Award Application
Grigore Moisil Prize, Romanian Research Gala 2024

January 27, 2024

Contents

Motto: "*Insight must precede application*".
(Max Planck, Nobel Prize in Physics)

1 Candidate's personal details

Name: Vicenţiu D. RĂDULESCU

Degrees:

– PhD in Mathematics, Sorbonne University (former Université Pierre et Marie Curie–Paris 6). The thesis "Analyse de quelques problèmes liés à l'équation de Ginzburg-Landau" was defended in June 1995. PhD adviser: Professor Haim Brezis (Académie des Sciences–Institut de France, National Academy of Sciences, American Academy of Arts and Sciences, Steele Prize). The commission was composed by Haim Brezis (president), Fabrice Béthuel, Thierry Cazenave, Doina Cioranescu, Alain Haraux, Frédéric Hélein and L.A. Peletier. For this thesis I received the highest academic distinction: *très honorable avec félicitations.*

– Ph. D. in Mathematics, University of Craiova, Romania with the thesis "Applications of Operator Theory to Nonlinear Analysis", defended in December 1993. Adviser: Constantin Niculescu.

– Habilitation in Mathematics, Sorbonne University (former Université Pierre et Marie Curie–Paris 6). The Habilitation Mémoire "Analyse de quelques problèmes aux limites elliptiques non linéaires" was defended in February 2003. President of the commission: Haim Brezis. Reviewers: Catherine Bandle, Otared Kavian and Michel Willem. The other members of the commission were Fabrice Bethuel, Doina Cioranescu and Laurent Véron.

– Habilitation in Mathematics (AGH University of Kraków) with the Mémoire "Local and nonlocal problems in nonlinear analysis", June 2023. President of the commission: Piotr Biler. Reviewers: Jan Cholewa, Bartłomiej Dyda, Krzysztof Chełmiński, Piotr Gwiadza, Piotr Kut.

Positions:

– Professor, University of Craiova, Romania

– Professorial Fellow, Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest

Honorary positions:

– 2008: Distinguished Foreign Professor, University of Ljubljana

– 2014–2021: Distinguished Adjunct Professor, King Abdulaziz University, Jeddah

– 2014–2019: Honorary Director, Institute of Mathematics of the Heilongjiang Institute of Technology, Harbin

– 2015: Senior Research Fellow, City University of Hong Kong

– 2018–2023: Guest Professor, Harbin Engineering University

– 2019–2020: Distinguished Professor, University of Electronic Science and Technology of China, Chengdu

– 2019, 2024: Senior Research Fellow, Central South University

– 2011–present: Director of the Research Laboratory "Pure and Applied Nonlinear Analysis", University of Craiova

Research positions:

– 22008-2022: Institute of Mathematics, Physics and Mechanics & University of Ljubljana, Slovenia

– 2018-present: AGH University of Kraków, Poland

– 2023-present: Brno University of Technology, Czech Republic

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Prize application: Grigore Moisil Prize in Mathematics (individual), Romanian Research Gala 2024

2 Brief description of the main scientific achievements in the last 5 years (at most 4 pages)

My research work is concerned with the mathematical treatment of several problems arising in "nonlinear analysis". So, a natural question is:

Why nonlinear analysis?

The simplest answer is the following: "because our world is nonlinear". Otherwise, we can explain its role in relationship with the new frontiers of science. Indeed, science has been transforming our daily lives. Advances in physics have pushed our understanding of the universe to new frontiers. Under these new circumstances, what is the role of "nonlinear analysis"? Nonlinear analysis is the foundation upon which nearly every area of applied mathematics is built. To a great extent, these applied fields describe phenomena driven by nonlinear (local or nonlocal) equations.

