Based Real-time Control of the Liquid Levels in a Three Tank System, Proceedings of 2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2010, Montreal, Canada, pp. 768-773, 2010 (ieeexplore.ieee.org).

8. Publications List – team member 2 – Adriana-Nicoleta ALBU

Papers in 2019-2023

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals

1. A.-M. Minda (Perea), A. Albu, "Prostate Cancer Classifier based on Three-Dimensional Magnetic Resonance Imaging and Convolutional Neural Networks", Computer Science Journal of Moldova, vol. 31, no. 1(91), pp. 22-44, Apr. 2023, impact factor (IF) = 0.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 0.3, (https://www.math.md/files/csjm/v31-n1/v31-n1-(pp22-44).pdf).
2. R.-E. Precup, R.-C. Roman, T.-A. Teban, A. Albu, E. M. Petriu and C. Pozna, Model-Free Control of Finger Dynamics in Prosthetic Hand Myoelectric-based Control Systems, Studies in Informatics and Control (ICI Bucharest), vol. 29, no. 4, pp. 399-410, 2020, impact factor (IF) = 1.649, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204 (sic.ici.ro).
3. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, IEEE Transactions on Instrumentation and Measurement, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, Highly Cited Paper according to Clarivate Analytics Web of Science as of September/October 2023 (ieeexplore.ieee.org).
4. Albu, R.-E. Precup and T.-A. Teban, Results and Challenges of Artificial Neural Networks Used for Decision-Making in Medical Applications, Facta Universitatis, Series: Mechanical Engineering (University of Nis), vol. 17, no 4, pp. 285-308, 2019, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (casopisi.junis.ni.ac.rs).

Book chapters

1. Albu, R.-E. Precup and T.-A. Teban, Intelligent Paradigms for Diagnosis, Prediction and Control in Healthcare Applications, in: Handbook of Artificial Intelligence in Healthcare, Vol. 2: Practicalities and Prospects, C.-P. Lim, Y.-W. Chen, A. Vaidya, C. Mahorkar and L. C. Jain, Eds., Springer, Cham, Intelligent Systems Reference Library, vol. 212, pp. 3-41, 2022 (link.springer.com, link.springer.com).

Published contributions in refereed academic conferences (2019-2023)

1. L. Stanciu, E. Faur, A. Albu, "AnatomyLab – Web application for Romanian medical students to learn the human body anatomy", Proceedings of EHB 2023 - The 11-th International Conference on e-Health and Bioengineering, Bucuresti, Romania, Nov., 2023.
2. G.-L. Sirbu, A. Albu, "Artificial Intelligence Guided Diagnosis based on Optical Coherence Tomography Images", Proceedings of EHB 2023 - The 11-th International Conference on e-Health and Bioengineering, Bucuresti, Romania, Nov., 2023.
3. M. Jodłowiec, A. Albu, K. Wołk, N. Thai-Nghe, A. Karasiński, "Layer-wise Optimization of Contextual Neural Networks with Dynamic Field of Aggregation", ACIIDS 2022 -

Asian Conference on Intelligent Information and Database Systems, Ho Chi Minh City, Vietnam, Nov., 2022, Lecture Notes in Computer Science, Springer, vol. 13758, pp. 302-312, ISI Proceedings (https://link.springer.com/chapter/10.1007/978-3-031-21967-2_25).

4. M. S. Pasca, B. Caruntu, A. Albu, "A method for determining the analytical solution for Bagley Torvik equations with fractional derivatives", Proceedings of SACI 2022 - The IEEE 16-th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, May, 2022 (https://ieeexplore.ieee.org/document/9919569).
5. M. S. Pasca, B. Caruntu, A. Juratoni, O. Bundau, A. Albu, "Least Squares Differential Quadrature Method for systems of fractional order differential equations", Proceedings of EHB 2021 - The 9-th International Conference on e-Health and Bioengineering, Iasi, Romania, Nov., 2021, ISI Proceedings (https://ieeexplore.ieee.org/document/9657626).
6. N. Mischie, A. Albu, "Artificial Neural Networks for Diagnosis of Coronary Heart Disease", Proceedings of EHB 2020 - The 8-th International Conference on e-Health and Bioengineering, Iasi, Romania, Oct., 2020, ISI Proceedings (https://ieeexplore.ieee.org/document/9280271).
7. M.-L. Nedelcea, A. Albu, "Warning Solution for Medication Administration", Proceedings of SACI 2020 - The IEEE 14-th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, May, 2020, ISI Proceedings (https://ieeexplore.ieee.org/document/9118842).
8. L. Stanciu, A. Albu, "Analysis on Emotion Detection and Recognition Methods using Facial Microexpression. A Survey", Proceedings of EHB 2019 - The 7-th International Conference on e-Health and Bioengineering, Iasi, Romania, Nov., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/8969925).
9. C. G. Zimbru, A. Albu, N. Andreescu, A. Chirita-Emandi, M. Puiu, "Determining Splicing Signal Variation in Humans by Analyzing the Regulatory Splicing Motifs", Proceedings of EHB 2019 - The 7-th International Conference on e-Health and Bioengineering, Iasi, Romania, Nov., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/8969983).
10. C. G. Zimbru, N. Andreescu, A. Albu, A. Chirita-Emandi, A. Stanciu, M. Puiu, "Performance evaluation of in silico predictors for the classification of ClinVar variants", Proceedings of EHB 2019 - The 7-th International Conference on e-Health and Bioengineering, Iasi, Romania, Nov., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/8969963).
11. Albu, L. Stanciu, M.-S. Pasca, C. G. Zimbru, "Choosing Between Artificial Neural Networks and Bayesian Inference in Stroke Risk Prediction", Proceedings of EHB 2019 - The 7-th International Conference on e-Health and Bioengineering, Iasi, Romania, Nov., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/8970035).
12. R.-E. Precup, T.-A. Teban, A. Albu, "Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control", Proccedings of ECAI 2019 - International Conference - 11th Edition Electronics, Computers and Artificial Intelligence, Pitesti, Romania, Jun., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/9042090).
13. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I.-A. Zamfirache, E. M. Petriu, "Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Using Weighted Recursive Least Squares Algorithm for Identification", Proceeding of ROSE 2019 - The 13th IEEE International Symposium on RObotic and Sensors Environments, Ottawa, Ontario, Canada, Jun., 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/8790416).

14. Albu, M. S. Pasca, C. G. Zimbru, "Medical Predictions: Naive Bayes Classifier vs Artificial Neural Networks", Proceedings of SACI 2019 - The IEEE 13-th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, May, 2019, ISI Proceedings (https://ieeexplore.ieee.org/document/9111510).

Papers in 2005-2018

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiments in Incremental Online Identification of Fuzzy Models of Finger Dynamics, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 21, no. 4, pp. 358-376, 2018, impact factor (IF) = 0.661, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Article Influence Score (AIS) = 0.272, Q4 quartile AIS 2022 (conform JCR iunie 2023) (www.romjist.ro).

Books

1. Adriana Albu, "Computer Programming - The C Language", Conspress, Bucuresti, Romania, 2013, 263 pages, ISBN: 978-973-100-270-5.
2. Adriana Albu, "Stabilirea de baze de date pentru diagnosticarea hepatitelor virale prin analiza imaginilor ficatului obtinute prin tomografiere" - PhD Thesis, "Politehnica" Printing House, Timisoara, Romania, 2007, 142 pages, ISBN: 978-973-625-400-0, ISSN: 1842-4937.
3. Antonius Stanciu, Loredana Ungureanu, Adriana Albu, "Utilizarea calculatoarelor", "Politehnica" Printing House, Timisoara, Romania, 2007, 148 pages, ISBN: 973-625-179-9.

Papers in refereed journals / contributions to books

1. A.-E. Vaduva, A. Albu, "Optimization of Blood Donation Activity Supporting a Smart City", Applied Medical Informatics, vol. 40, no. 1-2, pp. 24-30, Jun., 2018 (https://ami.info.umfcluj.ro/index.php/AMI/article/view/627/pdf_64).
2. D. Dragulescu, A. Albu, "Medical Predictions System", Acta Polytechnica Hungarica, Journal of Applied Sciences at Budapest Tech, Budapest, Hungary, 2007, vol. 4, no. 3, p. 89-101, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (http://acta.uni-obuda.hu//Dragulescu_Albu_11.pdf).
3. A. Dragulescu, A. Albu, C. Gavriluta, S. Filip, K. Menyhardt, "Statistical Analyses and Artificial Neural Networks for Prognoses in Hepatitis C", Acta Polytechnica Hungarica, Journal of Applied Sciences at Budapest Tech, Budapest, Hungary, 2006, vol. 3, no. 3, p. 71-79, Article Influence Score (AIS) = 0.170, Q4 quartile AIS 2022 (conform JCR iunie 2023) (http://acta.uni-obuda.hu//Dragulescu_Albu_Gavriluta_Filip_Menyhardt_7.pdf).
4. N. Robu, V. Stoicu-Tivadar, I. Silea, L. Stoicu-Tivadar, D. Berian, A. Albu, G. Vlasiu, "Lotus Solutions for a Regional E-administration Network", Studies in Informatics and Control, ICI Publishing House, National Institute for Research & Development in

Informatics, Bucuresti, Romania, Sep. 2006, vol. 15, no. 3, p. 251-258, Article Influence Score (AIS) = 0.204, Q4 quartile AIS 2022 (conform JCR iunie 2023).

Published contributions in refereed academic conferences

1. A. Albu, R.-E. Precup, T.-A. Teban, "Medical Applications of Artificial Neural Networks", XIV International SAUM Conference on Systems, Automatic Control and Measurements, Nis, Serbia, Nov., 2018, Plenary Session.
2. T.-A. Teban, R.-E. Precup, E.-C. Lunca, A. Albu, C.-A. Bojan-Dragos, E. M. Petriu, "Recurrent Neural Network Models for Myoelectric-based Control of a Prosthetic Hand", Proceedings of ICSTCC 2018 - 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, Oct., 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8540720).
3. A. Mirea, A. Albu, "Automated System for Medication Stocks Management", Proceedings of ICSTCC 2018 - 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, Oct., 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8540667).
4. R.-E. Precup, T.-A. Teban, E. M. Petriu, A. Albu, I.-C. Mituletu, "Structure and Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Systems", Proceedings of MED'18: The 26th Mediterranean Conference on Control and Automation, Zadar, Croatia, Jun., 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8442770).
5. A. Mirea, A. Albu, "Acquisition of Physical Data in an Automated System for Monitoring Medication Stocks", Proccedings of SACI 2018 - The IEEE 12-th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, May, 2018, ISI Proceedings (https://ieeexplore.ieee.org/document/8440977).
6. A. Albu, "From Logical Inference to Decision Trees in Medical Diagnosis", Proceedings of EHB 2017 - The 6th IEEE International Conference on E-Health and Bioengineering, Sinaia, Romania, Jun., 2017, ISI Proceedings (https://ieeexplore.ieee.org/document/7995362).
7. I. Tanasoiu, A. Albu, "A Connectionist Model for Cerebrovascular Accident Risk Prediction", Proceedings of EHB 2017 - The 6th IEEE International Conference on E-Health and Bioengineering, Sinaia, Romania, Jun., 2017, ISI Proceedings (https://ieeexplore.ieee.org/document/7995357).
8. A. Albu, "Logical Inference Modeled by Petri Nets", Proceedings of SACI 2016 - The 11-th IEEE International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, Mai, 2016, p. 137-140, ISI Proceedings (https://ieeexplore.ieee.org/document/7507358).
9. A. Albu, L. Stanciu, "Benefits of Using Artificial Intelligence in Medical Predictions", Proceedings of EHB 2015 - The 5th IEEE International Conference on E-Health and Bioengineering, Iasi, Romania, Nov., 2015, ISI Proceedings (https://ieeexplore.ieee.org/document/7391610).
10. C. Covasinteanu, A. Albu, "A Software Solution for Managing the Permanence Centers of Romanian Healthcare System", Proceedings of SACI 2014 - The 9-th IEEE International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, Mai, 2014, p. 207-212, ISI Proceedings (https://ieeexplore.ieee.org/document/6840062).
11. D.-M. Filimon, A. Albu, "Skin Diseases Diagnosis using Artificial Neural Networks", Proceedings of SACI 2014 - The 9-th IEEE International Symposium on Applied

Computational Intelligence and Informatics, Timisoara, Romania, Mai, 2014, p. 189-194, ISI Proceedings (https://ieeexplore.ieee.org/document/6840059).

12. D.-I. Curiac, G. Vasile, O. Banias, C. Volosencu, A. Albu, "Bayesian Network Model for Diagnosis of Psychiatric Diseases", Proccedings of the 31-st International Conference on Information Technology Interfaces, Cavtat, Croatia, Jun., 2009, p. 61-66, ISI Proceedings (https://ieeexplore.ieee.org/document/5196055).
13. A. Albu, "Decisional Methods Applied in Medical Domain", Proceedings of the 5-th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, May, 2009, p. 123-128, ISI Proceedings (https://ieeexplore.ieee.org/document/5136225).
14. D. Dragulescu, A. Albu, "Expert System for Medical Predictions", Proceedings of the 4-th Romanian-Hungarian Joint Symposium on Applied Computational Intelligence, Timisoara, Romania, 2007, p. 123-128, ISI Proceedings (https://ieeexplore.ieee.org/document/4262498).
15. N. Robu, V. Stoicu-Tivadar, I. Silea, L. Stoicu-Tivadar, D. Berian, A. Albu, G. Vlasiu, "Managing the Development of a Regional e-Administration Network with Academic Expertise", Proceedings of the IEEE 3-rd International Conference on Computational Cybernetics, Mauritius, Mauritius, Apr., 2005, p. 319-324, ISI Proceedings (https://ieeexplore.ieee.org/document/1511594).

8. Publication List – team member 3 – Raul-Cristian Roman

Publication List

Publications 2019 – 2023

Books

1. R.-E. Precup, **R.-C. Roman** and A. Safaei, "Data-Driven Model-Free Controllers," 1st edition, CRC Press, Boca Raton, FL, USA, Dec. 2021, https://www.taylorfrancis.com/,

Book chapters

1. R.-E. Precup, E.-I. Voisan, R.-C. David, E.-L. Hedrea, E. M. Petriu, **R.-C. Roman** and A.-I. Szedlak-Stinean, "Nature-Inspired Optimization Algorithms for Path Planning and Fuzzy Tracking Control of Mobile Robots," Applied Optimization and Swarm Intelligence, 2021, pp. 129-148, https://link.springer.com, https://link.springer.com,

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) Journals

1. I. A. Zamfirache, R.-E. Precup, **R.-C. Roman**, and E. M. Petriu, "Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation," Expert Systems with Applications, vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276, https://www.sciencedirect.com,
2. A.-I. Borlea, R.-E. Precup, and **R.-C. Roman**, "Discrete-Time Model-Based Sliding Mode Controllers for Tower Crane Systems," Facta Universitatis, Series: Mechanical Engineering, vol. 21, no. 1, pp. 1-20, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651, http://casopisi.junis.ni.ac.rs,
3. **R.-C. Roman**, R.-E. Precup, E. M. Petriu, and M. Muntyan, "Fictitious Reference Iterative Tuning of Discrete-Time Model-Free Control for Tower Crane Systems," Studies in Informatics and Control, vol. 32, no. 1, pp. 5-14, 2023, impact factor (IF) = 1.6, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204, https://sic.ici.ro,
4. A.-I. Szedlak-Stinean, R.-E. Precup, E. M. Petriu, **R.-C. Roman**, E.-L. Hedrea, and C.-A. Bojan-Dragos, "Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system," Expert Systems with Applications, vol. 208, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276, https://www.sciencedirect.com,
5. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, E.-L. Hedrea, **R.-C. Roman** and E. M. Petriu, "A Low-Cost Approach to Data-Driven Fuzzy Control of Servo Systems," Facta Universitatis, Series: Mechanical Engineering, vol. 20, no. 1, pp. 021-036, 2022, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651, http://casopisi.junis.ni.ac.rs,
6. R.-E. Precup, **R.-C. Roman**, E.-L. Hedrea, C.-A. Bojan-Dragos, M.-M. Damian and M.-L. Nedelcea, "Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems," International Journal of Computers Communications & Control, vol. 17, no. 1, pp. 1-18, 2022, impact factor (IF) = 2.7, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302, http://univagora.ro,
7. I. A. Zamfirache, R.-E. Precup, **R.-C. Roman** and E. M. Petriu, "Reinforcement Learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system," Information Sciences, vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, https://www.sciencedirect.com,

8. Publication List – team member 3 – Raul-Cristian Roman

8. I. A. Zamfirache, R.-E. Precup, **R.-C. Roman** and E. M. Petriu, "Policy Iteration Reinforcement Learning-based control using a Grey Wolf Optimizer algorithm," Information Sciences, vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, https://www.sciencedirect.com,
9. R.-E. Precup, C.-A. Bojan-Dragos, E.-L. Hedrea, **R.-C. Roman** and E. M. Petriu, "Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators," Romanian Journal of Information Science and Technology, vol. 24, no. 4, pp. 353-365, 2021, impact factor (IF) = 0.852, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272, https://www.romjist.ro/,
10. R.-E. Precup, R.-C. David, **R.-C. Roman**, A.-I. Szedlak-Stinean and E. M. Petriu, "Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using Slime Mould Algorithm," International Journal of Systems Science, vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, https://www.tandfonline.com,
11. E.-L. Hedrea, R.-E. Precup, **R.-C. Roman** and E. M. Petriu, "Tensor product-based model transformation approach to tower crane systems modeling," Asian Journal of Control, vol. 23, no. 3, pp. 1313-1323, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390, https://onlinelibrary.wiley.com,
12. R.-E. Precup, R.-C. David, **R.-C. Roman**, E. M. Petriu and A.-I. Szedlak-Stinean, "Slime Mould Algorithm-Based Tuning of Cost-Effective Fuzzy Controllers for Servo Systems," International Journal of Computational Intelligence Systems, vol. 14, no. 1, pp. 1042-1052, 2021, impact factor (IF) = 1.736, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.9, Q4 quartile, Article Influence Score (AIS) = 0.349, https://www.atlantis-press.com,
13. **R.-C. Roman**, R.-E. Precup and E. M. Petriu, "Hybrid Data-Driven Fuzzy Active Disturbance Rejection Control for Tower Crane Systems," European Journal of Control, vol. 58, pp. 373-387, 2021, impact factor (IF) = 2.395, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.4, Q3 quartile, Article Influence Score (AIS) = 0.696, https://www.sciencedirect.com, (Highly Cited Papers according to Clarivate Analytics Web of Science in March/April 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in July/August 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in September/October 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in November/December 2021, Highly Cited Papers according to Clarivate Analytics Web of Science in January/February 2022, Hot Papers according to Clarivate Analytics Web of Science in September/October 2021),
14. R.-E. Precup, **R.-C. Roman**, E.-L. Hedrea, E. M. Petriu, and C.-A. Bojan-Dragos, "Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation," International Journal of Computers Communications & Control, vol, 16 no. 1, pp. 1-18, 2021, impact factor (IF) = 2.635, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302, http://univagora.ro,
15. R.-E. Precup, **R.-C. Roman**, T.-A. Teban, A. Albu, E. M. Petriu and C. Pozna, "Model-Free Control of Finger Dynamics in Prosthetic Hand Myoelectric-Based Control Systems," Studies in Informatics and Control, vol. 29, no. 4, pp. 399-410, 2020, impact factor (IF) = 1.649, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204, https://sic.ici.ro,
16. R.-E. Precup, E.-L. Hedrea, **R.-C. Roman**, E. M. Petriu, A.-I. Szedlak-Stinean and C.-A. Bojan-Dragos, "Experiment-Based Approach to Teach Optimization Techniques," IEEE Transactions on Education, vol 64, no. 2, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Q3 quartile, Article Influence Score (AIS) = 0.453, https://ieeexplore.ieee.org,

8. Publication List – team member 3 – Raul-Cristian Roman

17. R.-E. Precup, S. Preitl, E. M. Petriu, **R.-C. Roman**, C.-A. Bojan-Dragos, E.-L. Hedrea and A.-I. Szedlak-Stinean, "A Center Manifold Theory-Based Approach to the Stability Analysis of State Feedback Takagi-Sugeno-Kang Fuzzy Control Systems," Facta Universitatis, Series: Mechanical Engineering, vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651, http://casopisi.junis.ni.ac.rs,
18. R.-E. Precup, E.-I. Voisan, E. M. Petriu, M. L. Tomescu, R.-C. David, A.-I. Szedlak-Stinean and **R.-C. Roman**, "Grey Wolf Optimizer-Based Approaches to Path Planning and Fuzzy Logic-based Tracking Control for Mobile Robots," International Journal of Computers Communications & Control, vol, 15, no. 3, pp. 1-17, 2020, impact factor (IF) = 2.293, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302, http://www.univagora.ro,

Published Contributions in Refereed Academic Conferences:

1. E.-L. Hedrea, R.-E. Precup, **R.-C. Roman**, and I.-C. Hedrea "Tensor Product-based and State Feedback Control Solutions for Cart Position Control of Pendulum-Cart Systems," 2023 27th International Conference on System Theory, Control and Computing (ICSTCC), Timisoara, Romania, pp. 12-17, 2023, https://ieeexplore.ieee.org,
2. **R.-C. Roman**, R.-E. Precup, and E.-L. Hedrea, "Intelligent Proportional Controller Tuned by Virtual Reference Feedback Tuning and Fictitious Reference Iterative Tuning," Procedia Computer Science, vol. 221, Oxford, England, UK, pp. 86-93, 2023, https://www.sciencedirect.com,
3. **R.-C. Roman**, R.-E. Precup, Emil M. Petriu, M. Muntyan, and E.-L. Hedrea, "Fictitious Reference Iterative Tuning of Intelligent Proportional-Integral Controllers for Tower Crane Systems," 2023 31st Mediterranean Conference on Control and Automation (MED), Limassol, Cyprus, pp. 740-746, 2023, https://ieeexplore.ieee.org,
4. A.-I Szedlak-Stinean, R.-E. Precup, **R.-C. Roman**, and E. M Petriu, "Discrete-time Observers for a Mechatronics System with PID Controllers Tuned Using SMA," 2023 IEEE 32nd International Symposium on Industrial Electronics (ISIE), Helsinki, Finland, pp. 1-8, 2023, https://ieeexplore.ieee.org,
5. C.-A. Bojan-Dragos, R.-E. Precup, **R.-C. Roman**, E. M Petriu, and M. Muntyan, "PI and Super Twisting Sliding Mode with Smith Predictor Control Structures for SMA Actuators," 2023 IEEE 32nd International Symposium on Industrial Electronics (ISIE), Helsinki, Finland, pp. 1-7, 2023, https://ieeexplore.ieee.org,
6. C.-A. Bojan-Dragos, R.-E. Precup, A.-I. Szedlak-Stinean, **R.-C. Roman**, E.-L. Hedrea, and E. M Petriu, "Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuators," 2023 European Control Conference (ECC), Bucharest, Romania, pp. 1-6, 2023, https://ieeexplore.ieee.org,
7. R.-E. Precup, **R.-C. Roman**, E.-L. Hedrea, E. M. Petriu, C.-A. Bojan-Dragos, and A.-I. Szedlak-Stinean, "Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems," 2023 57th Annual Conference on Information Sciences and Systems (CISS), Baltimore, MD, USA, pp. 1-6, 2023, https://ieeexplore.ieee.org,
8. A.-I. Szedlak-Stinean, R.-E. Precup, **R.-C. Roman**, E. M. Petriu, C.-A. Bojan-Dragos, and E.-L. Hedrea, "Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control," 2022 IEEE Symposium Series on Computational Intelligence (SSCI), Singapore, Singapore, pp. 700-707, 2022, https://ieeexplore.ieee.org,
9. C.-B. Gale-Cazan, C.-A. Bojan-Dragos, R.-E. Precup, **R.-C. Roman**, E. M. Petriu and A.-I. Szedlak Stinean, "GWO-based Modeling of an Unstable Transport System," Procedia Computer Science, vol. 214, Beijing, China, pp. 195-202, 2022, https://www.sciencedirect.com,
10. **R.-C. Roman**, R.-E. Precup, S. Preitl, A.-I. Szedlak Stinean, C.-A. Bojan-Dragos, E.-L. Hedrea, and E. M. Petriu, "PI Controller Tuning via Data Driven Algorithms for Shape Memory Alloy Systems," 1st IFAC Workshop on Control of Complex Systems, COSY 2022, vol. 55, no. 40, Bologna, Italy, pp. 181-186, 2022, https://www.sciencedirect.com,

8. Publication List – team member 3 – Raul-Cristian Roman

11. E.-L. Hedrea, R.-E. Precup, **R.-C. Roman**, C.-A. Bojan-Dragos, A.-I. Szedlak Stinean and C. Hedrea, "Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems," 2022 26th International Conference on System Theory, Control and Computing (ICSTCC), Sinaia, Romania, pp. 195-200, 2022, https://ieeexplore.ieee.org,
12. R.-E. Precup, E.-L. Hedrea, **R.-C. Roman**, E. M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak Stinean and C. Hedrea, "Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems," 48th Annual Conference of the Industrial Electronics Society, Brussels, Belgium, pp. 1-6, 2022, https://ieeexplore.ieee.org,
13. **R.-C. Roman**, R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, A.-I. Szedlak Stinean and E.-L. Hedrea, "Data-Driven Control Algorithms for Shape Memory Alloys," 6th IEEE Conference on Control Technology and Applications, Trieste, Italy, pp. 1-7, 2022, https://ieeexplore.ieee.org/,
14. R.-E. Precup, E.-L. Hedrea, **R.-C. Roman**, E. M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak Stinean and F.-A. Paulescu, "AVOA-Based Tuning of Low-Cost Fuzzy Controllers for Tower Crane Systems," 2020 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Padova, Italy, pp. 1-6, 2022, https://ieeexplore.ieee.org,
15. R.-E. Precup, E.-L. Hedrea, **R.-C. Roman**, E. M. Petriu, C.-A. Bojan-Dragos and A.-I. Szedlak Stinean, "GWO-Based Performance Improvement of PD-Type Iterative Learning Fuzzy Control of Tower Crane Systems," 2022 IEEE International Symposium on Industrial Electronics, Anchorage, AK, USA, pp. 1-6, 2022, https://ieeexplore.ieee.org,
16. A.-I. Szedlak Stinean, R.-E. Precup and **R.-C. Roman**, "Linear and nonlinear observers developed for direct current electric drive systems," 2022 9th International Conference on Computers Communications and Control, Baile Felix, Romania, pp. 1-6, 2022, https://link.springer.com,
17. C.-A. Bojan-Dragos, R.-E. Precup, E. M. Petriu, **R.-C. Roman**, E.-L. Hedrea and A.-I. Szedlak Stinean, "GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators," 6th IFAC Conference on Intelligent Control and Automation Sciences, Cluj-Napoca, Romania, pp. 1-6, 2022, https://www.sciencedirect.com,
18. **R.-C. Roman**, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragos and E. M. Petriu, "Iterative Feedback Tuning Algorithm for Tower Crane Systems," Procedia Computer Science, vol. 199, Chengdu, China, pp. 157-165, 2022, https://www.sciencedirect.com,
19. E.-L. Hedrea, R.-E. Precup, **R.-C. Roman**, E. M. Petriu, C.-A. Bojan-Dragos and C. Hedrea, "Tensor Product-Based Model Transformation Technique Applied to Servo Systems Modeling," 2021 IEEE 30th International Symposium on Industrial Electronics (ISIE), Kyoto, Japan, pp. 1-6, 2021, https://ieeexplore.ieee.org,
20. C.-A. Bojan-Dragos, R.-E. Precup, S. Preitl, **R.-C. Roman**, E.-L. Hedrea and A.-I. Szedlak-Stinean, "GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic Actuated Clutch Systems," IFAC-PapersOnLine, Valenciennes, France, vol. 54, no. 4, pp. 189-194, 2021, https://www.sciencedirect.com,
21. **R.-C. Roman**, R.-E. Precup, E. M. Petriu, C.-A. Bojan-Dragos, V.-B. Vanya and M.-D. Rarinca, "Second Order Active Disturbance Rejection Control – Virtual Reference Feedback Tuning for Twin Rotor Aerodynamic Systems," 2020 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2020), Toronto, Canada, pp. 1-6, 2020, https://ieeexplore.ieee.org,
22. **R.-C. Roman**, R.-E. Precup, E. M. Petriu, R.-C. David, E.-L. Hedrea and A.-I. Szedlak-Stinean, "First-Order Active Disturbance Rejection-Virtual Reference Feedback Tuning Control of Tower Crane Systems," 24th International Conference on System Theory, Control and Computing (ICSTCC 2020), Sinaia, Romania, pp. 1-6, 2020, https://ieeexplore.ieee.org,
23. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stinean E. M. Petriu and **R.-C. Roman**, "Fuzzy Control Systems with Reduced Parametric Sensitivity Design Based on Hybrid Grey Wolf Optimizer–Particle Swarm Optimization," 24th International Conference on System Theory, Control and Computing (ICSTCC 2020), Sinaia, Romania, pp. 1-6, 2020, https://ieeexplore.ieee.org,

8. Publication List – team member 3 – Raul-Cristian Roman

24. R.-C. David, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stinean, **R.-C. Roman** and E. M. Petriu, "Design of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity Based on Whale Optimization Algorithm," 2020 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Glasgow, Scotland, UK, pp. 1-6, 2020, https://ieeexplore.ieee.org,
25. R.-C. David, R.-E. Precup, S. Preitl, E. M. Petriu, A.-I. Szedlak-Stinean and **R.-C. Roman**, "Whale Optimization Algorithm-Based Tuning of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity," 2020 28th Mediterranean Conference on Control and Automation, Saint-Raphaël, France, pp. 440-445, 2020, https://ieeexplore.ieee.org,
26. I. Panfilii, R.-E. Precup, **R.-C. Roman** and E. M. Petriu. "Wilt Dataset-based Comparative Analysis of Three Neural Networks," 12th International Conference on Electronics, Computers and Artificial Intelligence, Bucharest, Romania, pp. 1-6, 2020, https://ieeexplore.ieee.org,
27. D. Komor, **R.-C. Roman**, R.-E. Precup, R.-C. David and I. Panfilii, "Models of Two-Wheeled Mobile Robots with Experimental Validation," 2020 IEEE 14th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, pp. 000211-000216, 2020, https://ieeexplore.ieee.org,
28. **R.-C. Roman**, R.-E. Precup, C.-A. Bojan-Dragos and A.-I. Szedlak-Stinean, "Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems," Procedia Computer Science, vol. 162, Granada, Spain, pp. 267-274, 2019, https://www.sciencedirect.com,
29. **R.-C. Roman**, R.-E. Precup, E. M. Petriu, E.-L. Hedrea, C.-A. Bojan-Dragos and M.-B. Radac, "Model-Free Adaptive Control With Fuzzy Component for Tower Crane Systems," in Proc. 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, pp. 1384-1389, 2019, https://ieeexplore.ieee.org,
30. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragos, E. M. Petriu and **R.-C. Roman**, "Tensor Product-Based Model Transformation and Sliding Mode Control of Electromagnetic Actuated Clutch System," in Proc. 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, pp. 1402-1407, 2019, https://ieeexplore.ieee.org,
31. C.-A. Bojan-Dragos, E.-L. Hedrea, R.-E. Precup, A.-I. Szedlak-Stinean and **R.-C. Roman**, "MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems," in Proc. 16th International Conference on Informatics in Control, Automation and Robotics, Prague, Czech Republic, vol. 1, pp. 810-817, 2019, https://www.semanticscholar.org,

Certificates

1. 2023: A certificate that register to the Romanian Office of Copyright (Oficiul Român pentru Drepturile de Autor, ORDA) the work "Study of design and industrial implementation of a hybrid model-free fuzzy controller", no. RGII/INT/1838/02.05.2023 - RGII/IES/1838/08.05.2023, (The certificate),
2. 2023: A certificate that register to the Romanian Office of Copyright (Oficiul Român pentru Drepturile de Autor, ORDA) the work "Study of design and industrial implementation of a hybrid model-free adaptive fuzzy controller", no. RGII/INT/2607/23.06.2023 - RGII/IES/2607/20.07.2023 (The certificate),
3. 2023: A certificate that register to the Romanian Office of Copyright (Oficiul Român pentru Drepturile de Autor, ORDA) the work "Study of design and industrial implementation of a fuzzy controller with proportional-derivative indirect iterative learning", no. RGII/INT/3514/29.08.2023 - RGII/IES/3514/28.09.2023 (The certificate),

8. Publication List – team member 3 – Raul-Cristian Roman

Earlier Publications

Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) Journals

1. M.-B. Radac, R.-E. Precup and **R.-C. Roman**, "Data-driven model reference control of MIMO vertical tank systems with model-free VRFT and Q-learning," ISA Transactions, vol. 73, pp. 227-238, 2018, https://www.sciencedirect.com,
2. M.-B. Radac, R.-E. Precup and **R.-C. Roman**, "Model-Free control performance improvement using virtual reference feedback tuning and reinforcement Q-learning," International Journal of Systems Science, vol. 48, no. 5, pp. 1071-1083, 2017, https://www.tandfonline.com,
3. R.-E. Precup, M.-B. Radac and **R.-C. Roman**, "Model-free sliding mode control of nonlinear systems: Algorithms and experiments," Information Sciences, vol. 381, pp. 176-192, 2017, https://www.sciencedirect.com, (Highly Cited Papers according to Clarivate Analytics Web of Science),
4. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, M.-B. Radac, A.-I. Szedlak-Stinean, E.-L. Hedrea and **R.-C. Roman**, "Automotive applications of evolving Takagi-Sugeno-Kang fuzzy models," Facta Universitatis, Series: Mechanical Engineering, vol. 15, no. 2, pp. 231-244, 2017, http://casopisi.junis.ni.ac.rs,
5. **R.-C. Roman**, M.-B. Radac and R.-E. Precup, "Multi-input-multi-output system experimental validation of model-free control and virtual reference feedback tuning techniques," IET Control Theory & Applications, vol. 10, no. 12, pp. 1395-1403, 2016, https://digital-library.theiet.org,
6. **R.-C. Roman**, M.-B. Radac, R.-E. Precup and E. M. Petriu, "Data-driven model-free adaptive control tuned by virtual reference feedback tuning," Acta Polytechnica Hungarica, vol. 13, no. 1, pp. 83-96, 2016, http://uni-obuda.hu,

Journal Papers

1. R.-E. Precup, S. Preitl, E. M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, **R.-C. Roman** and E.-L. Hedrea, "Model-Based Fuzzy Control Results for Networked Control Systems," Reports in Mechanical Engineering, vol. 1, no. 1, pp. 10-25, 2020, https://www.frontpres.rabek.org,

Published Contributions in Refereed Academic Conferences:

1. **R.-C. Roman**, R.-E. Precup and R.-C. David, "Second order intelligent proportional-integral fuzzy control of twin rotor aerodynamic systems," in Proc. Procedia Computer Science, vol. 139, Omaha, Nebraska, USA, pp. 372-380, 2018, https://www.sciencedirect.com,
2. E.-L. Hedrea, R.-E. Precup, C.-A. Bojan-Dragos, **R.-C. Roman**, O. Tanasoiu and M. Marinescu, "Cascade Control Solutions for Maglev Systems," in Proc. 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 20-26, 2018, https://ieeexplore.ieee.org,
3. **R.-C. Roman**, M.-B. Radac, C. Tureac and R.-E. Precup, "Data-Driven Active Disturbance Rejection Control of Pendulum Cart Systems*," in Proc. 2nd IEEE Conference on Control Technology and Applications, Copenhagen, Denmark, pp. 933-938, 2018, https://ieeexplore.ieee.org,
4. C. Bumb, M.-B. Radac, R.-E. Precup and R.-C. Roman, "Data-driven nonlinear VRFT for dead-zone compensation in servo systems control," in Proc. 2017 21st International Conference on System Theory, Control and Computing, Sinaia, Romania, pp. 821-826, 2017, https://ieeexplore.ieee.org,
5. **R.-C. Roman**, R.-E. Precup, M.-B. Radac and E. M. Petriu, "Takagi-Sugeno fuzzy controller structures for twin rotor aerodynamic systems," in Proc. 2017 IEEE International Conference on Fuzzy Systems, Naples, Italy, pp. 1-6, 2017, https://ieeexplore.ieee.org,
6. **R.-C. Roman**, R.-E. Precup and M.-B. Radac, "Model-free fuzzy control of twin rotor aerodynamic systems," in Proc. 25th Mediterranean Control Conference on Control and Automation, Valletta, Malta, pp. 559-564, 2017, https://ieeexplore.ieee.org,
7. M.-B. Radac, R.-E. Precup and **R.-C. Roman**, "Multi input-multi output tank system data-driven model reference control," in Proc. 13th IEEE International Conference on Control & Automation, Ohrid, Macedonia, pp. 1078-1083, 2017, https://ieeexplore.ieee.org,

8. Publication List – team member 3 – Raul-Cristian Roman

8. M.-B. Radac, R.-E. Precup and **R.-C. Roman**, "Anti-lock braking systems data-driven control using Q-learning," in Proc. 26th IEEE International Symposium on Industrial Electronics, Edinburgh, Scotland, United Kingdom, pp. 418-423, 2017, https://ieeexplore.ieee.org,
9. E.-L. Hedrea, C.-A. Bojan-Dragos, R.-E. Precup, **R.-C. Roman**, E. M. Petriu and C. Hedrea, "Tensor product-based model transformation for position control of magnetic levitation systems," in Proc. 26th IEEE International Symposium on Industrial Electronics, Edinburgh, Scotland, United Kingdom, pp. 1141-1146, 2017, https://ieeexplore.ieee.org,
10. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, M.-B. Radac, A.-I. Szedlak-Stinean, E.-L. Hedrea and **R.-C. Roman**, "Evolving Takagi-Sugeno fuzzy modeling applications of incremental online identification algorithms," in Proc. XIII International SAUM Conference on Systems, Automatic Control and Measurements, Nis, Serbia, pp. 1-8, 2016, https://scholar.google.com,
11. **R.-C. Roman**, M.-B. Radac and R.-E. Precup, "Mixed MFC-VRFT approach for a multivariable aerodynamic system position control," in Proc. 2016 IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary, pp. 2615-2620, 2016, https://ieeexplore.ieee.org,
12. R.-E. Precup, M.-B. Radac, E. M. Petriu, **R.-C. Roman**, T.-A. Teban and A.-I. Szedlak-Stinean, "Evolving fuzzy models for the position control of twin rotor aerodynamic systems," in Proc. 2016 IEEE 14th International Conference on Industrial Informatics, Poitiers, France, pp. 237-242, 2016, https://ieeexplore.ieee.org,
13. M.-B. Radac, R.-E. Precup and **R.-C. Roman**, "Data-driven virtual reference feedback tuning and reinforcement Q-learning for model-free position control of an aerodynamic system," in Proc. 2016 24th Mediterranean Conference on Control and Automation (MED), Athens, Greece, pp. 1126-1132, 2016, https://ieeexplore.ieee.org,
14. **R.-C. Roman**, M.-B. Radac, R.-E. Precup and E. M. Petriu, "Virtual reference feedback tuning of MIMO data-driven model-free adaptive control algorithms," in Proc. 7th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, Caparica (Lisbon), Portugal, 2016, pp. 253-260, https://link.springer.com, https://link.springer.com,
15. **R.-C. Roman**, M.-B. Radac, R.-E. Precup and A.-I. Stinean, "Two data-driven control algorithms for a MIMO aerodynamic system with experimental validation," in Proc. 2015 19th International Conference on System Theory, Control and Computing, Cheile Gradistei, Romania, pp. 736-741, 2015, https://ieeexplore.ieee.org,
16. **R.-C. Roman**, M.-B. Radac, R.-E. Precup and E.M. Petriu, "Data-driven optimal model-free control of twin rotor aerodynamic systems," in Proc. 2015 IEEE International Conference on Industrial Technology, Seville, Spain, pp. 161-166, 2015, https://ieeexplore.ieee.org,
17. M.-B. Radac, **R.-C. Roman**, R.-E. Precup and E. M. Petriu, "Data-driven model-free control of twin rotor aerodynamic systems: algorithms and experiments," in Proc. 2014 IEEE International Symposium on Intelligent Control, Antibes, France, pp. 1889-1894, 2014, https://ieeexplore.ieee.org,
18. **R.-C. Roman**, M.-B. Radac and R.-E. Precup, "Data-driven model-free adaptive control of twin rotor aerodynamic systems," in Proc. IEEE 9th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, pp. 25-30, 2014, https://ieeexplore.ieee.org,
19. M.-B. Radac, **R.-C. Roman**, R.-E. Precup, E. M. Petriu, C.-A. Dragos and S. Preitl, "Data-based tuning of linear controllers for MIMO twin rotor systems," in Proc. 2013 IEEE EUROCON, Zagreb, Croatia, pp. 1915-1920, 2013, https://ieeexplore.ieee.org,

PUBLICATION LIST

LIST OF SCIENTIFIC PAPERS PUBLISHED DURING THE PERIOD 2019-2023:

I. Scientific papers published in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) Journals

- **2023**

1. R.-E. Precup, R.-C. David, R.-C. Roman, **A.-I. Szedlak-Stînean** and E. M. Petriu, "Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using Slime Mould Algorithm", **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023, **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (link).

- **2022**

2. **A.-I. Szedlak-Stînean**, R.-E. Precup, E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, "Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system", **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276 (link).

- **2021**

3. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, **A.-I. Szedlak-Stînean** and C.-A. Bojan-Dragoş, "Experiment-Based Approach to Teach Optimization Techniques", **IEEE Transactions on Education**, vol. 64, no. 2, pp. 88-94, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Q3 quartile, Article Influence Score (AIS) = 0.453 (link).
4. R.-E. Precup, R.-C. David, R.-C. Roman, E. M. Petriu and **A.-I. Szedlak-Stînean**, "Slime mould algorithm-based tuning of cost-effective fuzzy controllers for servo systems", **International Journal of Computational Intelligence Systems** (Atlantis Press), vol. 14, no. 1, pp. 1042-1052, 2021, impact factor (IF) = 1.736, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.9, Q4 quartile, Article Influence Score (AIS) = 0.349, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (link).

- **2020**

5. R.-E. Precup, S. Preitl, E. M. Petriu, R.-C. Roman, C.-A. Bojan-Dragoş, E.-L. Hedrea and **A.-I. Szedlak-Stînean**, "A center manifold theory-based approach to the stability analysis of state feedback Takagi-Sugeno-Kang fuzzy control systems", **Facta Universitatis, Series: Mechanical Engineering** (University of Nis), vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (link).
6. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M. L. Tomescu, R.-C. David, **A.-I. Szedlak-Stînean** and R.-C. Roman, "Grey Wolf Optimizer-Based Approaches to Path Planning and Fuzzy Logic-based Tracking Control for Mobile Robots", **International Journal of Computers Communications & Control** (Agora University Editing House - CCC Publications), vol. 15, no. 3, 3844, pp. 1-17, 2020, impact factor (IF) = 2.293, IF according to 2022 Journal Citation

Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302 (link).