In a specific way, my research work deals with the rigorous qualitative and quantitative analysis of several relevant local and nonlocal phenomena that arise in the applied sciences. The modern theory of partial differential equations started after the seminal contributions of H. Poincaré [38, 39, 40] who emphasized the close relationship between the mathematical analysis of partial differential equations and the wide range of applications of these problems. Poincaré established not only several basic results in the theory of linear elliptic equations but he is also a

pioneer of the theory of *nonlinear* elliptic equations. My recent contributions are concerned with the mathematical analysis of several classes of local or nonlocal Schrödinger-type equations. The Schrödinger equation is central in quantum mechanics and it plays the role of Newton's laws and conservation of energy in classical mechanics, that is, it predicts the future behaviour of a dynamical system. The linear Schrödinger equation is a central tool of quantum mechanics, which provides a thorough description of a particle in a non-relativistic setting. The nonlinear version of this equation has a complicate structure and it was initially developed by Schrödinger, inspired by the work of Lord Rayleigh in acoustics. The nonlocal version of this equation was first studied in the 1928 pioneering paper by G. Gamow [15], who proved the tunneling effect. The notion of solution used by him was not explicitly mentioned in the paper but it is coherent with the notion of weak solution introduced several years later by other authors such as J. Leray, S. Sobolev and L. Schwartz. The main nonlocal problems studied in my papers are concerned with Kirchhoff, Choquard-Pekar and Stein-Weiss systems. These classes of problems were introduced in the pioneering contributions by G. Kirchhoff [23] (study of transverse oscillations of a stretched string). Recently, the fractional Schrödinger equation was studied by N. Laskin [24, 25] as a manifestation of fractional quantum mechanics, namely as an expansion of the Feynman path integral from Brownian-like to Lévy-like quantum mechanical paths.

My research contributions in the last five years include several papers published in some of the most influential mathematical journals in the world. In several circumstances, the problems are driven by various classes of unbalanced *local* or *nonlocal* operators, which generate *double phase* or *multi phase* energy functionals. I have expressed a constant interest in such type of problems during the last years, motivated by discussions with several leaders in the field. One of them is P. Marcellini, the pioneer of the regularity theory for (p, q)-equations, who introduced me to the study of double phase problems and proposed me several relevant topics in this field.

My research activity in the last five years is developed around two basic notions in applied sciences, namely "nonlinearity" and "anisotropy". I have divided my work in these fields into the following five topics dealing with the qualitative mathematical analysis of various nonlinear models described by local or nonlocal operators. For every topic, I will briefly describe my scientific contributions in relationship with some of my very recent papers.

I. Nonlinear elliptic equations. I have been interested in the analysis of singular problems, non-autonomous equations with unbalanced growth, and critical differential systems. My results include the qualitative analysis of solutions, such as existence, nonexistence and parametric analysis for some classes of nonlinear elliptic systems with Dirichlet or Neumann boundary condition.

The analysis contained in paper [20] is extended to a new class of non-homogeneous operators introduced recently by C. Stuart [47, 48], in relationship with the existence of guided cylindrical TM-modes in an inhomogeneous self-focusing dielectric. According with the growth of the reaction, in our paper there are studied the linear and sublinear cases. Open problems concern the superlinear and critical cases and partial results are now available (not yet published). A major difficulty in [20] is to show that the Palais-Smale sequence at the mountain pass level is bounded. This is usually achieved by applying the principle of *localizing the Palais-Smale sequence*. To overcome this difficulty, we introduce a different approach. On the one hand, we consider a modified energy functional in order to ensure, from the beginning, that a non-negative

critical point will be obtained. On the other hand, we make use of the approach developed in [19] to obtain a bounded Palais-Smale sequence.

Paper [36] is concerned with a class of double phase equations ((p,q)-equations, in the terminology of P. Marcellini) and the novelty relies in the study of the combined effects generated by singular terms and a nonlinearity depending on the gradient (convection term). The case corresponding to Neumann boundary conditions is less studied in the framework of singular problems with convection. The particular structure of the problem implies a nonvariational approach, which relies essentially on the Leray-Schauder alternative principle, cf. A. Granas and J. Dugundji [16, p. 124].

II. Regularity and gradient estimates of solutions. This analysis covers both the isotropic case and the anisotropic setting associated to problems with variable exponent. In the first case, I discuss sharp gradient estimates for multi-phase problems in Campanato spaces, cf. [8]. The anisotropic framework corresponds to degenerate fully nonlinear elliptic equations with variable exponent.

Paper [11] complements the regularity theory for double phase problems and its purpose is twofold:

(i) the analysis is developed in the anisotropic case, corresponding to the presence of several variable exponents;

(ii) the regularity of solutions is established in the framework of degenerate fully nonlinear elliptic equations.

The problem studied in [11] features an inhomogeneous degenerate term modelled on a double phase integrand with variable exponents. Our main hypothesis extends to the *anisotropic* setting the condition introduced by P. Marcellini [26, 27] in the *isotropic* case as a prototype of energy functionals satisfying nonstandard growth conditions of (p,q)-type. By making use of geometric tangential methods and combing a refined improvement-of-flatness approach with compactness and scaling techniques, we establish a sharp regularity result, in the sense that the viscosity solutions of this problem are locally of class $C^{1,\alpha}(\Omega)$.

The main result in [13] establishes a new Campanato-type estimate for the weak solutions of a class of multi-phase problems. The problem under consideration is characterized by the fact that both ellipticity and growth switch between three different types of polynomial according to the position, which describes a feature of strongly anisotropic materials. The results obtained in [13] are different from the BMO-type estimates for the usual p-Laplacian equation due to E. DiBenedetto and J. Manfredi. In contrast with the space of functions of bounded mean oscillation, which is due to F. John and L. Nirenberg [22], the Campanato space describes situations where the oscillation of the function in a ball is proportional to some power of the radius other than the dimension.

III. Concentration and multiplicity properties of solutions. I have been concerned with fractional double phase patterns described by unbalanced fractional Laplace operators, double phase problems with competing potentials, and nonlinear Schrödinger equations with magnetic potential. The abstract arguments are at the interplay between several fields, including calculus of variations (critical point theory), topology (Ljusternik-Schnirelmann category), perturbation analysis, and asymptotic methods.

Paper [3] is concerned with the existence, multiplicity and concentration behavior of positive solutions of fractional double phase problems, which has a particular interest due to the unbalanced behaviour of the operator in the source term. The main result established that the number of solutions of the problem is in relationship with the topology of the set of minima of the potential. In this new nonlocal abstract setting, we develop the Moser iteration scheme introduced by J. Moser [34] to deduce L^∞-estimates and to establish a Hölder regularity property.

Paper [21] deals with the study of multiplicity and concentration properties for the nonlinear magnetic Schrödinger equation. A feature of this paper is that the reaction has regularity than usually, hence related arguments existing in the literature fail. Moreover, due to the presence of the magnetic field, the problem cannot be changed into a pure real-valued equation, hence we deal directly with a complex-valued problem, which causes several new difficulties.

To the best of my knowledge, paper [52] is the first work dealing with concentration properties of solutions to *double phase* problems in the presence of *two* competing potentials. The features of [52] are the following:

(i) the presence of several differential operators with different growth, which generate a double phase associated energy;

(ii) the problem combines the multiple effects generated by *two* variable potentials;

(iii) there exists a competition effect between the absorption potential and the reaction potential, which implies more complex phenomena to locate the concentration positions;

(iv) the main concentration phenomenon creates a bridge between the global maximum point of the solution versus the global maximum of the reaction potential and the global minimum of the absorption potential;

(v) due to the unboundedness of the domain, the Palais-Smale sequences do not have standard compactness properties.

IV. Qualitative analysis of double phase problems. The interest to the study of problems with multiple phase comes from the pioneering contributions of J. Ball [6] and V. Zhikov [54], in relationship with patterns arising in nonlinear elasticity, composite materials, and strongly anisotropic materials in the context of homogenisation.

In paper [35] it is studied a class of non-autonomous double phase Dirichlet problems. The features of this paper are the following:

(i) The source term is driven by a differential operator with a power-type nonhomogeneous term.

(ii) The corresponding energy functional is a non-autonomous variational integral that satisfies nonstandard growth conditions of (p, q)-type.

(iii) The potential that describes the differential operator satisfies general regularity assumptions and it belongs to the p-Muckenhoupt class. Accordingly, the thorough spectral and the qualitative analysis contained in this paper are developed in Musielak-Orlicz-Sobolev spaces.

(iv) The paper covers both the coercive resonant case and the noncoercive (asymptotic resonance or nonresonance) case.

Paper [51] is concerned with the analysis of obstacle problems with convection (a reaction term depending on the gradient). The features of paper [51] are the following:

(i) the presence of a nonhomogeneous differential operator with different isotropic growth, which generates a double phase associated energy;

(ii) the analysis deals with the combined effects of a nonstandard operator with unbalanced growth, a convection nonlinearity, three multivalued terms, and an implicit obstacle constraint;

(iii) the proofs rely on fixed point methods for multivalued operators in combination with tools from nonsmooth analysis and theory of pseudomonotone operators.