II. Scientific papers published in the proceedings of scientific events (Proceedings) indexed in ISI Proceedings (Papers in Clarivate Analytics Web of Science)

- 2023

1. C.-A. Bojan-Dragos, R.-E. Precup, **A.-I. Szedlak-Stinean**, R.-C. Roman, E.-L. Hedrea, E. M Petriu, "Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuator", Proceedings of European Control Conference (ECC), pp. 1-6, 2023 (link).

- 2022

2. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş, **A.-I. Szedlak-Stînean** and F. C. Paulescu, "AVOA-Based Tuning of Low -Cost Fuzzy Controllers for Tower Crane Systems", 2022 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Padua, Italy, 2022, pp. 1-8, 2022 (link).
3. C.-A. Bojan-Dragoş, R.-E. Precup, E. M. Petriu, R.-C. Roman, E.-L. Hedrea and **A.-I. Szedlak-Stînean**, "GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators", Proceedings of 6th IFAC Conference on Intelligent Control and Automation Sciences (ICONS), Cluj-Napoca, Romania, 2022, IFAC-PapersOnLine, vol. 55, no. 15, pp. 39-44, 2022 (link).
4. **A.-I. Szedlak-Stînean**, R.-E. Precup and R.-C. Roman, "Linear and Nonlinear Observers Developed for Direct Current Electric Drive Systems", in: Intelligent Methods Systems and Applications in Computing, Communications and Control, 9th International Conference on Computers Communications and Control (ICCCC) 2022, Baile Felix, Romania, 2022, S. Dzitac, D. Dzitac, F. G. Filip, J. Kacprzyk, M. J. Manolescu and H. Oros (Eds.), Advances in Intelligent Systems and Computing, vol. 1435, Springer, Cham, pp. 107-119, 2023 (link).
5. **A.-I. Szedlak-Stînean**, R.-E. Precup, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and E.-L. Hedrea, "Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control", Proceedings of IEEE Symposium Series on Computational Intelligence (IEEE SSCI), Singapore, Singapore, pp. 700-707, 2022 (link).
6. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, C.-A. Bojan-Dragoş and **A.-I. Szedlak-Stînean**, "GWO-Based Performance Improvement of PD-Type Iterative Learning Fuzzy Control of Tower Crane Systems", 2022 IEEE 31st International Symposium on Industrial Electronics (ISIE), Anchorage, Alaska, USA, pp. 1041-1046, 2022 (link).
7. E.-L. Hedrea, R.-E. Precup, R.-C. Roman, C.-A. Bojan-Dragoş, **A.-I. Szedlak-Stînean** and C. Hedrea, "Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems", 2022 26th International Conference on System Theory, Control and Computing (ICSTCC), pp. 195-200, 2022 (link).

- 2021

8. C.-A. Bojan-Dragoş, R.-E. Precup, S. Preitl, R.-C. Roman, E.-L. Hedrea and **A.-I. Szedlak-Stînean**, "GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic Actuated Clutch Systems", Proceedings of 4th IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2021, Valenciennes, France, 2021, IFAC-PapersOnLine, vol. 54, no. 4, pp. 189-194, 2021 (link).

- 2020

9. R.-C. David, R.-E. Precup, S. Preitl, E. M. Petriu, **A.-I. Szedlak-Stînean** and R.-C. Roman, "Whale Optimization Algorithm-Based Tuning of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity", Proceedings of 28th Mediterranean Conference on Control and Automation MED 2020, Saint-Raphael, France, pp. 440-445, 2020 (link).

10. R.-C. Roman, R.-E. Precup, E. M. Petriu, R.-C. David, E.-L. Hedrea and **A.-I. Szedlak-Stînean**, "First-Order Active Disturbance Rejection-Virtual Reference Feedback Tuning Control of Tower Crane Systems", 2020 24th International Conference on System Theory, Control and Computing (ICSTCC), pp.137-142, 2020 (link).
11. R.-C. David, R.-E. Precup, S. Preitl, **A.-I. Szedlak-Stînean**, R.-C. Roman E. M. Petriu, "Design of Low-Cost Fuzzy Controllers with Reduced Parametric Sensitivity Based on Whale Optimization Algorithm", Proceedings of 2020 IEEE International Conference on Fuzzy Systems FUZZ-IEEE 2020, Glasgow, UK, pp. 1-6, 2020 (link).
12. R.-C. David, R.-E. Precup, S. Preitl, **A.-I. Szedlak-Stînean**, R.-C. Roman and Petriu E. M, "Fuzzy Control Systems with Reduced Parametric Sensitivity Design Based on Hybrid Grey Wolf Optimizer-Particle Swarm Optimization", 2020 24th International Conference on System Theory, Control and Computing (ICSTCC), pp. 66-71, 2020 (link).

- **2019**

13. C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-E. Precup, **A.-I. Szedlak-Stînean** and R.-C. Roman, "MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems", Proceedings of 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 1, pp. 810-817, 2019 (link).
14. **A.-I. Szedlak-Stînean**, R.-E. Precup and R.-C. David, "State Observers for Mechatronics Systems with Rigid and Flexible Drive Dynamics", Proceedings of 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019, Prague, Czech Republic, vol. 2, pp. 387-394, 2019 (link).
15. **A.-I. Szedlak-Stînean**, R.-E. Precup and R.-C. David, "Speed and Acceleration Control of BLDC Drives Using Different Types of Observers",Proceedings of 13th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2019), Timisoara, Romania, pp. 229-235, 2019 (link).

III. Scientific papers published in the proceedings of scientific events (Proceedings) indexed in BDI (IEEE Explore, Scopus, IFAC)

- **2023**

1. **A.-I. Szedlak-Stinean**, R.-E. Precup, R.-C. Roman, E. M Petriu, C.-A. Bojan-Dragos, E.-L. Hedrea, "Discrete-time Observers for a Mechatronics System with PID Controllers Tuned Using SMA", Proceedings of IEEE 32nd International Symposium on Industrial Electronics (ISIE), pp. 1-8, 2023 (link).
2. **A.-I. Szedlak-Stinean,** R.-E. Precup, R.-C. Roman, E. M Petriu and E.-L. Hedrea, "SMA-Based Tuning of PI Controller Using Takagi-Sugeno Fuzzy Observers for an Electromechanical System with Variable Parameters", Proceedings of 9th International Conference on Control, Decision and Information Technologies (CoDIT), pp. 1761-1768, 2023 (link).
3. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M Petriu, C.-A. Bojan-Dragos **A.-I. Szedlak-Stinean**, "Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems", Proceedings of 57th Annual Conference on Information Sciences and Systems (CISS), pp. 1-6, 2023 (link).

- **2022**

4. R.-E. Precup, Elena-Lorena Hedrea, Raul-Cristian Roman, Emil M Petriu, Claudia-Adina Bojan-Dragos, **A.-I. Szedlak-Stînean** and C. Hedrea, "Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems", Proceedings of 48th Annual Conference of the IEEE Industrial Electronics Society (IECON), pp. 1-6, 2022 (link).

IV. Scientific papers published in refereed journals / Contributions to books

- **2022**

1. C.-B. Gale-Cazan, C.-A. Bojan-Dragoş, R.-E. Precup (corresponding author), R.-C. Roman, E. M. Petriu and **A.-I. Szedlak-Stînean**, "GWO-based Modeling of an Unstable Transport System", Procedia Computer Science (Elsevier), vol. 214, pp. 195-202, 2022 (link).

- **2020**

2. R.-E. Precup, S. Preitl, E. M. Petriu, C.-A. Bojan-Dragoş, **A.-I. Szedlak-Stînean**, R.-C. Roman and E.-L. Hedrea, "Model-Based Fuzzy Control Results for Networked Control Systems", Reports in Mechanical Engineering (Regional Association for Security and Crisis Management, European Centre for Operational Research), vol. 1, no. 1, pp. 10-25, 2020 (link).

- **2019**

3. R.-C. Roman, R.-E. Precup, C.-A. Bojan-Dragoş and **A.-I. Szedlak-Stînean**, "Combined Model-Free Adaptive Control with Fuzzy Component by Virtual Reference Feedback Tuning for Tower Crane Systems", Procedia Computer Science (Elsevier), vol. 162, pp. 267-274, 2019 (link).

V. Book chapters

- **2021**

1. R.-E. Precup, E.-I. Voişan, R.-C. David, E.-L. Hedrea, E. M. Petriu, R.-C. Roman and **A.-I. Szedlak-Stînean**, "Nature-inspired optimization algorithms for path planning and fuzzy tracking control of mobile robots", in: Applied Optimization and Swarm Intelligence, E. Osaba and X.-S. Yang, Eds., Springer Tracts in Nature-Inspired Computing, Springer, Singapore, pp. 129-148, 2021 (link, link.springer.com).

LIST OF OTHER RELEVANT SCIENTIFIC PAPERS PUBLISHED DURING THE PERIOD 2011-2018:

I. Scientific papers published in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) Journals

- **2018**

1. R.-E. Precup, T.-A. Teban, A. Albu, **A.-I. Szedlak-Stînean** and C.-A. Bojan-Dragoş, "Experiments in Incremental Online Identification of Fuzzy Models of Finger Dynamics", **Romanian Journal of Information Science and Technology** (Romanian Academy, Section for Information Science and Technology), vol. 21, no. 4, pp. 358-376, 2018, impact factor (IF) = 0.661, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272 (link).

- **2017**

2. R.-E. Precup, St. Preitl, C.-A. Bojan-Dragoş, M.-B. Rădac, **A.-I. Szedlak-Stînean**, E.-L. Hedrea and R.-C. Roman, "Automotive Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models", **Facta Universitatis, Series: Mechanical Engineering** (University of Nis), vol. 15, no 2, pp. 231-244, 2017, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651 (link).

II. Scientific papers published in the proceedings of scientific events (Proceedings) indexed in ISI Proceedings (Papers in Clarivate Analytics Web of Science)

- **2018**

1. C.-A. Bojan-Dragos, **A.-I. Szedlak-Stinean**, R.-E. Precup, L. Gurgui, E.-L. Hedrea and I.-C Mituletu, "Control Solutions for Vertical Three-Tank Systems", Proceedings of 12th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2018), Timisoara, Romania, pp. 593-598, 2018 (link).
2. **A.-I. Szedlak-Stinean**, R.-E. Precup, C.-A. Bojan-Dragos, and I.-C Mituletu, "Feedback Control Solutions for an Electromechanical Process with Rigid Body Dynamics", Proceedings of 12th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2018), Timisoara, Romania, pp. 599-605, 2018 (link).
3. **A.-I. Szedlak-Stînean,** C.-A. Bojan-Dragoş, R.-E. Precup and M.-B. Rădac, "Gain-Scheduling Control Solutions for a Strip Winding System with Variable Moment of Inertia", Proceedings of 3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018, Ghent, Belgium, 2018, IFAC-PapersOnLine, vol. 51, no. 4, pp. 370-375, 2018 (link).

- **2017**

4. **A.-I. Szedlak-Stînean,** R.-E. Precup and E.M. Petriu, "Fuzzy and 2-DOF Controllers for Processes with a Discontinuously Variable Parameter", Proceedings of 14th International Conference on Informatics in Control, Automation and Robotics (*ICINCO 2017*), Madrid, Spain, vol. 2, pp. 431-438, 2017 (link).

- **2016**

5. R.-C. Roman, M.-B. Rădac, R.-E. Precup and **A.-I. Stînean,** "Two data-driven control algorithms for a MIMO aerodynamic system with experimental validation", Proceedings of 19th International Conference on System Theory, Control and Computing (ICSTCC 2015), Sinaia, Romania, pp. 736-741, 2015 (link).
6. **A.-I. Szedlak-Stînean**, St. Preitl, R.-E. Precup and C.-A. Bojan-Dragoş, "An adaptable feedback control solution for a drive system with variable parameters", Proceedings of 11th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2016), Timisoara, Romania, pp. 209-216, 2016 (link).
7. C.-A. Bojan-Dragoş, St. Preitl, R.-E. Precup, S. Hergane, E.G. Hughiet and **A.-I. Szedlak-Stînean**, "State feedback and proportional-integral-derivative control of a magnetic levitation system", Proceedings of 14th IEEE International Symposium on Intelligent Systems and Informatics (SISY 2016), Subotica, Serbia, pp. 111-116, 2016 (link).
8. R.-E. Precup, R.C. David, E.M. Petriu, and **A.-I. Szedlak-Stînean** and C.-A. Bojan-Dragoş, "Grey wolf optimizer-based approach to the tuning of PI-fuzzy controllers with a reduced process parametric sensitivity", Proceedings of 4th IFAC Conference on Intelligent Control and Automation Sciences (ICONS 2016), Reims, France, vol. 49, no. 5, pp. 55-60, 2016 (link).
9. C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl, **A.-I. Szedlak-Stînean**, "Particle swarm optimization of fuzzy models for electromagnetic actuated clutch systems", Proceedings of 18th Mediterranean Electrotechnical Conference: Intelligent and Efficient Technologies and Services for the Citizen (MELECON 2016), Limassol, Cipru, pp.1-6, 2016 (link).
10. R.-E. Precup, M.-B. Rădac, E.M. Petriu, R.-C. Roman, T.-A. Teban and **A.-I. Szedlak-Stînean**, "Evolving Fuzzy Models for the Position Control of Twin Rotor Aerodynamic Systems", Proceedings of 2016 IEEE 14th International Conference on Industrial Informatics (INDIN 2016), Poitiers, France, pp. 237-242, 2016 (link).
11. **A.-I. Szedlak-Stinean**, R.-E. Precup, St. Preitl, E. M. Petriu and C.-A. Bojan-Dragos, "State Feedback Control Solutions for a Mechatronics System with Variable Moment of Inertia", Proceedings of 13th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2016), Lisbon, Portugal, vol. 2, pp. 458-465, 2016 (link).

12. C.-A. Bojan-Dragos, R.-E. Precup, St. Preitl, S. Hergane, E.G. Hughiet and **A.-I. Szedlak-Stînean**, "Proportional-Integral Gain-Scheduling Control of a Magnetic Levitation System", Proceedings of 20th International Conference on System Theory, Control and Computing (ICSTCC 2016), Sinaia, Romania, pp. 1-6, 2016 (link).

- **2015**

13. C.-A. Bojan-Dragoş, **A.-I. Stînean,** R.-E. Precup, St. Preitl and E.M. Petriu, "Model predictive control solution for magnetic levitation systems",Proceedings of 20th International Conference on Methods and Models in Automation and Robotics (MMAR 2015), Miedzyzdroje, Polonia, pp. 139- 144, 2015 (link).
14. **A.-I. Stînean,** St. Preitl, R.-E. Precup and C.-A. Bojan-Dragoş, "Model predictive control of a mechatronic system with variable inputs", Proceedings of 2015 IEEE 10th Jubilee International Symposium on Applied Computational Intelligence and Informatics (*SACI 2015*), Timisoara, Romania, pp. 271-276, 2015 (link).
15. S. Sgaverdea, C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl and **A.-I. Stînean,** "Model predictive controllers for magnetic levitation systems", Proceedings of 2015 IEEE 10th Jubilee International Symposium on Applied Computational Intelligence and Informatics (*SACI 2015*), Timisoara, Romania, pp. 171-176, 2015 (link).

- **2014**

16. **A.-I. Stînean,** St. Preitl, R.-E. Precup, M. Crainic,"Study on experimental plant of positioning control solutions for processes with variable moment of inertia", Proceedings of 9th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2014), Timisoara, Romania, pp. 37- 42, 2014 (link).
17. R.-E. Precup, R.-C. David, **A.-I. Stînean,** M.-B. Rădac and E.M. Petriu, "Adaptive hybrid Particle Swarm Optimization-Gravitational Search Algorithm for fuzzy controller tuning", Proceedings of 2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2014), Alberobello, Italia, pp. 14-20, 2014 (link).
18. R.-E. Precup, D.C. Bota, C.-A. Dragoş, **A.-I. Stînean**, St. Preitl and M.-B. Rădac, "Frequency Domain Design of Fractional Order PI Controllers for Lambda Control", Proceedings of 18th International Conference on System Theory, Control and Computing (ICSTCC 2014), Sinaia, Romania, pp. 652-657, 2014 (link).

- **2013**

19. M.-B. Rădac, R.-A. Achimescu, R.-E. Precup, St. Preitl, C.-A. Dragoş and **A.-I. Stînean**, "Design and Experiments for Model-Free PI Control of DC Drives", Proceedings of 8th IEEE International Symposium on Applied Computational Intelligence and Informatics (*SACI 2013*), Timisoara, Romania, pp. 103-108, 2013 (link).
20. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, E.M. Petriu and M.-B. Rădac, "2-DOF control solutions for an electric drive system under continuously variable conditions", Proceedings of 8th IEEE International Symposium on Applied Computational Intelligence and Informatics (*SACI 2013*), Timisoara, Romania, pp. 115-120, 2013 (link).
21. R.-E. Precup, M.-B. Rădac, E. M. Petriu, C.-A. Dragoş, St. Preitl and **A.-I. Stînean**, "Data-Driven Performance Improvement of Control Systems for Three-Tank Systems", Proceedings of 2013 6th International Conference on Human System Interactions (*HSI 2013*), Gdansk, Sopot, Poland, pp. 306-311, 2013 (link).
22. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, "Modeling and Control of An Electric Drive System with Continuously Variable Reference, Moment of Inertia and Load Disturbance", Proceedings of 9th Asian Control Conference (*ASCC 2013*), Istanbul, Turkey, paper 585, 6 pp., 2013 (link).
23. C.-A. Dragoş, R.-E. Precup, R.-C. David, St. Preitl, **A.-I. Stînean** and E. M. Petriu, "Simulated annealing-based optimization of fuzzy models for magnetic levitation systems", Proceedings of

2013 Joint IFSA World Congress and NAFIPS Annual Meeting (*IFSA/NAFIPS 2013*), Edmonton, AB, Canada, pp. 286-291, 2013 (link).

24. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, E. M. Petriu and M.-B. Rădac, "Solutions to Avoid the Worst Case Scenario in Driving Systems Working Under Continuously Variable Conditions", Proceedings of IEEE 9th International Conference on Computational Cybernetics (*ICCC 2013*), Tihany, Hungary, pp. 339-344, 2013 (link).
25. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E. M. Petriu, "Low-Cost Neuro-Fuzzy Control Solution for Servo Systems with Variable Parameters", Proceedings of 2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (*CIVEMSA 2013*), Milano, Italy, pp. 156-161, 2013 (link).
26. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and M. Crainic, "Adaptable fuzzy control solutions for driving systems working under continuously variable conditions", Proceedings of 14th IEEE International Symposium on Computational Intelligence and Informatics (*CINTI 2013*), Budapest, Hungary, pp. 231-237, 2013 (link).

- 2012

27. **A.-I. Stînean,** St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "2-DOF PI(D) Takagi-Sugeno and Sliding Mode Controllers for BLDC Drives", Proceedings of 15th International Power Electronics and Motion Control Conference (*EPE-PEMC 2012*), ECCE Europe, Novi Sad, Serbia, pp. DS2a.7-1-DS2a.7-6, 2012 (link).
28. C.-A. Dragoş, St. Preitl, R.-E. Precup, E.M.Petriu and **A.-I. Stînean**, "Adaptive Control Solutions for the Position Control of Electromagnetic Actuated Clutch Systems", Proceedings of 2012 IEEE Intelligent Vehicles Symposium (*IV 2012*), Alcala de Henares, Spain, pp. 81-86, 2012 (link).
29. B.-S.Cerveneak, M.-B. Rădac, R.-E. Precup, **A.-I. Stînean**, E.M.Petriu, St. Preitl and C.-A. Dragoş, "Novel Iterative Formulation of Correlation-Based Tuning", Proceedings of IEEE International Conference on Industrial Technology (*ICIT 2012*), Athens, Greece, pp. 886-891, 2012 (link).
30. St. Preitl, R.-E. Precup, **A.-I. Stînean**, C.-A. Dragoş and M.-B. Rădac, "Control Structures for Variable Inertia Output Coupled Drives", Proceedings of 4th IEEE International Symposium on Logistics and Industrial Informatics (*LINDI 2012*), Smolenice, Slovakia, pp. 179-184, 2012 (link).

- 2011

31. C.-A. Dragoş, St. Preitl, R.-E. Precup, E.M.Petriu and **A.-I. Stînean**, "A Comparative Case Study of Position Control Solutions for a Mechatronics Application", Proceedings of 2011 IEEE/ASME International Conference on Advanced Mechatronics (*AIM 2011*), Budapest, Hungary, pp. 814-819, 2011 (link).

III. Scientific papers published in the proceedings of scientific events (Proceedings) indexed in BDI (IEEE Explore, Scopus, IFAC)

- 2018

1. C.-A. Bojan-Dragoş, M.-B. Rădac, R.-E. Precup, E.-L. Hedrea, **A.-I. Szedlak-Stînean** and St. Preitl, "Gain-Scheduling Position Control Approaches for Electromagnetic Actuated Clutch Systems", Proceedings of 15th International Conference on Informatics in Control, Automation and Robotics (*ICINCO 2018*), Porto, Portugal, vol. 2, pp. 411-418, 2018 (link).

- 2015

2. **A.-I. Stînean,** C.-A. Bojan-Dragoş, R.-E. Precup, St. Preitl and E.M. Petriu,"Takagi-Sugeno PD+I fuzzy control of processes with variable moment of inertia", Proceedings of 2015

International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2015), Madrid, Spania, 2015 (link).

- 2012

3. St. Preitl, **A.-I. Stînean**, R.-E. Precup, Zs. Preitl, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "Controller Design Methods for Driving Systems Based on Extensions of Symmetrical Optimum Method with DC and BLDC Motor Applications", Proceedings of 2nd IFAC Conference on Advances in PID Control PID'12, Brescia, Italy, Advances in PID Control, vol. 2, R. Vilanova and A. Visioli, Eds., pp. 264-269, 2012 (link).
4. R.-E. Precup, St. Preitl, **A.-I. Stînean**, C.-A. Dragoş and M.-B. Rădac, "Hybrid fuzzy controllers for non-minimum phase system", Proceedings of 7th IEEE International Symposium on Applied Computational Intelligence and Informatics (*SACI 2012*), Timisoara, Romania, pp. 23-28, 2012 (link).
5. **A.-I. Stînean,** St. Preitl, R.-E. Precup, E. M. Petriu, C.-A. Dragoş and M.-B. Rădac, "Takagi-Sugeno Fuzzy Control Solutions for BLDC Drives", Proceedings of 2012 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (*SPEEDAM 2012*), Sorrento, Italy, pp. 724-729, 2012 (link).
6. M.-B. Rădac, B.-A. Bigher, R.-E. Precup, E. M. Petriu, C.-A. Dragoş, St. Preitl and **A.-I. Stînean**, "Data-based Tuning of PI Controllers for Vertical Three-Tank Systems", Proceedings of 9th International Conference on Informatics in Control, Automation and Robotics (*ICINCO 2012*), Rome, Italy, vol. 1, pp. 31-39, 2012 (link).
7. **A.-I. Stînean,** St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "Hybrid Fuzzy Control Solutions for Brushless DC Drives with Variable Moment of Inertia", Proceedings of IEEE 10th Jubilee International Symposium on Intelligent Systems and Informatics (*SISY 2012*), Subotica, Serbia, pp. 317-322, 2012 (link).
8. **A.-I. Stînean,** St. Preitl, R.-E. Precup, C.-A. Dragoş, E.M. Petriu and M.-B. Rădac, "Choosing a Proper Control Structure for a Mechatronic System with Variable Parameters", Proceedings of 2nd IFAC Workshop on Convergence of Information Technologies and Control Methods with Power System, Cluj-Napoca (*ICPS'13*), Romania, Convergence of Information Technologies and Control Methods with Power Systems, vol. 2, pp. 26-31, 2012 (link).

- 2011

9. St. Preitl, R.-E. Precup, **A.-I. Stînean**, C.-A. Dragoş and M.-B. Rădac, "Extensions in Symmetrical Optimum design method. Advantages, applications and perspectives", Proceedings of 6th IEEE International Symposium on Applied Computational Intelligence and Informatics (*SACI 2011*), Timisoara, Romania, pp. 17-22, 2011 (link).
10. **A.-I. Stînean**, St. Preitl, R.-E. Precup, Cl. Pozna, C.-A. Dragoş and M.-B. Rădac, "Speed and position control of BLDC servo systems with low inertia", Proceedings of 2nd International Conference on Cognitive Infocommunications (*CogInfoCom 2011*), Budapest, Hungary, 10 pp., 2011 (link).
11. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "2-DOF Control Solutions for BLDC-m Drives", Proceedings of IEEE 9th International Symposium on Intelligent Systems and Informatics (*SISY 2011*), Subotica, Serbia, pp. 29-34, 2011 (link).
12. C.-A. Dragoş, St. Preitl, R.-E. Precup, E.M. Petriu, **A.-I. Stînean**, "Alternative control solutions for vehicles with continuously variable transmission. A case study", Proceedings of 15th International Conference on System Theory and Computing *(ICSTCC 2011)*, Sinaia, Romania, pp. 1-6, 2011 (link).
13. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş, M.-B. Rădac and E.M. Petriu, "State feedback fuzzy control solution for BLDC drives", Proceedings of 12th IEEE International Symposium on Computational Intelligence and Informatics (*CINTI 2011*), Budapest, Hungary, pp. 85-90, 2011 (link).

IV. Scientific papers published in refereed journals / Contributions to books

- **2015**

1. R.-E. Precup, C.-A. Bojan-Dragoş, E. M. Petriu, M.-B. Rădac and **A.-I. Stînean**, "Results on Optimal Tuning of Fuzzy Models of Magnetic Levitation Systems", International Journal of Artificial Intelligence (CESER Publications), vol. 13, no. 2, pp. 57-72, 2015 (pdf, link).

- **2012**

2. C.-A. Dragoş, R.-E. Precup, St. Preitl, E. M. Petriu and **A.-I. Stînean**, "Takagi-Sugeno fuzzy control solutions for mechatronic applications", International Journal of Artificial Intelligence (*CESER Publications*), vol. 8, no. S12, pp. 45-65, 2012 (pdf, link).

V. Book chapters

- **2018**

1. R.-C. David, R.-E. Precup, St. Preitl, **A.-I. Szedlak-Stînean** and L.-O. Fedorovici, "Application of grey wolf optimization in fuzzy controller tuning for servo systems", Chapter 13 in Swarm Intelligence - Volume 2: Innovation, new algorithms and methods, Y. Tan, Ed. (IET Digital Library), pp. 363-387, 2018 (link, digital-library.theiet.org, www2.theiet.org).

- **2016**

2. St. Preitl, R.-E. Precup, Zs. Preitl, **A.-I. Stînean**, C.-A. Dragoş and M.-B. Rădac, "Pragmatic Design Methods Using Adaptive Controller Structures for Mechatronic Applications with Variable Parameters and Working Conditions", in: Complex Systems, G. M. Dimirovski, Ed., Studies in Systems, Decision and Control, vol. 55 (Springer International Publishing), pp. 619-647, 2016 (link, mlink.springer.com).

- **2014**

3. St. Preitl, R.-E. Precup, Zs. Preitl, **A.-I. Stînean**, M.-B. Rădac and C.-A. Dragoş, "Control Algorithms for Plants Operating Under Variable Conditions, Applications", in: Advances in Soft Computing, Intelligent Robotics and Control, J. Fodor and R. Fuller, Eds., Topics in Intelligent Engineering and Informatics, vol. 8 (Springer-Verlag), pp. 3-39, 2014 (link, link.springer.com).

- **2013**

4. **A.-I. Stînean**, St. Preitl, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "Classical and Fuzzy Approaches to 2-DOF Control Solutions for BLDC-m Drives", in: Intelligent Systems: Models and Applications, E. Pap, Ed., Topics in Intelligent Engineering and Informatics, vol. 3 (Springer-Verlag), pp. 175-193, 2013 (link, link.springer.com).

- **2012**

5. St. Preitl, **A.-I. Stînean**, R.-E. Precup, C.-A. Dragoş and M.-B. Rădac, "2-DOF and Fuzzy Control Extensions of Symmetrical Optimum Design Method: Applications and Perspectives", in: Applied Computational Intelligence in Engineering and Information Technology, R.-E. Precup, Sz. Kovács, St. Preitl and E. M. Petriu, Eds., Topics in Intelligent Engineering and Informatics, vol. 1 (Springer-Verlag), pp. 19-37, 2012 (link, link.springer.com).

PUBLICATION LIST

PUBLICATION OF THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023:

I. Papers in Clarivate Analytics Web of Science Journals

❖ 2022

1. R.-E. Precup, R.-C. Roman, **E.-L. Hedrea**, C.-A. Bojan-Dragos, M.-M. Damian and M.-L. Nedelcea, "Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems," International Journal of Computers Communication and Control, vol. 17, no. 1, pp. 1-18, 2022, **impact factor (IF) = 2.7, IF = 2.7 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.302, Q4 quartile based on AIS 2022, Q3 quartile based on IF 2022,** (link).
2. R.-E. Precup, S. Preitl, C.-A. Bojan Dragos, E.-L. Hedrea, R.-C. Roman and E.M. Petriu, "A Low Cost Approach to data-driven fuzzy control of servo systems," Facta Universitatis-Series Mechanical Engineering, vol. 20, no. 1, pp. 21-36, 2022, **impact factor (IF)= 3.324, IF = 7.9 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.651, Q2 quartile based on AIS 2022, Q1 quartile based on IF 2022,** (link).
3. A.-I. Szedlak-Stinean, R.-E. Precup, E.M. Petriu, R.-C. Roman, **E.-L. Hedrea** and C.-A. Bojan-Dragos, "Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system," Expert Systems With Applications, vol. 208, pp. 1-15, 2022, **impact factor (IF) = 8.5, IF = 8.5 according to 2022 Journal Citation Reports (JCR) published by Clarivate Analytics in 2023, Article Influence Score (AIS) = 1.276, Q1 quartile based on AIS 2022, Q1 quartile based on IF 2022,** (link).

❖ 2021

4. R.-E. Precup, **E.-L. Hedrea**, R.-C. Roman, E.M. Petriu, A.I. Szedlak-Stinean and C.-A. Bojan-Dragos, "Experiment-Based Approach to Teach Optimization Techniques," IEEE Transactions on Education, vol. 64, no. 2, pp. 88-94, 2021, **impact factor (IF) = 2.116, IF=2.6 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.453, Q3 quartile based on AIS 2022, Q3 quartile based on IF 2022,** (link).
5. **E.-L. Hedrea**, R.-E. Precup, E.M. Petriu, C.-A. Bojan-Dragos and C. Hedrea, "Tensor product-based model transformation approach to cart position modeling and control in pendulum-cart systems," Asian Journal of Control, vol. 23, no. 3, pp. 1238-1248, 2021, **impact factor (IF) = 3.452, IF= 2.4 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.390, Q3 quartile based on AIS 2022, Q3 quartile based on IF 2022,** (link).
6. **E.-L. Hedrea**, R.-E. Precup, R.-C. Roman and E.M. Petriu, "Tensor product-based model transformation approach to tower crane systems modeling," Asian Journal of Control, vol. 23, no. 3, pp. 1313-1323, 2021, **impact factor (IF) = 3.452, IF= 2.4 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.390, Q3 quartile based on AIS 2022, Q3 quartile based on IF 2022,** (link). **This paper received the titles of "Top Cited Article" in 2020-2021 and 2021-2022 according to Wiley** (link).
7. R.-E. Precup, C.-A. Bojan-Dragos, **E.-L. Hedrea**, R.-C. Roman and E.M. Petriu, "Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators," Romanian Journal of Information Science and Technology, vol. 24, no. 4, 2021, pp. 353-365, **impact factor (IF) = 0.852, IF = 3.5 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.272, Q4 quartile based on AIS 2022, Q2 quartile based on IF 2022,** (link).
8. R.-E. Precup, R.-C. Roman, **E.-L. Hedrea**, E.M. Petriu and C.-A. Bojan-Dragos, "Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation," International Journal of Computers Communication and Control, vol. 16, no. 1, pp. 1-17, 2021, **impact factor (IF) = 2.635, IF= 2.7 according to 2022 Journal Citation Reports (JCR) released by Clarivate**

Analytics in 2023, Article Influence Score (AIS) = 0.302, Q4 quartile,based on AIS 2022, Q3 quartile,based on IF 2022, (link).

❖ **2020**

9. R.-E. Precup, S. Preitl, E.M. Petriu, R.-C. Roman, C.-A. Bojan-Dragos, **E.-L. Hedrea** and A.-I. Szedlak-Stinean, "A center manifold theory-based approach to the stability analysis of the state feedback Takagi-Sugeno-Kang Fuzzy control systems," Facta Universitatis-Series Mechanical Engineering, vol. 18, no. 2, pp. 189-204, 2020, **impact factor (IF)= 3.324, IF = 7.9 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.651, Q2 quartile based on AIS 2022, Q1 quartile based on IF 2022,** (link).

❖ **2019**

10. **E.-L. Hedrea**, R.-E. Precup and C.-A. Bojan-Dragos, "Results on Tensor Product-based Model Transformation of Magnetic Levitation Systems," Acta Polytechnica Hungarica, vol. 16, no. 9, pp. 93-111, 2019, **impact factor (IF) = 1.219, IF=1.7 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.170, Q3 quartile based on IF 2022, Q4 quartile based on AIS 2022,** (link).

II. Books

1. C.-A. Bojan-Dragos, R.-E. Precup , **E.-L. Hedrea**, Sisteme de reglare fuzzy cu aplicatii mecatronice, Ed. Politehnica, Automatica Collection, ISBN 978-606-35-0472-3, 2022.

III. Book Chapters

1. R.-E. Precup, E.-I. Voişan, R.-C. David, **E.-L. Hedrea**, E. M. Petriu, R.-C. Roman and A.-I. Szedlak-Stînean, Nature-inspired optimization algorithms for path planning and fuzzy tracking control of mobile robots, in: Applied Optimization and Swarm Intelligence, E. Osaba and X.-S. Yang, Eds., Springer Tracts in Nature-Inspired Computing, Springer, Singapore, pp. 129-148, 2021 (link).

IV. Papers in Refreed Journals

1. R. E. Precup, S. Preitl, E.M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, R.-C. Roman and **E.-L. Hedrea**, "Model-Based Fuzzy Control Results for Networked Control Systems," Reports in Mechanical Engineering (Regional Association for Security and Crisis Management, European Centre for Operational Research), vol. 1, no. 1, pp. 10-25, 2020, (link).

V. Published Contributions in Refreed Academic Conferences

❖ **2023**

1. C.-A. Bojan-Dragos, R.-E. Precup, A.-I. Szedlak-Stinean, R.-C. Roman, **E.-L. Hedrea** and E.M. Petriu, "Sliding Mode and Super-Twisting Sliding Mode Control Structures for SMA Actuators, " in Proc. of the European Control Conference (ECC), Bucharest Romania, 2023, **indexed in Clarivate Analytics Web of Science**, (link).
2. R.-C. Roman, R.-E. Precup, E.M. Petriu, M. Muntyan and **E.-L. Hedrea**, "Fictitious Reference Iterative Tuning of Intelligent Proportional-Integral Controllers for Tower Crane Systems, " in Proc of the 31st Mediterranean Conference on Control and Automation (MED), Limassol, Cyprus, 2023, **indexed in Clarivate Analytics Web of Science**, (link).
3. R.-E. Precup, R.-C. Roman, **E.-L. Hedrea**, E.M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, "Slime Mold Algorithm-Based Performance Improvement of PD-Type Indirect Iterative Learning Fuzzy Control of Tower Crane Systems," in Proc. of the 57th Annual Conference on Information Sciences and Systems (CISS), Baltimore, Maryland, 2023, pp. 1-6, **indexed in IEEE Xplore**, (link).

8. Publication List – team member 5 – Elena-Lorena HEDREA

4. **E.-L. Hedrea**, R.-E. Precup, R.-C. Roman and C. Hedrea, "Tensor Product-based and State Feedback Control Solutions for Cart Position Control of Pendulum-Cart Systems," in Proc. of the 27th International Conference on System Theory, Control and Computing (ICSTCC), Timisoara, Romania, 2023, **indexed in IEEE Xplore**, (link).
5. A.-I. Szedlak-Stinean, R.-E. Precup, R.-C. Roman, E.M. Petriu and **E.-L. Hedrea**, "SMA-Based Tuning of PI Controller Using Takagi-Sugeno Fuzzy Observers for an Electromechanical System with Variable Parameters," in Proc. of the 9th International Conference on Control, Decision and Information Technologies (CoDIT), Rome, Italy, 2023, **indexed in IEEE Xplore**, (link).

❖ **2022**

6. **E.-L. Hedrea**, R.-E. Precup, R.-C. Roman, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean and C. Hedrea, "Tensor Product-based and State Feedback Structures for Level Control of Vertical Three Tank Systems," in Proc. of the 26th International Conference on System Theory Control and Computing (ICSTCC), Sinaia, Romania, 2022, pp. 195-200, **indexed in Clarivate Analytics Web of Science**, (link).
7. R.-E. Precup, **E.-L. Hedrea**, R.-C. Roman, E.M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean and F.-C. Paulescu, "AVOA-Based Tuning of Low -Cost Fuzzy Controllers for Tower Crane Systems," in Proc. of the IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Padua, Italy, 2022, **indexed in Clarivate Analytics Web of Science**, (link).
8. R.-C. Roman, R.-E. Precup, **E.-L. Hedrea**, S. Preitl, I.-A. Zamfirache, C.-A. Bojan-Dragos and E.M. Petriu, "Iterative Feedback Tuning Algorithm for Tower Crane Systems," in Proc. of the 8th International Conference on Information Technology and Quantitative Management (2020&2021): Developing Global Digital Economy after COVID-19, Chengdu, China, 2022, pp. 157-165, **indexed in Clarivate Analytics Web of Science**, (link).
9. C.-A. Bojan-Dragos, R.-E. Precup, E.M. Petriu, R.-C. Roman, **E.-L. Hedrea** and A.-I. Szedlak-Stinean, "GWO-Based Optimal Tuning of Controllers for Shape Memory Alloy Wire Actuators," in Proc. of the 6th IFAC Conference on Intelligent Control and Automation Sciences (ICONS), Cluj-Napoca, Romania, 2022, pp. 39-44, **indexed in Clarivate Analytics Web of Science**, (link).
10. R.-C. Roman, R.-E. Precup, S. Preitl, A.-I. Szedlak-Stinean, C.-A. Bojan-Dragos, **E.-L. Hedrea** and E.M. Petriu, "PI Controller Tuning via Data-Driven Algorithms for Shape Memory Alloy Systems," in Proc. of the 1st IFAC Workshop on Control of Complex Systems (COSY), Bologna, Italy, 2022, pp. 181-186, **indexed in Clarivate Analytics Web of Science**, (link).
11. A.-I. Szedlak-Stinean, R.-E. Precup, R.-C. Roman, E.M. Petriu, C.-A. Bojan-Dragos and **E.-L. Hedrea**, "Discrete-time Linear and Nonlinear Observers for an Electromechanical Plant with State Feedback Control, " in Proc. of the IEEE Symposium Series on Computational Intelligence (SSCI), Singapore, 2022, pp. 700-707, **indexed in Clarivate Analytics Web of Science**, (link).
12. R.-E. Precup, **E.-L. Hedrea**, R.-C. Roman, E.M. Petriu, C.-A. Bojan-Dragos and A.-I. Szedlak-Stinean, "GWO-Based Performance Improvement of PD-Type Iterative Learning Fuzzy Control of Tower Crane Systems, " in Proc. of the 31st IEEE International Symposium on Industrial Electronics (ISIE), Anchorage, AK, 2022, pp. 1041-1046, **indexed in Clarivate Analytics Web of Science**, (link).
13. R.-E. Precup, **E.-L. Hedrea**, R.-C. Roman, E.M. Petriu, C.-A. Bojan-Dragos, A.-I. Szedlak-Stinean, C. Hedrea, "Evolving Fuzzy and Tensor Product-based Models for Tower Crane Systems," in Proc. of the Industrial Electronics Conference (IECON), Brussels, Belgium, 2022, **indexed in IEEE Xplore**, (link).

❖ **2021**

14. **E.-L. Hedrea**, R.-E. Precup, R.-C. Roman, E.M. Petriu, C.-A. Bojan-Dragos and C. Hedrea, "Tensor Product-Based Model Transformation Technique Applied to Servo Systems Modeling," in Proc. of the 30th IEEE International Symposium on Industrial Electronics (ISIE), Kyoto, Japan, 2021, **indexed in Clarivate Analytics Web of Science**, (link).
15. C.-A. Bojan-Dragos, R.-E. Precup, S. Preitl, R.-C. Roman, **E.-L. Hedrea** and A.-I. Szedlak-Stinean, "GWO-Based Optimal Tuning of Type-1 and Type-2 Fuzzy Controllers for Electromagnetic

Actuated Clutch Systems," in Proc. of the 4th IFAC Conference on Embedded Systems, Computational Intelligence and Telemetics in Control (CESCIT), Valenciennes, France, 2021, pp. 189-194, **indexed in Clarivate Analytics Web of Science**, (link).

❖ **2020**

16. R.-C. Roman, R.-E. Precup, E.M. Petriu, R.-C. David, **E.-L. Hedrea** and A.-I. Szedlak-Stinean, "First-Order Active Disturbance Rejection-Virtual Reference Feedback Tuning Control of Tower Crane Systems," in Proc. of the 24th International Conference on System Theory Control and Computing (ICSTCC), Electr. Network, 2020, pp. 137-142, **indexed in Clarivate Analytics Web of Science**, (link).

❖ **2019**

17. **E.-L. Hedrea**, R.-E. Precup, C.-A. Bojan-Dragos and C. Hedrea, "TP-Based Fuzzy Control Solutions for Magnetic Levitation Systems," in Proc. of the 23rd International Conference on System Theory Control and Computing (ICSTCC), Sinaia, Romania, 2019, pp. 809-814, **indexed in Clarivate Analytics Web of Science**, (link).
18. **E.-L. Hedrea**, R.-E. Precup, C.-A. Bojan-Dragos and O. Tanasoiu, "Tensor Product-Based Model Transformation Technique Applied to Modeling Magnetic Levitation Systems," in Proc. of the 23rd International Conference on Intelligent Engineering Systems (INES), Godollo, Hungary, 2019, pp. 179-184, **indexed in Clarivate Analytics Web of Science**, (link).
19. C.-A. Bojan-Dragos, **E.-L. Hedrea**, R.-E. Precup, A.-I. Szedlak-Stinean and R.-C. Roman, "MIMO Fuzzy Control Solutions for the Level Control of Vertical Two Tank Systems," in Proc. of the 16th International Conference on Informatics in Control, Automation and Robotics (ICINCO), Prague, Czech Republic, 2019, pp. 810-817, **indexed in Clarivate Analytics Web of Science**, (link).
20. R.-C. Roman, R.-E. Precup, E.M. Petriu, **E.-L. Hedrea**, C.-A. Bojan-Dragos and M.-B. Radac, "Model-Free Adaptive Control With Fuzzy Component for Tower Crane Systems," in Proc. of the IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, 2019, pp. 1384-1389, **indexed in Clarivate Analytics Web of Science**, (link).
21. **E.-L. Hedrea**, R.-E. Precup, C.-A. Bojan-Dragos, E.M. Petriu and R-C. Roman, "Tensor Product-Based Model Transformation and Sliding Mode Control of Electromagnetic Actuated Clutch System," in Proc. of the IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, 2019, pp. 1402-1407, **indexed in Clarivate Analytics Web of Science**, (link).
22. **E.-L. Hedrea**, R.-E. Precup, C.-A. Bojan-Dragos, C. Hedrea, D. Ples and D. Popovici, "Cascade Control Solutions for Level Control of Vertical Three Tank Systems," in Proc. of the 13th International Symposium on Applied Computational Intelligence and Informatics (SACI), Timisoara, Roamania, 2019, pp. 353-358, **indexed in Clarivate Analytics Web of Science**, (link).

PUBLICATION OF OTHER RELEVANT RESULTS OF THE RESEARCH ACTIVITY IN 2016-2018:

I. Papers in Clarivate Analytics Web of Science Journals

❖ **2018**

2. C.-A. Bojan Dragos, M.-B. Radac, R.-E. Precup, **E.-L. Hedrea** and O. Tanasoiu, "Gain-Scheduling Control Solutions for Magnetic Levitation Systems," Acta Polytechnica Hungarica, vol. 15, no. 5, pp. 89-108, 2018, **impact factor (IF) = 1.219, IF=1.7 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article Influence Score (AIS) = 0.170, Q3 quartile based on IF 2022, Q4 quartile based on AIS 2022**, (link).

❖ **2017**

3. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragos, M.-B. Radac, A.-I. Szedlak-Stinean, **E.-L. Hedrea** and R.-C. Roman, "Automotive Applications of Evolving Takagi-Sugeno-Kang Fuzzy Models," Facta Universitatis-Series Mechanical Engineering, vol. 15, no. 2, pp. 231-244, 2017, **IF = 7.9 according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023, Article**

Influence Score (AIS) = 0.651, Q2 quartile based on AIS 2022, Q1 quartile based on IF 2022, (link).

II. Published Contributions in Refreed Academic Conferences

❖ 2018

2. **E.-L. Hedrea**, C.-A. Bojan Dragos, R.-E. Precup and E.-M. Petriu, "Comparative Study of Control Structures for Maglev Systems," in Proc. of the IEEE International Power Electronics and Motion Control Conference IPEMC, Budapest, Hungary, 2018, pp. 657-662, **indexed in Clarivate Analytics Web of Science**, (link).
3. C.-A. Bojan-Dragos, R.-E. Precup, **E.-L. Hedrea**, A. Simo and A. Daia, "Discrete time Control Solutions for Inverted Pendulum Crane Mode Control," in Proc of the 18th IEEE International Symposium on Computational Intelligence and Informatics (CINTI), Budapest, Hungary, 2018, pp. 295-300, **indexed in Clarivate Analytics Web of Science**, (link).

❖ 2017

4. R.-E. Precup, C.-A. Bojan Dragos, **E.-L. Hedrea**, I.-D. Borlea, "Evolving Fuzzy Models for Anti-lock Braking Systems," in Proc. of the IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications, Annecy, France, 2017, pp. 48-53, **indexed in Clarivate Analytics Web of Science**, (link) .
5. **E.-L. Hedrea**, C.-A. Bojan Dragos, R.-E. Precup, R.-C. Roman, E.-M. Petriu and C. Hedrea, "Tensor Product-Based Model Transformation for Position Control of Magnetic Levitation Systems," in Proc. of the IEEE International Symposium on Industrial Electronics (ISIE), Edinburgh, Scotland, 2017, pp. 1141-1146, **indexed in Clarivate Analytics Web of Science**, (link).
6. R.-E. Precup, C.-A. Bojan Dragos, **E.-L. Hedrea**, M.-D. Rarinca and E.-M. Petriu, "Evolving Fuzzy Models for the Position Control of Magnetic Levitation Systems," in Proc. of the Conference on Evolving and Adaptive Intelligent Systems (EAIS), Ljubljana, Slovenia, 2017, **indexed in Clarivate Analytics Web of Science**, (link).
7. **E.-L. Hedrea**, C.-A. Bojan Dragos, R.-E. Precup and T-A. Teban, "Tensor Product-Based Model Transformation for Level Control of Vertical Three Tank Systems," in Proc. of the 21st IEEE International Conference on Intelligent Engineering Systems (INES), Larnaca, Cyprus, 2017, pp. 113-118, **indexed in Clarivate Analytics Web of Science**, (link).

8. Publication List – team member 6 – Iuliu Alexandru Zamfirache

PUBLICATION LIST OF IULIU ALEXANDRU ZAMFIRCHE (2019-2023)
(please visit https://scholar.google.com/citations?user=cnKqHv8AAAAJ&hl=en&oi=ao)

A) Papers in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) journals published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/isijournals.html):*

1. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).
2. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
3. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
4. I. A. Zamfirache, R.-E. Precup (corresponding author) and E. M. Petriu, Q-learning, policy iteration and actor-critic reinforcement learning combined with metaheuristic algorithms in servo system control, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 21, no. 4, pp. 615-630, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
5. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).

B) Papers in refereed journals / contributions to books published in 2019-2023 *(http://www.aut.upt.ro/~rprecup/journals.html):*

1. R.-C. Roman, R.-E. Precup, E.-L. Hedrea, S. Preitl, I. A. Zamfirache, C.-A. Bojan-Dragoş and E. M. Petriu, Iterative Feedback Tuning Algorithm for Tower Crane Systems, Procedia Computer Science (Elsevier), vol. 199, pp. 157-165, 2022.

C) Published contributions to refereed academic conferences in 2019-2023 *(http://www.aut.upt.ro/~rprecup/confe.html):*

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving Fuzzy Models for Prosthetic Hand Myoelectric-based Control Using Weighted Recursive Least Squares Algorithm for Identification, Proceedings of 2019 IEEE International Symposium on Robotic and Sensors Environments ROSE 2019, Ottawa, ON, Canada, pp. 164-169, 2019.

9. LIST OF RESEARCH PROJECTS WON BY THE RESEARCH TEAM AND THEIR VALUES

2023-2025: Research grant, Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS), 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call), director coordinator Europe: Prof. Dr. Engr. Radu-Emil PRECUP, Politehnica University of Timisoara (please visit the project website, link).

2022–2024: National research grant National Research Grant Human Resources Demonstrative Experimental Projects 2021 entitled "Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob)", 120962 EUR, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PED, UEFISCDI), director of UPT: Assoc. Prof. dr. eng. Adriana Albu, director: Prof. Sorin Grigorescu, Transilvania University of Brasov (please visit the project website, link).

2022-2024: Dynamics of hypercomplex-valued neural networks (DHVNN), 33333 EUR, national postdoctoral research project (PD, UEFISCDI), director: Assoc. Prof. Calin-Adrian Popa, UPT (please visit the attached link), principal investigator: Prof. Radu-Emil Precup.

2021–2023: National research grant National Research Grant Human Resources Exploratory Research Projects 2020 entitled "Data-driven fuzzy control with experimental validation", 243000 EUR, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PCE, UEFISCDI), director: Prof. Radu-Emil PRECUP, UPT (please visit the project website, link).

2021–2022: Research contract titled "Nonlinear Observers-based control structures applied to mechatronic Systems (NOBSMECS) ", 220,169 lei, director: Lect. Alexandra-Iulia Szedlak-Stinean (please visit the project website, link).

2021–2022: DeCaGen – Early Detection of Cardiovascular Diseases Based on Genetic Features, PCD-TC-2021-10167, Institutional Research Grant, competition organized and financed by Politehnica University Timisoara (UPT), 50000 lei (equivalent approx. 10000 EUR), partner Politehnica University Timisoara: Assoc. Prof. dr. Eng. Adriana ALBU.

2020–2022 : National research grant National Research Grant Human Resources Young Teams Research Projects 2019 entitled "Fuzzy controllers for shape memory alloys systems", 89000 EUR, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (TE, UEFISCDI), director: Assoc. Prof. Claudia-Adina Bojan-Dragos, UPT (please visit the project website, link).

2020–2022: National research grant National Research Grant Human Resources Postdoctoral Research Projects 2019 entitled "Data-driven controllers for shape memory alloys systems", 52476 EUR, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PD, UEFISCDI), director: Lect. Raul-Cristian Roman (please visit the project website, link).

9. LIST OF RESEARCH PROJECTS WON BY THE RESEARCH TEAM AND THEIR VALUES

2019–2020: National research grant National Research Grant ARUT 2018 entitled "Nonlinear controllers with parameters tuned using experiments, dedicated to aerodynamic systems", 10000 EUR, financed by Politehnica Univeristy of Timisoara, director: Lect. Raul-Cristian Roman (please visit the attached ease visit the link).

2019: National research grant Institutional Development Fund for State Universities, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (FDI, UEFISCDI), director: Prof. Dr. Engr. Radu-Emil PRECUP, Politehnica University of Timisoara (please visit the link).

2018-2019: IMproving the PREdiction of opinion dynamics in temporal Social networks: Mathematical modeling and Simulation framework (IMPRESS), 38245 EUR, national postdoctoral research project (PD, UEFISCDI), director: Lect. Dr. Alexandru Topirceanu, UPT (please visit the attached link), principal investigator: Prof. Radu-Emil Precup.

2018–2019: Research contract titled "Nonlinear Observers-based control structures applied tomechatronic Systems (NOBSMECS) ", 47207 EUR, director: Lect. Alexandra-Iulia Szedlak-Stinean (please visit the project website, link).

PROJECTS WON BEFORE 2019

2017–2018: Institutional Research Grant "Research and development projects for young researchers" (in Romanian, Proiecte de Cercetare-Dezvoltare pentru tineri cercetatori) PCD-TC-2017, entitled "Tensor product model transformation-based adaptive control techniques with mechatronics applications", 10000 EUR, competition organized and financed by Politechnica University of Timisoara, director: Assoc. Prof. Claudia-Adina Bojan-Dragos.

2014–2017: UPT partner in the research project "Advanced control systems for bioprocesses in food industry" (ADCOSBIO), 238637 EUR, national joint applied research project (PCCA, UEFISCDI), director: Prof. Dan Selisteanu, University of Craiova, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link).

2014–2017: UPT partner in the research project "Advanced control system of a biorefinery plant" (BIOCON), 284091 EUR (PCCA, UEFISCDI), director: Prof. Sergiu Caraman, "Lower Danube" University of Galati, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link).

2012–2016: UPT partner in the research project "Software products based on artificial intelligence algorithms applied to modelling and optimization of chemical systems" (AISoftChim), 362903 EUR (PCCA, UEFISCDI), director: Prof. Silvia Curteanu, "Gheorghe Asachi" Technical University of Iasi, director of the UPT partner: Prof. Radu-Emil Precup (please visit the attached link and link).

2011–2016: UPT partner in the research project "New performance improvement techniques of control systems using experiment-based tuning", 339907 EUR, national exploratory research grant (PCE, UEFISCDI), director: Prof. Radu-Emil Precup (please visit the attached link).

2008–2011: UPT research team (director of the UPT partner: Prof. Radu-Emil Precup), "Real-time informatics technologies for embedded-system-control of power-train in automotive design and applications" (SICONA), 500000 EUR, Romanian research contract, The National Centre for Programme Management (CNMP), Prof. Corneliu Lazar, director of the project coordinator, "Gheorghe Asachi" Technical University of Iasi, Romania.

9. LIST OF RESEARCH PROJECTS WON BY THE RESEARCH TEAM AND THEIR VALUES

2009-2011: Research concerning new cognitive systems based on experimenting causal relations, 250000 EUR, national research contract (CNCSIS), director: Assoc. Prof. Claudiu Pozna, Transilvania University of Brasov, director of UPT: Prof. Radu-Emil Precup.

2009-2011: Research concerning the design and implementation of modern solutions for information security in distributed systems, SCADA, DCS and remote control applied to gas distribution, 65000 EUR, national research contract (CNCSIS), director, Prof. Ioan Silea, UPT, principal investigator: Prof. Radu-Emil Precup.

2008-2009: Director of the Romanian partner, UPT: Prof. Radu-Emil Precup New results in development and applications of fuzzy control systems, 16000 EUR, international research contract (bilateral project Slovenia-Romania, CNMP), Prof. Igor Škrjanc, director of the Slovenian partner, University of Ljubljana.

2008-2009: Integration of Iterative Learning Control (ILC) and fuzzy methods in intelligent control systems, 16000 EUR, international research contract (bilateral project Hungary-Romania, CNMP), Prof. Stefan Preitl, director of the Romanian partner, UPT, Prof. János Fodor, director of the Hungarian partner, Budapest Tech Polytechnical Institution, principal investigator: Prof. Radu-Emil Precup.

2007-2010: Integrated real-time networked control systems (SICOTIR), 500000 EUR, national research contract (CNMP), director, Prof. Cosmin Ionete, University of Craiova (please visit the attached link), principal investigator: Prof. Radu-Emil Precup.

2007-2008: Analysis and development of intelligent control systems with fuzzy controllers dedicated to servo systems, 35000 EUR, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

2006-2007: Analysis and development of intelligent systems, 16000 EUR, international research contract (bilateral project Hungary-Romania, Romanian Ministry of Research), Prof. Stefan Preitl, director of the Romanian partner, UPT, Prof. János Fodor, director of the Hungarian partner, Budapest Tech Polytechnical Institution, principal investigator: Prof. Radu-Emil Precup.

2006-2007: Development of new fuzzy controller structures for embedded systems using Iterative Feedback Tuning algorithms, 18000 EUR, national research contract (CNCSIS) , director: Prof. Radu-Emil Precup.

2004-2005: Development of new fuzzy controller structures based on sensitivity theory, 15000 EUR, national research contract (CNCSIS), director: Prof. Radu-Emil Precup.

2004-2005: Development of new control structures and controller development methods for positioning systems, 12000 EUR, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

2003-2005: Nonlinear systems and control in the field of power electronics, 16000 EUR, international research contract (bilateral project Hungary-Romania, Romanian Ministry of Research), Prof. Stefan Preitl, director of the Romanian partner, UPT, Acad. István Nagy, director of the Hungarian partner, Budapest University of Technology and Economics, principal investigator: Prof. Radu-Emil Precup.

2001: Research concerning the development of new stability analysis methods for a class of fuzzy control systems applied to the development of Takagi-Sugeno fuzzy controllers, 1400 USD, national research contract (CNCSIS), director: Prof. Radu-Emil Precup.

2001: Research concerning the development of new robustness analysis methods for fuzzy control systems based on the parametric sensitivity analysis, 1500 USD, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

9. LIST OF RESEARCH PROJECTS WON BY THE RESEARCH TEAM AND THEIR VALUES

2000: Research concerning the development of new stability analysis methods for fuzzy control systems applied to power systems processes, 2000 USD, national research contract (CNCSIS), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1998-1999: Research concerning the development of new control structures and controller development methods for variable inertia drives, 11000 USD, national research contract (CNCSU, CNCSIS), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1998-2001: Intelligent process control systems, 170000 USD, national research contract (CNCSIS, World Bank), director, Prof. Ioan Dumitrache, corresponding member of Romanian Academy, Politehnica University of Bucharest, principal investigator: Prof. Radu-Emil Precup.

1998-2001: Transient and voltage stability in power systems, 50000 USD, national research contract (CNCSIS, World Bank), director, Prof. Stefan Kilyeni, UPT, principal investigator: Prof. Radu-Emil Precup.

1996-1997: Research concerning the development of control strategies for synchronous generators based on fuzzy set theory, 3500 USD, national research contract (CNCSU), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1996: Research concerning the implementation of fuzzy control algorithms dedicated to electro-hydraulic and eletromechanical servo systems, 2000 USD, national research contract (CNCSU), director: Prof. Radu-Emil Precup.

1996: Fuzzy control structures with dynamics and fuzzy-based parameter adaptation dedicated to control of nonminumum phase systems, 2700 USD, national research contract (Romanian Academy), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1995: Development of control strategies and structures, and controllers applied to hydrogenerator control, 2000 USD, national research contract (CNCSU), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1993: Development of control algorithms based on fuzzy set theory, 1000 USD, national research contract (Romanian Ministry of Education), director, Prof. Stefan Preitl, UPT, principal investigator: Prof. Radu-Emil Precup.

1993: Control systems structures for small and medium power hydrogenerators, models and structures for applications, 1000 USD, national research contract (Romanian Ministry of Education), director, Prof. Toma-Leonida Dragomir, UPT, principal investigator: Prof. Radu-Emil Precup.

List of certificates registered at the Romanian Office of Copyright

The applicability of the research carried out between 2019-2023 had an important result in the implementation of the proposed algorithms in real life, after the authors managed to obtain three certificates registered at the Romanian Copyright Office (Oficiul Român pentru Drepturile de Autor, ORDA), with the following numbers and links: RGII/INT/1838/02.05.2023 - RGII/IES/1838/08.05.2023, RGII/INT/2607/23.06.2023 - RGII/IES/2607/20.07.2023, RGII/INT/3514/29.08.2023 - RGII/IES/3514/28.09.2023.

The first certificate, RGII/INT/1838/02.05.2023 - RGII/IES/1838/08.05.2023, addresses the tower crane industry and consists in the implementation of Model-Free Control (MFC) algorithms based on the combination of Takagi-Sugeno fuzzy and intelligent Proportional-Integral controllers. The certified controller is focused on tower cranes whose mathematical model is difficult to obtain and to reduce the cost of personnel.

The second certificate, RGII/INT/2607/23.06.2023 - RGII/IES/2607/20.07.2023, also for the tower crane industry, achieves Model-Free Adaptive Control mixed with Proportional-Derivative (PD) Takagi-Sugeno Fuzzy Controller. The second certified controller is suitable for tower crane systems that need to be adapted at any time and to reduce the cost of personnel.

The third certificate, RGII/INT/3514/29.08.2023 - RGII/IES/3514/28.09.2023, to be used in the tower crane industry, gives a low-cost Proportional-Integral fuzzy controller embedded in an indirect Iterative Learning Control structure based on PD-type learning rules, with the gains optimally tuned using metaheuristic Slime Mould Algorithms. The third certificate is suitable for tower cranes that perform repetitive work, and the controller will learn iteratively, reducing energy consumption and labor costs.

The team's research on data-driven control has had a significant impact on the field, paving the way for the development of new and more effective control algorithms. The contributions have been recognized with several awards.

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

QUANTITATIVE QUALITY INDICES FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 2)

1. Papers as main author or co-author classified with the article document type, published in Web of Science indexed journals JCR quartile Q1 according to AIS.

In 2019-2023, the team leader published **7 papers** in Web of Science indexed journals JCR quartile Q1 according to AIS. According to the attached Publication List of the team leader and also http://www.aut.upt.ro/~rprecup/isijournals.html, the papers with the following numbers in Section C belong to this category: 2, 3, 5, 6, 7, 12 and 19. These papers are specified as follows:

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).
2. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
3. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
4. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).
5. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
7. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoș, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

3. National and international research projects, won through competition, with a value of at least 100000 EUR each and a team of at least 3 members, as director/project leader.

In 2019-2023, the team leader was the director and project leader of **2 research projects**. According to the List of research projects won by the research team included in this award application and also http://www.aut.upt.ro/~rprecup/contracts.html, the projects in the first and fourth positions in the list belong to this category. These projects are specified as follows:

1. Radu-Emil Precup is the director of the project coordinator Europe, Politehnica University of Timisoara (UPT), of the project "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)" in 2023-2025, with a value of 699469 EUR to the European partners, 250000 EUR to UPT, 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), funded by the JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call.

2. Radu-Emil Precup was the director of the project "Data-driven fuzzy control with experimental validation" in 2021-2023, with a value of 249844.58 EUR, national exploratory research grant (PCE), funded by the Research, Development and Innovation Funding (UEFISCDI).

5. The quality of Editor-in-Chief of a journal indexed Journal Citation Reports.

Since 2022, Radu-Emil Precup is the **Editor-in-Chief of the Romanian Journal of Information Science and Technology** (http://www.romjist.ro/) of the Romanian Academy. He has been a member of the Editorial Board of this journal since 2018. The journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and currently has an **impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023**. The journal has been awarded in 2023 the *Diploma of Academic Merit of the Romanian Academy, for the leading position in the Clarivate evaluation and first place among the journals in Romania, from the point of view of the impact factor.*

6. Cumulative Article Influence Score: A = 5.3711

The cumulative Article Influence Score (A) of the papers published in Web of Science indexed journals is calculated as follows according to the positions of the papers in Section C of the attached Publication List, namely: A = 1: 0.696 / 3 + 2: 0.882 / 6 + 3: 1.442 / 4 + 4: 0.720 / 5 + 5: 2.448 / 4 + 6: 1.333 / 4 + 7: 1.333 / 4 + 8: 0.349 / 5 + 9: 0.390 / 4 + 10: 0.720 / 3 + 11: 0.418 / 4 +12: 1.276 / 4 + 13: 0.651 / 3 + 14: 0.651 / 3 + 15: 0.272 / 4 + 16: 0.272 / 4 + 17: 0.204 / 4 + 18: 0.170 / 2 + 19: 1.276 / 6 + 20: 0.651 / 6 + 21: 0.302 / 6 + 22:0.097 / 4 + 23: 0.390 / 5 + 24: 0.453 / 6 + 25: 1.129 / 2 + 26: 0.302 / 5 + 27: 0.272 / 5 + 28: 0.204 / 6 + 29: 0.302 / 7 + 31: 0.651 / 7 + 32: 0.170 / 3 + 33: 0.651 / 3 = 0.232 + 0.147 + 0.3605 + 0.144 + 0.612 + 0.33325 + 0.33325 + 0.0698 + 0.0975 + 0.24 + 0.1045 + 0.319 + 0.217 + 0.217 + 0.068 + 0.068 + 0.051 + 0.085 + 0.2127 + 0.1085 + 0.0503 + 0.0243 + 0.078 + 0.0755 + 0.5645 + 0.0604 + 0.0544 + 0.034 + 0.0431 + 0.093 + 0.0567 + 0.217 = 5.3711.

The following is a list of papers that correspond to the above numbers.

1. R.-C. Roman, R.-E. Precup (corresponding author) and E. M. Petriu, Hybrid Data-Driven Fuzzy Active Disturbance Rejection Control for Tower Crane Systems, **European Journal of Control** (Elsevier), vol. 58, pp. 373-387, 2021, impact factor (IF) = 2.395, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.4, Q3 quartile, Article Influence Score (AIS) = 0.696, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/EJC_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of July/August 2022 (http://www.aut.upt.ro/~rprecup/EJC_2021_Hot_Paper.png).
2. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).
3. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

    Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
4. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
5. C. Pozna, R.-E. Precup (corresponding author), E. Horvath and E. M. Petriu, Hybrid Particle Filter-Particle Swarm Optimization Algorithm and Application to Fuzzy Controlled Servo Systems, **IEEE Transactions on Fuzzy Systems**, vol. 30, no. 10, pp. 4286-4297, 2022, impact factor (IF) = 11.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 11.9, Q1 quartile, Article Influence Score (AIS) = 2.448, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TFS_2022_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of May/June 2023 (http://www.aut.upt.ro/~rprecup/TFS_2022_Hot_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).
7. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
8. R.-E. Precup, R.-C. David, R.-C. Roman, E. M. Petriu and A.-I. Szedlak-Stînean, Slime mould algorithm-based tuning of cost-effective fuzzy controllers for servo systems, International Journal of Computational Intelligence Systems (Atlantis Press), vol. 14, no. 1, pp. 1042-1052, 2021, impact factor (IF) = 1.736, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.9, Q4 quartile, Article Influence Score (AIS) = 0.349, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJCIS_2021_Highly_Cited_Paper.png).
9. E.-L. Hedrea, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Tensor product-based model transformation approach to tower crane systems modeling, **Asian Journal of Control** (Wiley), vol. 23, no. 3, pp. 1313-1323, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390, **Top Cited Article in 2020-2021 and 2021-2022 according to Wiley** (http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2020-2021.pdf, http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2021-2022.pdf).
10. R.-E. Precup, A.-T. Nguyen and S. Blažič, A survey on fuzzy control for mechatronics applications, **International Journal of Systems Science** (Taylor & Francis), DOI: 10.1080/00207721.2023.2293486, pp. 1-43, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720.
11. M. Brezovan, R.-E. Precup (corresponding author), D. Selişteanu and L. Stănescu, Colored Petri nets-based control and experimental validation on three-tank system level control, **International Journal of General Systems** (Taylor & Francis), vol. 51, no. 1, pp. 1-47, 2023, impact factor (IF) = 2, IF according

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to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2, Q3 quartile, Article Influence Score (AIS) = 0.418.

12. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
13. A.-I. Borlea, R.-E. Precup (corresponding author) and R.-C. Roman, Discrete-time model-based sliding mode controllers for tower crane systems, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 21, no. 1, pp. 1-20, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
14. I. A. Zamfirache, R.-E. Precup (corresponding author) and E. M. Petriu, Q-learning, policy iteration and actor-critic reinforcement learning combined with metaheuristic algorithms in servo system control, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 21, no. 4, pp. 615-630, 2023, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
15. G. Duca, S. Travin, I. Zinicovscaia and R.-E. Precup (corresponding author), Approach to Evaluate the Data of Moss Biomonitoring Studies: Preprocessing and Preliminary Ranking, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 26, no. 3-4, pp. 276-288, 2023, impact factor (IF) = 3.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
16. S. M. Abramov, S. Travin, G. Duca and R.-E. Precup (corresponding author), New Opportunities Model for Monitoring, Analyzing and Forecasting the Official Statistics on Coronavirus Disease Pandemic, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 26, no. 1, pp. 49-64, 2023, impact factor (IF) = 3.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
17. R.-C. Roman, R.-E. Precup (corresponding author), E. M. Petriu and M. Muntyan, Fictitious Reference Iterative Tuning of Discrete-Time Model-Free Control for Tower Crane Systems, Studies in Informatics and Control (ICI Bucharest), vol. 32, no. 1, pp. 5-14, 2023, impact factor (IF) = 1.6, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204.
18. C. Pozna and R.-E. Precup, On the Use of Quaternions, in the Translated Reference Frame Formalism, Acta Polytechnica Hungarica, vol. 20, no. 6, pp. 195-214, 2023, impact factor (IF) = 1.806, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Q4 quartile, Article Influence Score (AIS) = 0.170.
19. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
20. R.-E. Precup, S. Preitl, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, A low-cost approach to data-driven fuzzy control of servo systems, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 20, no. 1, pp. 21-36, 2022, impact factor (IF) = 7.9, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
21. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, C.-A. Bojan-Dragoş, M.-M. Damian and M.-L. Nedelcea, Performance Improvement of Low-Cost Iterative Learning-Based Fuzzy Control Systems for Tower Crane Systems, International Journal of Computers Communications & Control, vol. 17, no. 1, 4623, pp. 1-18, 2022, impact factor (IF) = 2.7, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
22. R.-E. Precup, G. Duca, S. Travin and I. Zinicovscaia, Processing, neural network-based modeling of biomonitoring studies data and validation on Republic of Moldova data, Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science (Editura Academiei Romane, Bucharest), vol. 23, no. 4, pp. 403-410, 2022, impact factor (IF) = 0.3, IF according to 2022

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 0.3, Q4 quartile, Article Influence Score (AIS) = 0.097.

23. E.-L. Hedrea, R.-E. Precup (corresponding author), E. M. Petriu, C.-A. Bojan-Dragoş and C. Hedrea, Tensor product-based model transformation approach to cart position modeling and control in pendulum-cart systems, **Asian Journal of Control** (John Wiley and Sons), vol. 23, no. 3, pp. 1238-1248, 2021, impact factor (IF) = 3.452, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.4, Q3 quartile, Article Influence Score (AIS) = 0.390.
24. R.-E. Precup, E.-L. Hedrea, R.-C. Roman, E. M. Petriu, A.-I. Szedlak-Stînean and C.-A. Bojan-Dragoş, Experiment-Based Approach to Teach Optimization Techniques, **IEEE Transactions on Education**, vol. 64, no. 2, pp. 88-94, 2021, impact factor (IF) = 2.116, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.6, Q3 quartile, Article Influence Score (AIS) = 0.453.
25. A. Topîrceanu and R.-E. Precup, A novel geo-hierarchical population mobility model for spatial spreading of resurgent epidemics, Scientific Reports (Nature), vol. 11, paper 14341, pp. 1-12, 2021, impact factor (IF) = 4.997, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.6, Q2 quartile, Article Influence Score (AIS) = 1.129.
26. R.-E. Precup, R.-C. Roman, E.-L. Hedrea, E. M. Petriu and C.-A. Bojan-Dragoş, Data-Driven Model-Free Sliding Mode and Fuzzy Control with Experimental Validation, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 16, no. 1, 4076, pp. 1-17, 2021, impact factor (IF) = 2.635, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
27. R.-E. Precup, C.-A. Bojan-Dragoş, E.-L. Hedrea, R.-C. Roman and E. M. Petriu, Evolving Fuzzy Models of Shape Memory Alloy Wire Actuators, Romanian Journal of Information Science and Technology (Romanian Academy, Section for Information Science and Technology), vol. 24, no. 4, pp. 353-365, 2021, impact factor (IF) = 0.852, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 3.5, Q4 quartile, Article Influence Score (AIS) = 0.272.
28. R.-E. Precup, R.-C. Roman, T.-A. Teban, A. Albu, E. M. Petriu and C. Pozna, Model-Free Control of Finger Dynamics in Prosthetic Hand Myoelectric-based Control Systems, Studies in Informatics and Control (ICI Bucharest), vol. 29, no. 4, pp. 399-410, 2020, impact factor (IF) = 1.649, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 =1.6, Q4 quartile, Article Influence Score (AIS) = 0.204.
29. R.-E. Precup, E.-I. Voişan, E. M. Petriu, M. L. Tomescu, R.-C. David, A.-I. Szedlak-Stînean and R.-C. Roman, Grey Wolf Optimizer-Based Approaches to Path Planning and Fuzzy Logic-based Tracking Control for Mobile Robots, International Journal of Computers Communications & Control (Agora University Editing House - CCC Publications), vol. 15, no. 3, 3844, pp. 1-17, 2020, impact factor (IF) = 2.293, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.7, Q4 quartile, Article Influence Score (AIS) = 0.302.
30. A. Topîrceanu and R.-E. Precup, A framework for improving electoral forecasting based on time-aware polling, Social Network Analysis and Mining (Springer), vol. 10, no. 1, 39, pp. 1-14, 2020, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 2.8.
31. R.-E. Precup, S. Preitl, E. M. Petriu, R.-C. Roman, C.-A. Bojan-Dragoş, E.-L. Hedrea and A.-I. Szedlak-Stînean, A center manifold theory-based approach to the stability analysis of state feedback Takagi-Sugeno-Kang fuzzy control systems, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 18, no. 2, pp. 189-204, 2020, impact factor (IF) = 3.324, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.
32. E.-L. Hedrea, R.-E. Precup and C.-A. Bojan-Dragoş, Results on Tensor Product-based Model Transformation of Magnetic Levitation Systems, Acta Polytechnica Hungarica, vol. 16, no. 9, pp. 93-111, 2019, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 1.7, Q4 quartile, Article Influence Score (AIS) = 0.170.
33. A. Albu, R.-E. Precup and T.-A. Teban, Results and Challenges of Artificial Neural Networks Used for Decision-Making in Medical Applications, Facta Universitatis, Series: Mechanical Engineering (University of Niš), vol. 17, no. 4, pp. 285-308, 2019, impact factor (IF) = 0.000, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 7.9, Q2 quartile, Article Influence Score (AIS) = 0.651.

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

QUANTITATIVE EVALUATION CRITERIA FOR THE RESULTS OF THE RESEARCH ACTIVITY IN 2019-2023 (according to Appendix 3)

C1. THE RESULTS OF RESEARCH AND/OR INNOVATION ACTIVITY, EVALUATED THROUGH BOOKS PUBLISHED BY PRESTIGIOUS INTERNATIONAL PUBLISHING HOUSES, PAPERS PUBLISHED IN JOURNALS INDEXED IN JOURNAL CITATION REPORTS Q1 ACCORDING TO INFLUENCE SCORE (AIS) OR APPLIED PATENTS

International Books and Q1 Journal Papers (please see the sections A and C of the Publication List of the team leader and also *http://www.aut.upt.ro/~rprecup/public.html, http://www.aut.upt.ro/~rprecup/books.html, http://www.aut.upt.ro/~rprecup/isijournals.html):*

In 2019-2023, the team leader and the research team published **2 books (in CRC Press, Taylor & Francis, and Butterworth-Heinemann, Elsevier), edited 2 books (in Springer), and 7 papers in Q1 journals** according to AIS. These books and papers are specified as follows:

Books:

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., **CRC Press, Taylor & Francis**, Boca Raton, FL, USA, 289 pp., 2021 (www.routledge.com), **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (link), 60 citations received so far.
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimization Algorithms for Fuzzy Controlled Servo Systems, **Butterworth-Heinemann, Elsevier**, Oxford, UK, 148 pp., 2019 (www.elsevier.com, www.sciencedirect.com), 110 citations received so far.
3. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Advanced Control and Optimization Paradigms for Wind Energy Systems, Power Systems Series, **Springer** Singapore, Singapore, 257 pp., 2019 (https://www.springer.com/gp/book/9789811359941), 16 overall citations received so far, and many others of the chapters included in the book.
4. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Solar Photovoltaic Power Plants - Advanced Control and Optimization Techniques, Power Systems Series, **Springer** Singapore, Singapore, 250 pp., 2019 (https://www.springer.com/gp/book/9789811361500), 33 overall citations received so far, and many others of the chapters included in the book.

Q1 Journal Papers:

1. R.-E. Precup, T.-A. Teban, A. Albu, A.-B. Borlea, I. A. Zamfirache and E. M. Petriu, Evolving fuzzy models for prosthetic hand myoelectric-based control, **IEEE Transactions on Instrumentation and Measurement**, vol. 69, no. 7, pp. 4625-4636, 2020, impact factor (IF) = 4.016, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 5.6, Q1 quartile, Article Influence Score (AIS) = 0.882, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png).
2. I.-D. Borlea, R.-E. Precup (corresponding author), A.-B. Borlea and D. Iercan, A Unified Form of Fuzzy C-Means and K-Means algorithms and its Partitional Implementation, **Knowledge-Based Systems** (Elsevier), vol. 214, paper 106731, pp. 1-16, 2021, impact factor (IF) = 8.038, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.8, Q1 quartile, Article Influence Score (AIS) = 1.442, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png).
3. R.-E. Precup, R.-C. David, R.-C. Roman, A.-I. Szedlak-Stînean and E. M. Petriu, Optimal tuning of interval type-2 fuzzy controllers for nonlinear servo systems using slime mould algorithm, **International Journal of Systems Science** (Taylor and Francis), vol. 54, no. 15, pp. 2941-2956, 2023, impact factor (IF) = 4.3, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 4.3, Q2 quartile, Article Influence Score (AIS) = 0.720, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of March/April 2022 (http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png).
4. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Reinforcement learning-based control using Q-learning and gravitational search algorithm with experimental validation on a nonlinear servo system, **Information Sciences** (Elsevier), vol. 583, pp. 99-120, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

(http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png), **Hot Paper according to Clarivate Analytics Web of Science** as of November/December 2022 (http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png).

5. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Policy iteration reinforcement learning-based control using a grey wolf optimizer algorithm, **Information Sciences** (Elsevier), vol. 585, pp. 162-175, 2022, impact factor (IF) = 8.1, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.1, Q1 quartile, Article Influence Score (AIS) = 1.333, **Highly Cited Paper according to Clarivate Analytics Web of Science** as of September/October 2023 (http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png).
6. I. A. Zamfirache, R.-E. Precup (corresponding author), R.-C. Roman and E. M. Petriu, Neural Network-based Control Using Actor-Critic Reinforcement Learning and Grey Wolf Optimizer with Experimental Servo System Validation, **Expert Systems with Applications** (Elsevier), vol. 225, paper 120112, pp. 1-15, 2023, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.
7. A.-I. Szedlak-Stînean, R.-E. Precup (corresponding author), E. M. Petriu, R.-C. Roman, E.-L. Hedrea and C.-A. Bojan-Dragoş, Extended Kalman filter and Takagi-Sugeno fuzzy observer for a strip winding system, **Expert Systems with Applications** (Elsevier Science), vol. 208, paper 118215, pp. 1-15, 2022, impact factor (IF) = 8.5, IF according to 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023 = 8.5, Q1 quartile, Article Influence Score (AIS) = 1.276.

C2. THE IMPACT OF RESEARCH AND/OR INNOVATION ACTIVITY, ASSESSED BY THE QUALITY OF CITATIONS IN INDEXED JOURNALS JOURNAL CITATION REPORTS Q1 ACCORDING TO THE INFLUENCE SCORE AND/OR BY PRESENTING CONCRETE APPLICATIONS OF RESEARCH RESULTS IN THE ECONOMY AND/OR SOCIETY

Citations of the team leader (http://www.aut.upt.ro/~rprecup/cita.html):

As of February 6, 2024, the papers of the team leader have received **11783 citations**, with **h-index = 70** and **i10-index = 188** according to **Scholar Google** (http://scholar.google.com/citations?user=a43tQMQAAAAJ&hl=en).

As of February 6, 2024, the 427 Scopus articles of the team leader have received **9226 citations in Scopus, h-index = 62** (http://www.scopus.com/authid/detail.url?authorId=56234853500).

As of February 6, 2024, the 341 Clarivate Analytics Web of Science articles of the team leader received **7128 citations in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge), h-index =58**, according to Clarivate Analytics Web of Science, available from http://www.researcherid.com/rid/A-6993-2009 transferred to https://www.webofscience.com/wos/author/record/1001320,

Excluding the self-citations of all authors, or in other words, counting only the independent citations, the h-index values of the papers of the team leader are: **h-index = 55** (excluding the self-citations of all authors), **h-index = 51** (excluding the self-citations of all authors) according to Scopus, and **h-index = 42** (excluding the self-citations of all authors) according to Clarivate Analytics Web of Science.

The **cumulative Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) impact factor (IF) of independent citations of the team leader was 574.685**, and the **cumulative IF according to 2013 Journal Citation Reports (JCR) released by Clarivate Analytics in 2014 was 623.687**. These values have to be seen in the context of the IF of leading journals in the field of the research team, which is about 3. In the same context, my papers have received **nore than 6500 independent citations** so far.

In 2019-2023, **10 of the papers of the research team have the status of Highly Cited Papers according to Clarivate Analytics Web of Science** as of September/October 2023, November/December 2022 and September/October 2021. The links to the proofs are:
http://www.aut.upt.ro/~rprecup/EJC_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TIM_2020_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/KBS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TFS_2022_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_1_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_2_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJCIS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/IJSS_2021_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/TIE_2017_Highly_Cited_Paper.png,
http://www.aut.upt.ro/~rprecup/CiI_2011_Highly_Cited_Paper.png.

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

In 2019-2023, **four of the papers of the research team have the status of Hot Papers according to Clarivate Analytics Web of Science** as of May/June 2023, November/December 2022, July/August 2022 and March/April 2022. The links to the proofs are:
http://www.aut.upt.ro/~rprecup/TFS_2022_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/INS_2022_1_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/EJC_2021_Hot_Paper.png,
http://www.aut.upt.ro/~rprecup/IJSS_2021_Hot_Paper.png.

One of the papers of the research team has the status of **Top Cited Article in 2020-2021 and 2021-2022 according to Wiley** (http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2020-2021.pdf, http://www.aut.upt.ro/~rprecup/AJC_2021_Top_Cited_Article_2021-2022.pdf).

Concrete Applications of Research Results in the Economy and the Society in the Framework of Research Contracts and Grants in 2019-2023 (http://www.aut.upt.ro/~rprecup/contracts.html):

In the framework of the international research contract in the first position in the List of research projects won by the research team included in this award application, the research team is applying (2023-2025) its optimal control solutions for connected autonomous electric buses to improve schedule reliability while minimizing energy consumption in the municipality of Hangzhou (China), namely Hangzhou Comprehensive Transportation Center, with technical support from three companies, namely WSP Sverige AB (Sweden), FellowBot AB (Sweden), and Enjoyor Ltd Co. (China).

In the framework of the national research contract in the fourth position in the List of research projects won by the research team included in this award application, the research team has applied its data-driven fuzzy controllers to a test bench of the private partner Continental Automotive Timisoara. The partnership was created in 2008-2011 through the project PCCA "Real-time informatics technologies for embedded-system-control of power-train in automotive design and applications (SICONA)", project leader, Prof. Corneliu Lazăr, "Gheorghe Asachi" Technical University of Iasi.

In this regard, the applicability of the research carried out by the research team on data-driven fuzzy control between 2019-2023 had an important result in the implementation of the proposed algorithms in real life, after the authors managed to obtain three certificates registered at the Romanian Copyright Office (Oficiul Român pentru Drepturile de Autor, ORDA), with the following numbers and links: Certificate fuzzy MFC, Certificate fuzzy MFAC, Certificate fuzzy ILC.

In the framework of the national research contract in the fourth position in the List of research projects won by the research team included in this award application, the research team has applied its data-driven model-free controllers to the companies where the co-author of the research team, Dr. Ali Safaei (link), has worked in Ontario, Canada, namely Drone Delivery Canada, ATS Automation and General Motors. The initial formulation, developement and implementation of the controllers are published in a joint book (www.routledge.com) with free companion software.

These are the details on the two research projects mentioned above:

1. "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)" in 2023-2025, with a value of 699469 EUR to the European partners, 250000 EUR to Politehnica University of Timisoara (UPT), 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), funded by the JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call. The team leader is the director of the project coordinator Europe, UPT.

2. "Data-driven fuzzy control with experimental validation" in 2021-2023, with a value of 249844.58 EUR, national exploratory research grant (PCE), funded by the Research, Development and Innovation Funding (UEFISCDI). The team leader was the director of this project.

C3. THE ABILITY TO ATTRACT RESEARCH FUNDS OR TO COOPERATE WITH PUBLIC AND/OR PRIVATE RESEARCH ORGANIZATIONS, EVALUATED BY THE NUMBER OF RESEARCH PROJECTS WON AND THEIR VALUE OR BY ACQUIRING THE QUALITY OF TEACHER/RESEARCHER/INVITED SPEAKER AT UNIVERSITIES OR AT INTERNATIONAL EVENTS OF PRESTIGE

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Research Contracts and Grants in 2019-2023 *(please visit the Research Grants and Contracts List attached in the last two pages of this CV, and also http://www.aut.upt.ro/~rprecup/contracts.html)*:

In 2019-2023, the research team was involved in **6 national research contracts and grants** in the area of automatic control, serving as the **director of 2 of them**, including one international research contract.

For 2019-2023, the **total value of the research contracts and grants is 1353332.21 EUR**, calculated according to the positions of the contracts numbered below and specified in the List of research projects won by the research team included in this award application, viz: 1: 250000 + 510509.63 + 2: 249844.58 + 3: 120962 + 4: 33333 + 5: 89000 + 6: 52476 + 7: 47207 = 842822.58 EUR + 510509.63 EUR = 1353332.21 EUR. These seven contracts of the research team are:

1. 2023-2025: "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)", 699469 EUR to the European partners, 250000 EUR to Politehnica University of Timisoara (UPT), 4000000 RMB (equivalent 510509.63 EUR) to the Chinese partners, director of the project coordinator China: Prof. Sheng Jin (Zhejiang University, China), partners: Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China) (JPI Urban Europe ERA-Net Co-fund Urban Accessibility and Connectivity (EN-UAC) Sino-European call). The team leader is the director of the project coordinator Europe, UPT.
2. 2021-2023: "Data-driven fuzzy control with experimental validation", 249844.58 EUR, national exploratory research grant (PCE, Research, Development and Innovation Funding - UEFISCDI). The team leader was the director of this project.
3. 2022-2024: "Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob)", 120962 EUR, demonstrative experimental project (PED, UEFISCDI), director: Prof. Sorin Grigorescu, Transilvania University of Brasov. The director of the UPT partner of this project is Assoc. Prof. Adriana-Nicoleta Albu, UPT, team member 2.
4. 2022-2024: "Dynamics of hypercomplex-valued neural networks (DHVNN)", 33333 EUR, national postdoctoral research project (PD, UEFISCDI). The director of this project is Assoc. Prof. Calin-Adrian Popa, UPT.
5. 2020-2022: "Fuzzy controllers for shape memory alloys systems", 89000 EUR, National Research Grant Human Resources Young Teams Research Projects 2019, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (TE, UEFISCDI). The director of this project was Assoc. Prof. Claudia-Adina Bojan-Dragos, UPT, team member 1.
6. 2020-2022: "Data-driven controllers for shape memory alloys systems", 52476 EUR, National Research Grant Human Resources Postdoctoral Research Projects 2019, financed by the Executive Agency for Higher Education, Research, Development and Innovation Funding (PD, UEFISCDI). The director of this project was Lect. Raul-Cristian Roman, UPT, team member 3.
7. 2018-2022: "NONlinear OBServers-based control structures applied to MEChatronics Systems (NOBSMECS)", 47207 EUR, national postdoctoral research project (PD, UEFISCDI). The director of this project was Lect. Alexandra-Iulia Szedlak-Stinean, UPT, team member 4.

Cooperation in 2019-2023 *(http://www.aut.upt.ro/~rprecup/coop.html)*:

In 2019-2023, the research team has carried out successful cooperation with public authorities, universities, research institutes and private companies and research organizations within the framework of the following two research contracts specified above and in the List of research projects won by the research team included in this award application:

1. 2023-2025: "Electric Multimodal Transport Systems for Enhancing Urban Accessibility and Connectivity (e-MATS)", 699469 EUR to the European partners, 250000 EUR to Politehnica University
2. 2022-2024: "Artificial intelligence based control system for legged robots used in autonomous navigation, mapping and surveillance of unstructured environments (AI-LegRob)", 120962 EUR, demonstrative experimental project (PED, UEFISCDI), director: Prof. Sorin Grigorescu, Transilvania University of Brasov. The director of the UPT partner of this project is Assoc. Prof. Adriana-Nicoleta Albu, UPT, team member 2.

These public authorities, universities, research institutes and private companies and research organizations are: Zhejiang University (China), Swedish National Road and Transport Research Institute (Sweden), Chalmers University of Technology (Sweden), Chongqing University (China), The Hong Kong Polytechnic

University Shenzhen Research Institute (China), WSP Sverige AB (Sweden), FellowBot AB (Sweden), Hangzhou Comprehensive Transportation Center (China), Enjoyor Ltd Co. (China), and Transilvania University of Brasov (Romania).

In 2019-2023, successful cooperation with professors from prestigious universities and research institutes as co-authors of joint journal papers (http://www.aut.upt.ro/~rprecup/isijournals.html) has been carried out. These are the co-authors of the research team's papers: Sašo Blažič (University of Ljubljana, Slovenia), Anh-Tu Nguyen (Université Polytechnique Hauts-de-France, Valenciennes, France), Emil M. Petriu (University of Ottawa, Canada), Sergey M. Abramov (Program Systems Institute of the Russian Academy of Sciences, Russia), Sergey Travin (Semenov Federal Research Center for Chemical Physics of the Russian Academy of Sciences, Russia), Inga Zinicovscaia (Institute of Chemistry of the Academy of Sciences of Moldova, Republic of Moldova, Joint Institute for Nuclear Research, Dubna, Russian Federation, and Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Romania), Claudiu Pozna (Széchenyi István University, Győr, Hungary, and Transilvania University of Brasov, Romania), Marius Brezovan, Dan Selişteanu, and Liana Stănescu (University of Craiova, Romania).

The following universities specified above are listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** from other countries: Chalmers University of Technology (Sweden), Zhejiang University (China), Chongqing University (China), Hong Kong Polytechnic University (China).

From 2016 to 2022, the team leader was an Adjunct Professor at the School of Engineering, Edith Cowan University, Joondalup, WA, Australia (Staff of ECU).

Invited Papers and Talks in 2019-2023 (http://www.aut.upt.ro/~rprecup/invite.html):

In 2019-2023, the team leader was invited to give **12 invited papers and talks**. They are specified as follows:

1. R.-E. Precup, Metaheuristic Algorithms and their Applications to Fuzzy Control, Fuzzy Modeling and Learning-based Control, 9th International Conference on Control and Optimization with Industrial Applications COIA 2024, Istanbul, Turkey, 2024.
2. R.-E. Precup, Metaheuristic Algorithms and their Applications to Fuzzy Control, Fuzzy Modeling and Mobile Robot Navigation, Keynote Speech, 10th User Conference on Advanced Automated Testing UCAAT 2023, Timisoara, Romania, 2023.
3. R.-E. Precup, Nature-inspired optimization algorithms applied to fuzzy control, fuzzy modeling and mobile robot navigation, 4th International Symposium on New Trends in Computational Intelligence NTCI 2022, Qingdao, China, 2022.
4. R.-E. Precup, 2-DOF Fuzzy Controllers and Mechatronics Applications, Invited Lecture, China University of Petroleum (East China), 266580, Qingdao, China, 11 October 2022.
5. R.-E. Precup, Evolving Takagi-Sugeno-Kang Fuzzy Models and Applications, International Seminar on Computational Intelligence ISCI'2022, Tijuana, Mexico, 2022.
6. R.-E. Precup, Evolving Fuzzy Models and Laboratory Applications, 23rd International Carpathian Control Conference ICCC'2022, Craiova, Romania, 2022.
7. R.-E. Precup, Evolving Fuzzy Models and Applications, 3rd International Symposium on New Trends in Computational Intelligence ISNTCI 2021, Qingdao, China, 2021.
8. R.-E. Precup, Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control, 9th IEEE International Conference on e-Health and Bioengineering EHB 2021, Iasi, Romania, 2021.
9. R.-E. Precup, Fuzzy Controller Structures for Servo Systems, Cycle of Conferences "Horizonte de la Automática y la Robótica más allá de la 4ta. Revolución Industrial (HORIZON-CAR)", Center for Automation and Robotics (CSIC-UPM) of Spanish National Research Council and Technical University of Madrid, Madrid, Spain, 18 November 2020.
10. R.-E. Precup, 2-DOF Fuzzy Controller Structures and Nature-Inspired Optimal Tuning, Keynote at Romanian AI Days, Virtual Brasov, Romania, 2-4 December 2020.
11. R.-E. Precup, Evolving Fuzzy Models of Mechatronics Applications, 17th IEEE International Symposium on Intelligent Systems and Informatics SISY 2019, Subotica, Serbia, pp. 1-2, 2019.
12. R.-E. Precup, T.-A. Teban and A. Albu, Evolving Fuzzy and Neural Network Models of Finger Dynamics for Prosthetic Hand Myoelectric-based Control, Proceedings of 11th International Conference on Electronics, Computers and Artificial Intelligence ECAI 2019, Pitesti, Romania, pp. 1-8, 2019.

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C4. PROFESSIONAL PRESTIGE, ASSESSED BY THE DEGREE OF RECOGNITION/ APPRECIATION OF THE CANDIDATE'S SCIENTIFIC ACTIVITY IN THE INTERNATIONAL ACADEMIC COMMUNITY

Member of Editorial Boards of Journals in 2019-2023 (http://www.aut.upt.ro/~rprecup/edboards.html):

In 2019-2023, the team leader was an **editorial board member of 18 journals indexed in Web of Science, in the Q1 to Q4 quartiles, 6 journals indexed in Scopus, and 15 journals indexed in other databases**. These journals are listed below:

Since 2022, the team leader is the **Editor-in-Chief of the Romanian Journal of Information Science and Technology** (http://www.romjist.ro/) of the Romanian Academy. I have been a member of the Editorial Board of this journal since 2018. The journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and currently has an **impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023**. The journal has been awarded in 2023 the *Diploma of Academic Merit of the Romanian Academy, for the leading position in the Clarivate evaluation and first place among the journals in Romania, from the point of view of the impact factor.*

From 2018 to 2022, the team leader was an Associate Editor of the journal *IEEE Transactions on Fuzzy Systems*. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 12.253, according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

The team leader was a *Guest Editor*, with Dr. Anh-Tu Nguyen (Université Polytechnique Hauts-de-France, France), Dr. Truong Quang Dinh (University of Warwick, UK), Dr. Junjie Chong (Newcastle University Singapore, Singapore), Prof. Makoto Iwasaki (Nagoya Institute of Technology, Japan) and Prof. Michael Ruderman (University of Agder, Norway), of the *Special Issue* on Emerging Control and Automation Technologies for Advanced Mechatronic Systems published in the journal *Control Engineering Practice* (Elsevier), vol. 136, Jul. 2023. This journal has an impact factor of 3.475 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2018, the team leader has been an Associate Editor of the journal *IEEE Transactions on Cybernetics*. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 11.448 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2020, the team leader has been an Associate Editor of the journal *Information Sciences*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 8.233 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2021, the team leader has been a member of the Editorial Board of the journal *Engineering Applications of Artificial Intelligence*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 6.212 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2014, the team leader has been a member of the Editorial Board of the journal *Applied Soft Computing*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 6.725 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2021, the team leader has been a member of the Editorial Board of the journal *Expert Systems with Applications*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 8.665 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2014, the team leader has been a member of the Editorial Board of the journal *Evolving Systems*, Springer. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.908 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2022, the team leader has been an Associate Editor of the journal *Applied Artificial Intelligence*, Taylor & Francis. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 2.777 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2019, the team leader has been an Associate Editor of the journal *CAAI Transactions on Intelligence Technology*, Institution of Engineering and Technology (IET) and Chinese Association for Artificial Intelligence (CAAI), Wiley. This journal is indexed in Clarivate Analytics Web of Science

(formerly ISI Web of Knowledge) and has an impact factor of 5.1 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023.

Since 2021, the team leader has been a member of the Editorial Board of the journal *Communications in Transportation Research*, Elsevier. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge.

Since 2021, the team leader has been a member of the Editorial Board of the journal *Healthcare Analytics*, Elsevier. This journal is indexed in SCOPUS.

Since 2022, the team leader has been an Associate Editor of the journal *Industrial Artificial Intelligence*, Springer.

Since 2017, the team leader has been an Editor of the journal *Cogent Engineering*, Taylor & Francis. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge).

Since 2022, the team leader has been a **Topical Editor** of the journal Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science, Romanian Academy, Romania. Since 2018, I have been an Editorial Board member of this journal, which is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 0.734 according to the 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

The team leader was a *Guest Editor* of the *Special Issue* on Optimization Problems in Information Science and Technology, published in *Romanian Journal of Information Science and Technology* (Romanian Academy), vol. 23, no. T, Nov. 2020. This journal has an impact factor of 3.5 according to the 2022 Journal Citation Reports (JCR) released by Clarivate Analytics in 2023.

Since 2020, the team leader has been a member of the Senior Editorial Board of the journal Studies in Informatics and Control, ICI Bucharest, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.649 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2016, the team leader has been an Associate Editor of the journal Control Engineering and Applied Informatics, Romanian Society of Control Engineering and Technical Informatics, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 0.973 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2014, the team leader has been a **Track Chair** of the journal Acta Polytechnica Hungarica, Óbuda University, Hungary. In 2012-2014, I was an Associate Editor of this journal, which is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.806 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

Since 2017, the team leader has been a member of the Editorial Board of the journal International Journal of Computers Communications & Control, Agora University, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 2.635 according to 2021 Journal Citation Reports (JCR) released by Clarivate Analytics in 2022.

Since 2007, the team leader has been a member of the Editorial Board of the journal Advances in Electrical and Computer Engineering, Stefan cel Mare University of Suceava, Romania. This journal is indexed in Clarivate Analytics Web of Science (formerly ISI Web of Knowledge) and has an impact factor of 1.221 according to the 2020 Journal Citation Reports (JCR) released by Clarivate Analytics in 2021.

From 2021 to 2022, the team member 3 served as a **member of the Early Career Advisory Board of the prestigious Elsevier journal Control Engineering Practice**.

Since 2020, the team leader has been a member of the Editorial Board of the journal Reports in Mechanical Engineering, Regional Association for Security and Crisis Management, Serbia. In 2020, I was the **Editor-in-Chief** of this journal, which is indexed in SCOPUS.

Since 2022, the team leader has been a member of the Editorial Board of the journal CAAI Transactions on Intelligent Systems, Chinese Association of Artificial Intelligence and Harbin Engineering University, China. This journal is indexed in SCOPUS.

Since 2021, the team leader has been a member of the Editorial Board of the journal Military Technical Courier, University of Defense in Belgrade, Military Academy, Belgrade, Serbia. This journal is indexed in SCOPUS.

Since 2022, the team leader has been a member of the Editorial Board of the Journal of Intelligent and Connected Vehicles, Emerald Publishing and Tsinghua University, China. This journal is indexed in SCOPUS.

Since 2021, the team leader has been an **Associate Editor-in-Chief** of the System Theory, Control and Computing Journal, Editura Universitaria, Craiova.

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Since 2010, the team leader has been an Editor of the Paladyn, Journal of Robotics, Intelligent Agents, and Artificial Intelligence, Versita, Poland, co-published first with Springer-Verlag and next with De Gruyter. This journal is indexed in SCOPUS and DBLP.

Since 2006, the team leader has been an Editor of the International Journal of Tomography & Simulation, CESER Publications, India. This journal has been indexed in SCOPUS until 2017.

Since 2009, the team leader has been an Editorial Advisory Board Member of Mediterranean Journal of Measurement and Control, SoftMotor Ltd, UK. This journal has been indexed in SCOPUS, INSPEC until 2016.

Since 2012, the team leader has been a member of the Editorial Board of Journal of Electrical Engineering, Politehnica Publishing House, Romania. This journal has been indexed in SCOPUS, INSPEC until 2017.

Since 2008, the team leader has been a member of the Editorial Board of the journal Facta Universitatis, Series Automatic Control and Robotics, University of Niš, Serbia.

Since 2014, the team leader has been an Associate Editor of the journal Gradus, John von Neumann University, Hungary.

Since 2021, the team leader has been a member of the Editorial Advisory Board of the journal Acta Technica Jaurinensis, Széchenyi István University, Győr, Hungary.

Since 2021, the team leader has been a member of the Editorial Board of IASEI Transactions on Swarm Intelligence, International Association of Swarm and Evolutionary Intelligence, China.

Since 2020, the team leader has been an Associate Editor of Journal of Smart Environments and Green Computing, OAE Publishing Inc., USA.

Since 2021, the team leader has been a member of the Editorial Board of the Journal of Computational and Cognitive Engineering, Bon View Press, Singapore.

Since 2023, the team leader has been a member of the Editorial Board of Journal of Machine Design and Automation Intelligence, De Gruyter, Germany.

Since 2023, the team leader has been a member of the Editoral Board of the journal Big Data and Computer Visions, Ayandegan Institute of Higher Education, Tonekabon, Iran.

Since 2020, the team leader has been a member of the Editorial Board of the journal The Annals of University "Dunarea de Jos" of Galati, Fascicle III Electrotechnics, Electronics, Automatic Control and Informatics, "Lower Danube" University of Galati, Romania.

Since 2021, the team leader has been a member of the Editorial Board of the Journal of Electrical Engineering, Electronics, Control and Computer Science, University of Pitesti, Romania.

Since 2021, the team leader has been a member of the Editorial Team of the journal Proceedings of CBU in Natural Sciences and ICT, Unicorn University, Prague, Czech Republic.

Authored and Edited Books Published in 2019-2023 by Prestigious International Publishing Houses (http://www.aut.upt.ro/~rprecup/books.html):

In 2019-2023, the team leader and the research team published **2 books with CRC Press, Taylor & Francis, and Butterworth-Heinemann, Elsevier, and edited 2 books with Springer**. These books are specified as follows:

1. R.-E. Precup, R.-C. Roman and A. Safaei, Data-Driven Model-Free Controllers, 1st Ed., **CRC Press, Taylor & Francis**, Boca Raton, FL, USA, 289 pp., 2021, **voted by the Editorial Board of CRC Press as 2021 Outstanding Title in STEM** (link).
2. R.-E. Precup and R.-C. David, Nature-Inspired Optimization Algorithms for Fuzzy Controlled Servo Systems, **Butterworth-Heinemann, Elsevier**, Oxford, UK, 148 pp., 2019.
3. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Advanced Control and Optimization Paradigms for Wind Energy Systems, Power Systems Series, **Springer** Singapore, Singapore, 257 pp., 2019.
4. R.-E. Precup, T. Kamal and S. Zulqadar Hassan, **Editors**, Solar Photovoltaic Power Plants - Advanced Control and Optimization Techniques, Power Systems Series, **Springer** Singapore, Singapore, 250 pp., 2019.

Awards and Honors Received in 2019-2023 (http://www.aut.upt.ro/~rprecup/honours.html):

Since 2018, the team leader has been a **Corresponding Member of the Romanian Academy** and a **Corresponding Member of the Academy of Technical Sciences of Romania**.

Since 2019, the team leader has been a **Doctor Honoris Causa of the Óbuda University, Budapest, Hungary**, and a **Doctor Honoris Causa of the Széchenyi István University, Győr, Hungary**.

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The team leader was **named a 2022 academic data leader by Chief Data Officer (CDO) Magazine, according to the 2022 List of Leading Academic Data Leaders** (https://www.cdomagazine.tech/) published by CDO Magazine in February 2022.

The team leader was **listed in the 2023, 2022, 2021 and 2020 World's Top 2% Scientists List, according to a Stanford University study**, https://doi.org/10.1371/journal.pbio.3000918, with the updates generally accessible in https://dx.doi.org/10.17632/btchxktzyw (the last one in October 2023), and the 2020 version (as of October 2020) of the database found in https://data.mendeley.com/datasets/btchxktzyw/2. The team member 3 was listed in these 2023 and 2022 prestigious lists for results achieved in a single year.

The team leader received the **Diploma of Academic Merit of the Romanian Academy**, awarded in 2023 to the Romanian Journal of Information Science and Technology (ROMJIST), whose Editor-in-Chief Radu-Emil Precup has been since 2022, for the leading position in the Clarivate evaluation and the first place among the journals in Romania, from the point of view of the impact factor.

In 2023, the team member 5 received the **"Tudor Tănăsescu" Prize from the Romanian Academy** for a group of 3 papers generically entitled "Modeling and Control Using Tensor Product Model Transformation".

In 2020, the team member 3 and the team leader received the **"Tudor Tănăsescu" Prize from the Romanian Academy** for data-driven controller tuning techniques.

The team leader is **listed in the Research.com Ranking of Top Scientists in Electronics and Electrical Engineering as 1131st in the World Ranking and 1st in the National Ranking (Romania)** according to http://research.com/u/radu-emil-precup as of February 15, 2023.

The team members 1, 3 and 4 and the team leader received a **Best Paper Award** at 7th International Conference on Information Technology and Quantitative Management ITQM 2019 (Granada, Spain).

The team leader received a **Best Paper Award** at 8th International Conference on Information Technology and Quantitative Management ITQM 2020 & 2021 (Chengu, China).

In recognition of the quality and significance of his doctoral research, the team member 3 received an **Honorary Mention** (competition link, Honorary Mention) **in the 2020 IEEE Robotics & Automation Society Romania Chapter Best Ph.D. Thesis Competition.**

The team member 3 has been awarded the **1st Prize in the "Rada Mihalcea pentru Tineri Cercetători în Știință și Inginerie" 2022 Competition** (The Award).

In 2022, the team leader received of the **Certificate of Commendation from IEEE Transactions on Fuzzy Systems** for the contribution to the journal by serving as an Associate Editor dealing with a high volume of papers efficiently.

Service and Member of Scientific and Technical Societies in 2019-2023 (http://www.aut.upt.ro/~rprecup/soc.html):

Since 2015, the team leader has been the **founder and chair of the Institute of Electrical and Electronics Engineers (IEEE) Systems, Man, and Cybernetics Society Romania Chapter.**

Since 2002, the team leader has been a member of the The International Federation of Automatic Control (IFAC) Technical Committee on Computational Intelligence in Control (formerly Cognition and Control). Since 2020, I have been a member of the IFAC Technical Committee on Linear Control Systems.

The team leader has been a Senior Member of IEEE since 2007, and a member of the Control Systems Society (since 2003), the Intelligent Transportation Systems Society (since 2003), the Computational Intelligence Society (since 2010), and the Industrial Electronics Society (since 2011).

The team leader has been a member of the Task Force on Autonomous Learning Systems within the Neural Networks Technical Committee of the IEEE Computational Intelligence Society since 2013, the Technical Committee on Computational Cybernetics of the IEEE Systems, Man, and Cybernetics Society since 2014, the Technical Committee on Cyber-Medical Systems of the IEEE Systems, Man, and Cybernetics Society since 2016, the Task Force on Adaptive and Evolving Fuzzy Systems within the Fuzzy Systems Technical Committee of the IEEE Computational Intelligence Society since 2020, the Technical Committee on Data-Driven Control and Monitoring of the IEEE Industrial Electronics Society since 2020, the Technical Committee on Control, Robotics and Mechatronics of the IEEE Industrial Electronics Society since 2021, and the IEEE Taskforce on Evolutionary Scheduling and Combinatorial Optimisation of the IEEE Computational Intelligence Society since 2022.

Since 2017, the team leader has been a member of the Machine Intelligence Research Labs (MIR Labs).

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Since 2011, the team leader has been a member of the Working Group WG 12.9 on Computational Intelligence of the Technical Committee TC12 on Artificial Intelligence of the International Federation for Information Processing (IFIP).

Since 2010, the team leader has been a member of the European Society for Fuzzy Logic and Technology (EUSFLAT).

Since 2020, the team leader has been the **chair of the Timisoara Branch of the Robotics Society of Romania** (SRR, Craiova).

The team leader was a mentor at WCCI 2020 in the framework of IEEE Computational Intelligence Society Mentoring Program.

Since 2005, the team leader has been an honorary member of the Hungarian Fuzzy Association (HFA, MFT, Budapest).

Member of International Program Committees of Prestigiuous International Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/progcom.html):

The team leader is a **Program Committee Co-Chair of 23rd International Conference on Machine Learning and Applications ICMLA'24** (Miami, FL, USA).

The team leader was a **Program Chair of 21st European Control Conference ECC23** (Bucharest, Romania).

The team leader was a **Workshop Chair of 28th IEEE International Conference on Emerging Technologies and Factory Automation ETFA 2023** (Sinaia, Romania).

The team leader was a **Co-Chair of the Control Systems and Applications Track**, with Prof. Gayan Kahandawa Appuhamillage (Australia), Prof. Panlong Tan (China), Prof. Thomas Strasser (Austria), Prof. Chao Deng (China), Prof. Guodong Shi (Australia), Prof. Ramon Guzmán (Spain), Prof. Mickael Hilairet (France), Prof. Hasan Komurcugil (Turkey), Yajun Pan (Canada) and Prof. Jun Yang (UK), in the framework of **49th Annual Conference of the IEEE Industrial Electronics Society IECON 2023** (Singapore).

The team leader was a **FUZZ-IEEE Technical Chair**, with Prof. Plamen Angelov (UK) and Prof. Fernando Gomide (Brazil), **of 2022 IEEE World Congress on Computational Intelligence IEEE WCCI 2022** (Padua, Italy).

The team leader was a **Program Co-Chair**, with Prof. Yuexian Zou (Peking University Shenzhen Graduate School, China), Prof. Gilles Mauris (University Savoie Mont Blanc, France) and Prof. Abdulmotaleb El Saddik (University of Ottawa, Canada), of **2021 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications CIVEMSA 2021** (Virtual).

The team leader was a **Publication Chair** of 14th International Conference on Swarm Intelligence ICSI'2023 (Shenzhen, China), and a **Publication Co-chair** of 13th International Conference on Swarm Intelligence ICSI'2022 (Xi'an, China), 12th International Conference on Swarm Intelligence ICSI'2021 (Qingdao, China), 11th International Conference on Swarm Intelligence ICSI'2020 (Belgrade, Serbia), and 10th International Conference on Swarm Intelligence ICSI'2019 (Chiang Mai, Thailand).

The team leader was the **General Chair of the International Program Committees** of 27th and 23rd International Conferences on System Theory, Control and Computing ICSTCC 2023 and ICSTCC 2019 (Timisoara and Sinaia, Romania), and a **Vice-Chair of the International Program Committees** of 26th, 25th and 24th International Conferences on System Theory, Control and Computing ICSTCC 2022 (Sinaia, Romania), ICSTCC 2021 (Iasi, Romania) and ICSTCC 2020 (Sinaia, Romania).

The team leader was a **General Co-Chair and Technical Program Committee Co-Chair** of IEEE 18th, 17th, 16th, 15th, 14th and 13th International Symposia on Applied Computational Intelligence and Informatics SACI 2024, SACI 2023, SACI 2022, SACI 2021, SACI 2020 and SACI 2019 (Siofok, Hungary, and Timisoara, Romania).

The team leader was a **General Co-Chair** of 17th, 16th and 15th International Conferences on Development and Application Systems DAS 2024, DAS 2022 and DAS 2020 (Suceava, Romania), technically co-sponsored by IEEE Industry Applications Society.

The team leader was a **Program Chair** of 6th and 5th International Conferences on Robotics and Computer Vision ICRCV 2024 and ICRCV 2023 (Wuxi, China, and Nanjing, China).

The team leader was a **Publication Chair** of 2nd International Conference on Artificial Intelligence, Automation and Algorithms AI2A 2022 (Hangzhou, China).

The team leader was an **Associate Editor** of 22nd World Congress of the International Federation of Automatic Control IFAC 2023 (Yokohama, Japan).

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

In 2019-2023, the team leader has been **a member of the international program committees** of the following international conferences: 32nd International Symposium on Industrial Electronics ISIE 2023 (Helsinki-Espoo, Finland), 29th International Conference on Information, Communication and Automation Technologies ICAT 2023 (Sarajevo, Bosnia and Herzegovina), 20th International Conference on Distributed Computing and Artificial Intelligence DCAI 2023 (Guimarães, Portugal), 20th International Conference on Informatics in Control, Automation and Robotics ICINCO 2023 (Rome, Italy), 15th International Joint Conference on Computational Intelligence FCTA 2023 (Rome, Italy), 9th International Conference on Control, Decision and Information Technologies CoDIT 2023 (Rome, Italy), 9th International Conference on Control, Automation and Robotics ICCAR 2023 (Beijing, China), 15th International Conference on Computational Collective Intelligence ICCCI 2023 (Budapest, Hungary), IEEE 27th International Conference on Intelligent Engineering Systems INES 2023 (Nairobi, Kenya), 24th International Carpathian Control Conference ICCC'2023 (Szilvásvárad, Hungary), 15th International KES Conference on Intelligent Decision Technologies KES-IDT-23 (Rome, Italy), 16th International KES Conference on Human Centred Intelligent Systems KES-HCIS-23 (Rome, Italy), 17th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-23 (Rome, Italy), 11th World Conference on Information Systems and Technologies WorldCIST 2023 (Pisa, Italy), International Conference on Operations Research, Business Analytics, and Data Science ICODAS 2023 (Istanbul, Turkey), 2nd International Conference on Internet of Digital Reality IoD 2023 (Smolenice, Slovakia), IEEE 11th International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2023 (Cancún, Mexico), 31st International Joint Conference on Artificial Intelligence and 25th European Conference on Artificial Intelligence IJCAI-ECAI 2022 (Vienna, Austria), 8th IFAC Symposium on System Structure and Control SSSC 2022 (Montreal, Canada), 1st IFAC Workshop on Control of Complex Systems COSY 2022 (Bologna, Italy), 19th International Conference on Informatics in Control, Automation and Robotics ICINCO 2022 (Lisbon, Portugal), 14th International Joint Conference on Computational Intelligence FCTA 2022 (Valletta, Malta), 14th European Symposium on Computational Intelligence and Mathematics ESCIM 2022 (Naples, Italy), The Seventh International Conference on Data Mining and Big Data DMBD'2022 (Beijing, China), International Conference Automatics and Informatics ICAI'22 (Varna, Bulgaria), International Conference on Modern Artificial Intelligence and Data Science Systems MAIDSS 2022 (Rabat, Morocco), 26th IEEE International Conference on Intelligent Engineering Systems INES 2022 (Crete, Greece), IEEE 10th Jubilee International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2022 (Reykjavík, Iceland), IEEE 20th Jubilee International Symposium on Intelligent Systems and Informatics SISY 2022 (Subotica, Serbia), IEEE 11th International Conference on Computational Cybernetics and Cyber-Medical Systems ICCC 2023 (Cancún, Mexico), 1st IEEE International Conference on Cognitive aspects of Virtual Reality cVR 2022 (Online), IEEE Symposium on Computational Intelligence in Control and Automation (IEEE CICA) within 2021 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2021, Orlando, FL, USA), 30th International Joint Conference on Artificial Intelligence IJCAI-21 (Montreal, QC, Canada), 18th International Conference on Informatics in Control, Automation and Robotics ICINCO 2021 (Online Streaming), 13th International Joint Conference on Computational Intelligence FCTA 2021 (Online Streaming), 18th International Conference on Distributed Computing and Artificial Intelligence DCAI 2021 (Salamanca, Spain), IEEE 25th International Conference on Intelligent Engineering Systems INES 2021 (Budapest, Hungary), 13th European Symposium on Computational Intelligence and Mathematics ESCIM 2021 (Budapest, Hungary), IEEE 21st International Symposium on Computational Intelligence and Informatics CINTI 2021 (Budapest, Hungary), IEEE 19th International Symposium on Intelligent Systems and Informatics SISY 2021 (Subotica, Serbia), 2021 IEEE Second International Conference on Control, Measurement and Instrumentation CMI 2021 (Kolkata, India), International Conference Automatics and Informatics ICAI'21 (Varna, Bulgaria), IEEE Symposium on Evolving and Autonomous Learning Systems (IEEE EALS) within 2020 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2020, Canberra, Australia), IEEE 15th International Conference on System of Systems Engineering SoSE 2020 (Budapest, Hungary), 17th International Conference on Informatics in Control, Automation and Robotics ICINCO 2020 (Lieusaint - Paris, France), 7th International Conference on Control, Decision and Information Technologies CoDIT 2020 (Prague, Czech Republic), 12th International Conference on Fuzzy Computation Theory and Applications FCTA 2020 (Budapest, Hungary), IEEE 24th International Conference on Intelligent Engineering Systems INES 2020 (Reykjavík, Iceland), IEEE 18th International Symposium on Intelligent Systems and Informatics SISY 2020 (Subotica, Serbia), 2020 6th International Conference on Control, Automation and Robotics ICCAR 2020 (Singapore), 12th International KES Conference on Intelligent Decision Technologies KES IDT 20 (Split, Croatia), 14th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES AMSTA 20 (Split, Croatia), 13th International KES Conference on Human Centred Intelligent Systems KES HCIS 20 (Split, Croatia), 12th Asian Conference on Intelligent Information and Database Systems ACIIDS 2020 (Phuket, Thailand), 5th

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

IFAC Conference on Intelligent Control and Automation Sciences ICONS 2019 (Belfast, UK), IEEE Symposium on Computational Intelligence in Control and Automation (IEEE CICA) within 2019 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2019, Xiamen, China), 18th IEEE International Conference on Machine Learning and Applications ICMLA 2019 (Boca Raton, FL, USA), 11th International Conference on Computational Collective Intelligence ICCCI 2019 (Hendaye, France), 16th International Conference on Informatics in Control, Automation and Robotics ICINCO 2019 (Prague, Czech Republic), 11th International Conference on Fuzzy Computation Theory and Applications FCTA 2019 (Vienna, Austria), 6th International Conference on Control, Decision and Information Technologies CoDIT'19 (Paris, France), 7th IFAC Symposium on Systems Structure and Control SSSC 2019 (Sinaia, Romania), 16th International Conference on Distributed Computing and Artificial Intelligence DCAI'19 (Avila, Spain), 23rd IEEE International Conference on Intelligent Engineering Systems INES 2019 (Gödöllő, Hungary), 13th International Symposium on Intelligent Distributed Computing IDC 2019 (Saint-Petersburbg, Russia), 19th International Conference on Intelligent Systems Design and Applications ISDA 2019 (Pretoria, South Africa), International Symposium on Information Systems and Engineering ISE 2019 within 17th International Conference on High Performance Computing & Simulation HPCS 2019 (Dublin, Ireland), 19th International Conference on Hybrid Intelligent Systems HIS 2019 (VIT Bhopal University, India), 11th Asian Conference on Intelligent Information and Database Systems ACIIDS 2019 (Yogyakarta, Indonesia), Second International Conference on Artificial Intelligence for Industries ai4i 2019 (Laguna Hills, CA, USA), 11th International KES Conference on Intelligent Decision Technologies KES-IDT-19 (St. Julians, Malta), 13th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications KES-AMSTA-19 (St. Julians, Malta), 12th International KES Conference on Intelligent Interactive Multimedia: Systems and Services KES-IIMSS-19 (St. Julians, Malta), 10th IEEE International Conference on Cognitive Infocommunications CogInfoCom 2019 (Naples, Italy), IEEE Joint 19th International Symposium on Computational Intelligence and Informatics and 7th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics CINTI-MACRo 2019 (Szeged, Hungary), 17th IEEE International Symposium on Intelligent Systems and Informatics SISY 2019 (Subotica, Serbia), 20th International Carpathian Control Conference ICCC 2019 (Krakow-Wieliczka, Poland), Second International Conference on Advanced Computational and Communication Paradigms ICACCP 2019 (Sikkim, India), 6th International Conference on Electrical, Electronic and Computing Engineering IcETRAN 2019 (Srebrno Jezero, Serbia), 7th International Conference on Transportation & Logistics TIL 2019 (Niš, Serbia), and 3rd International Conference on Computing and Network Communications CoCoNet'19 (Trivandrum, Kerala, India).

The team member 1 has been a member of the international program committee of 20th International Conference on Informatics in Control, Automation and Robotics ICINCO 2023 (Rome, Italy).

The team member 3 has been a member of the international program committees of 20th International Conference on Informatics in Control, Automation and Robotics ICINCO 2023 (Rome, Italy), and 15th International Joint Conference on Computational Intelligence FCTA 2023 (Rome, Italy).

Organization of Academic Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/organiz.html):

The team leader was a **Co-chair of the National Organizing Committee** of Joint IFAC Conference 7th IFAC Symposium on Systems Structure and Control SSSC 2019 and 15th IFAC Workshop on Time Delay Systems TDS 2019 (Sinaia, Romania).

The team leader was an **organizer**, with Drs. Jérôme Mendes (Institute of Systems and Robotics (ISR-UC), Portugal), João Paulo (Institute of Systems and Robotics (ISR-UC), Portugal), Cristiano Premebida (Loughborough University, UK) and Rui Araújo (University of Coimbra, Portugal), of the **Special Session** on Computational Intelligence Systems: Iterative, Dynamic, and Evolving Design, in the framework of 45th Annual Conference of the IEEE Industrial Electronics Society IECON 2019 (Lisbon, Portugal).

Session Chair / Co-chair in Academic Conferences in 2019-2023 (http://www.aut.upt.ro/~rprecup/chair.html):

The team leader was a session chair / co-chair at two prestigious conferences: **1st IFAC Workshop on Control of Complex Systems COSY 2022** (Bologna, Italy), and **28th Mediterranean Conference on Control and Automation MED 2020** (Saint-Raphael, France).

The team member 3 was a **FUZZ-IEEE session chair** at **2022 IEEE World Congress on Computational Intelligence IEEE WCCI 2022** (Padua, Italy).

The team member 4 was a session chair at **9th International Conference on Control Decision and Information Technologies CoDIT 2023** (Rome, Italy).

Other Appreciations of the Scientific Activity in 2019-2023:

11. Quantitative indices (Appendix 2) and quantitative evaluation criteria (Appendix 3) 2019-2023

In 2020-2025, the team leader has been appointed to the **Review College of the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO)**, Brussels, Belgium (link).

In 2019-2023, the team leader has been a member of 6 habilitation boards (http://www.aut.upt.ro/~rprecup/habcom.html), and a member of doctoral committees as a referee of 39 doctoral theses in Australia, Czech Republic, France, Italy, Norway and Romania (http://www.aut.upt.ro/~rprecup/doctcom.html).

The team leader was a member of Doctor Honoris Causa title committees awarded to: Prof. László T. Kóczy (chairman of the committee, title awarded by Politehnica University of Timisoara in 2022), Acad. Dorel Banabic (awarded by Politehnica University of Timisoara in 2023), and Dr. Silviu-Iulian Niculescu (awarded by "Lower Danube" University of Galati in 2023).

C5. ORGANIZATIONAL CAPACITY, ASSESSED BY THE WAY THE CANDIDATE HAS CONTRIBUTED TO THE TRAINING OF YOUNG RESEARCHERS AND/OR TO THE ESTABLISHMENT OF RESEARCH GROUPS WITH OUTSTANDING RESULTS AT THE INTERNATIONAL LEVEL

The team leader initiated and created in 2012 the **Process Control Group** of the Politehnica University of Timisoara (UPT), Romania, whose representative members are listed in one of the sections of the team leader's personal webpage: https://www.aut.upt.ro/~rprecup/coll.html, and the most active ones during 2019-2023 are included in this award application, namely: Assoc. Prof. Claudia-Adina Bojan-Dragoş, link, 2035 citations in Google Scholar, h-index = 21, Assoc. Prof. Adriana-Nicoleta Albu, link, 647 citations in Google Scholar, h-index = 12, Lect. Raul-Cristian Roman, link, 2165 citations in Google Scholar, h-index = 24, Lect. Alexandra-Iulia Szedlak-Stînean, Vice-Dean of the Faculty of Automation and Computers of UPT, link, 1121 citations in Google Scholar, h-index = 15, Assist. Lect. Elena-Lorena Hedrea, link, 657 citations in Google Scholar, h-index = 12, and Ph.D. student Iuliu Alexandru Zamfirache, link, 499 citations in Google Scholar, h-index = 6.

The team leader worked with six **Ph.D. students who gratuated under his supervision**: **Elena-Lorena Hedrea** (September 2022), thesis title: "Tensor Product-based Model Transformation Used in Control System Modeling and Design", thesis grade Excellent (Summa cum Laude), she is currently a member of the Process Control Group of UPT; **Raul-Cristian Roman** (March 2018), thesis title: "Model-free techniques for controller tuning" (in Romanian: "Tehnici de tip model-free de acordare a parametrilor regulatoarelor automate"), Recipient of the Honorary Mention in the 2020 IEEE Robotics & Automation Society Romania Chapter Best Ph.D. Thesis Competition, he is currently a member of the Process Control Group of UPT; **Radu-Codruţ David** (April 2015), thesis title: "Contributions to modeling and optimization of fuzzy control systems", link, 2068 citations in Google Scholar, h-index = 22, former postdoc in the Department of Automation and Applied Informatics of UPT and member of the Process Control Group of UPT, he works currently at Saguaro Technology, Timisoara, Romania; **Mircea-Bogdan Rădac** (September 2011), thesis title: "Iterative Techniques for Controller Tuning", link, 3183 citations in Google Scholar, h-index = 30, he is a former member of the Process Control of UPT until 2018, he is currently an Associate Professor in the Department of Automation and Applied Informatics of UPT; **Ovidiu Banias** (May 2009), thesis title: "Contributions to urban road traffic control using a wireless sensor network as traffic detector" (in Romanian: Contributii la conducerea traficului rutier urban utilizand o retea de senzori wireless ca detector de trafic), link, 421 citations in Google Scholar, h-index = 10, he is currently a Vice-Dean of the Faculty of Automation and Computers of UPT; **Zsuzsa Preitl** (April 2008), thesis title: "Model Based Design Methods for Speed Control Applications", she works currently at Siemens Energy, Nürnberg, Germany, where she is the co-author of several patents in USA and Europe.

The team leader worked in the same group from 1995-2000, also as a B.Sc. and M.Sc. advisor, with Prof. **Simona Doboli**, who is currently at the Department of Computer Science, Hofstra University, Hempstead, NY, USA, and received her Ph.D. degree in Electrical Engineering from the University of Cincinnati, Cincinnati, OH, USA, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2001, Ph.D. advisor: Prof. Ali Minai), link.

The team leader worked in the same group from 2000-2007, also as a B.Sc. and M.Sc. advisor, and next continued during 2010-2014, with Prof. **Levente Kovacs**, who is currently the Rector of the Obuda University, Budapest Hungary, and received his Ph.D. degree in Automatic Control at the Budapest University of Technology and Economics, Hungary (2007, Ph.D. advisor: Prof. Zoltan Benyo), link.

The team leader worked in the same group from 1998-1999, also as a B.Sc. and M.Sc. advisor, with Dr. **Stefan Solyom**, who is currently a chief technology officer at Pebble, Cupertino, CA, USA, and worked

at Tesla and also as a researcher and group leader at Volvo Car Corporation, Göteborg, Sweden, he received his Ph.D. degree in Automatic Control at Lund Institute of Technology, Sweden (2004, Ph.D. advisors: Prof. Anders Rantzer, Prof. Björn Wittenmark), link.

The team leader worked in the same group from 2006-2007, also as a B.Sc. and M.Sc. advisor, with Dr. **Mircea-Florian Lupu**, who is currently at Aurora, Pittsburgh, PA, USA, and worked as a Lecturer at the University of Pittsburgh, Pittsburgh, PA, USA, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities**, he received his Ph.D. degree in Electrical Engineering at the University of Pittsburgh, Pittsburgh, PA, USA (2014, advisor: Dr. Zhi-Hong Mao), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Assoc. Prof. **Sergiu Viorel Spătaru**, who is currently at the Department of Electrical and Photonics Engineering of the Technical University of Denmark, Roskilde, Denmark, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities**, and received his Ph.D. degree in Electrical Engineering at Aalborg University, Denmark, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2015, advisor: Prof. Dezso Sera), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Dr. **Cătălin Gavriluță**, who is currently a senior scientist at AIT Austrian Institute of Technology, Vienna, Austria, and worked as a postdoc in the G2ELab of the Grenoble Institute of Technology, Grenoble, France, he received his Ph.D. degree in Electrical Engineering at the Universitat Politècnica de Catalunya, Barcelona, Spain, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2015, advisor: Prof. Ignacio Candela), link.

The team leader worked in the same group from 2008-2009, also as a B.Sc. and M.Sc. advisor, with Dr. **Lucia-Roxana Golea**, who received her Ph.D. degree in Electrical Engineering at the Politecnico di Milano, Italy, listed in the Order no. 5665/2020, dated September 30, 2020, of the Ministry of Education and Research regarding the approval of the list of **prestigious universities** (2012, advisor: Prof. Enrico Zio), link.