A relevant contribution is established in [12] concerning the equivalence of weak and viscosity solutions for the nonhomogeneous double phase equation.

V. Nonlocal Kirchhoff, Choquard-Pekar and Stein-Weiss systems. My contributions include critical planar problems in the sense of Trudinger-Moser, critical systems with Stein-Weiss convolution, solutions of the Choquard-Pekar equation (also known as the Schrödinger-Newton equation in models coupling the Schrödinger equation of Quantum Physics together with nonrelativistic Newtonian gravity).

Paper [9] is concerned with the existence of ground state solutions for the critical exponential growth Kirchhoff equation with potential satisfying the Rabinowitz trapping condition. We overcome the following technical difficulties:

(i) the lack of the monotonicity condition and the Ambrosetti-Rabinowitz type condition prevent us from using usual methods to prove the boundednss of Cerami sequences;

(ii) it is more difficult to rule out the concentration phenomena and the vanishing phenomena of Cerami sequences;

(iii) it does not work that the BL-splitting property for the energy functional along Cerami sequences is caused by the appearance of the nonlinear term with critical growth, which is a powerful tool to restore the compactness of Cerami sequences.

Other papers dealing with nonlocal problems are [18, 42, 50] and the monograph [31].

3 Curriculum Vitae

I shall describe the main qualitative and quantitative features of my research activity in the last 5 years. This description will include the following directions:

(i) research papers published in Q1 journals (according with Web of Science);

(ii) Highly Cited Researchers ranking;

(iii) principal investigator of research projects with a budget of at least 100.000 EUR;

(iv) invited researcher in prestigious foreign universities;

(v) editor-in-chief and editor of journals indexed by Web of Science;

(vi) cumulative influence score of the Q1 papers published in the last 5 years.

3.1 Research papers published in Q1 journals (2019-2023)

My papers and books can be found on my web site:

`http://math.ucv.ro/radulescu/publications.html`

The papers I have published in Q1 journals (according with the AIS ranking established in 2023) are the following:

1. X. Mingqi, V.D. Rădulescu, B. Zhang, Fractional Kirchhoff problems with critical Trudinger-Moser nonlinearity, *Calc. Var. PDE* **58** (2019), 58:57. AIS: 1,792. Weighted AIS: 1,792/3=0,597.

2. X. Mingqi, V.D. Rădulescu, B. Zhang, A critical fractional Choquard-Kirchhoff problem with magnetic field, *Communications in Contemporary Mathematics* **21** (2019) 1850004. AIS: 1,227. Weighted AIS: 1,227/3=0,409.

3. A. Bahrouni, V.D. Rădulescu, D. Repovs, Double phase transonic flow problems with variable growth: nonlinear patterns and stationary waves, *Nonlinearity* **32** (2019), 2481-2495. AIS: 1,243. Weighted AIS: 1,243/3=0,414.

4. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Positive solutions for nonlinear parametric singular Dirichlet problems, *Bulletin of Mathematical Sciences*, Vol. 9, No. 3 (2019) 1950011. AIS: 1,230. Weighted AIS: 1,230/3=0,410.

5. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Nonlinear nonhomogeneous boundary value problems with competition phenomena, *Applied Mathematics and Optimization* **80** (2019), 251-298. AIS: 1,010. Weighted AIS: 1,010/3=0,336.

6. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Positive solutions for a class of singular Dirichlet problems, *Journal of Differential Equations* **267** (2019), 6539-6554. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

7. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Nonlinear nonhomogeneous singular problems, *Calculus of Variations and Partial Differential Equations* (2020), 59:9. AIS: 1,792. Weighted AIS: 1,792/3=0,597.

8. D. Goel, V.D. Rădulescu, K. Sreenadh, Coron problem for nonlocal equations involving Choquard nonlinearity, *Advanced Nonlinear Studies* **20** (2020), 141-161. AIS: 1,131. Weighted AIS: 1,131/3=0,377.

9. V. Ambrosio, V.D. Rădulescu, Fractional double-phase patterns: concentration and multiplicity of solutions, *Journal de Mathématiques Pures et Appliquées* **142** (2020), 101-145. AIS: 2,066. Weighted AIS: 2,066/2=1,033.

10. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Relaxation methods for optimal control problems, *Bulletin of Mathematical Sciences* **10** (2020), 2050004, 24 pp. AIS: 1,230. Weighted AIS: 1,230/3=0,410.

11. D. Kumar, V.D. Rădulescu, K. Sreenadh, Singular elliptic problems with unbalanced growth and critical exponent, *Nonlinearity* **33** (2020), 3336-3369. AIS: 1,243. Weighted AIS: 1,243/3=0,414.

12. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Existence and multiplicity of solutions for double-phase Robin problems, *Bull. London Math. Soc.* **52** (2020), 546-560. AIS: 1,120. Weighted AIS: 1,120/3=0,373.

13. A. Bahrouni, V.D. Rădulescu, P. Winkert, A critical point theorem for perturbed functionals and low perturbations of differential and nonlocal systems, *Advanced Nonlinear Studies* **20** (2020), 663-674. AIS: 1,131. Weighted AIS: 1,131/3=0,377.

14. G. Molica Bisci, V.D. Rădulescu, On the nonlinear Schrödinger equation on the Poincaré ball model, *Nonlin. Analysis* **201** (2020), 111812. AIS: 0,964. Weighted AIS: 0,964/2=0,482.

15. N. Papageorgiou, V.D. Rădulescu, D. Repovš, Anisotropic equations with indefinite potential and competing nonlinearities, *Nonlinear Analysis* **201** (2020), 111861. AIS: 0,964. Weighted AIS: 0,964/3=0,321.

16. S. Chen, V.D. Rădulescu, X. Tang, B. Zhang, Ground state solutions for quasilinear Schrödinger equations with variable potential and quasilinear reaction, *Revista Matematica Iberoamericana* **36** (2020), 1549-1570. AIS: 1,355. Weighted AIS: 1,355/4=0,338.

17. C. Ji, V.D. Rădulescu, Multiplicity and concentration of solutions to the nonlinear magnetic Schrödinger equation, *Calculus of Variations and Partial Differential Equations* **59** (2020), no. 4, Paper No. 115, 28 pp. AIS: 1,792. Weighted AIS: 1,792/2=0,896.

18. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Positive solutions for nonlinear Neumann problems with singular terms and convection, *Journal de Mathématiques Pures et Appliquées* **136** (2020), 1-21. AIS: 2,066. Weighted AIS: 2,066/3=0,688.

19. V.D. Rădulescu, D. Repovš, X. Shi, Q. Zhang, Multiple solutions of double phase variational problems with variable exponent, *Advances in Calculus of Variations* **13** (2020), 385-401. AIS: 1,344. Weighted AIS: 1,344/4=0,336.

20. A. Mohammed, V.D. Rădulescu, A. Vitolo, Blow-up solutions for fully nonlinear equations: existence, asymptotic estimates and uniqueness, *Adv. Nonlinear Anal.* **9** (2020), no. 1, 39-64. AIS: 2,576. Weighted AIS: 2,576/3=0,859.

21. X. Mingqi, V.D. Rădulescu, B. Zhang, Superlinear Schrödinger-Kirchhoff type problems involving the fractional p-Laplacian and critical exponent, *Adv. Nonlinear Anal.* **9** (2020), no. 1, 690-709. AIS: 2,576. Weighted AIS: 2,576/3=0,859.

22. Y. Zhang, X. Tang, V.D. Rădulescu, Small perturbations for nonlinear Schrödinger equations with magnetic potential, *Milan J. Math.* **88** (2020), 546-560. AIS: 1,210. Weighted AIS: 1,21/3=0,40.

23. M. Marin, V.D. Rădulescu, On some non-existence results in a semilinear theory of the dipolar thermoelastic bodies, *Applied Mathematics and Optimization* **84** (2021), 1959-1969. AIS: 1,010. Weighted AIS: 1,01/2=0,505.

24. D. Qin, V.D. Rădulescu, X. Tang, Ground states and geometrically distinct solutions for periodic Choquard-Pekar equations, *Journal of Differential Equations* **275** (2021), 652-683. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

25. Y. Fang, V.D. Rădulescu, C. Zhang, Regularity of solutions to degenerate fully nonlinear elliptic equations with variable exponent, *Bulletin of the London Mathematical Society* **53** (2021), 1863-1878. AIS: 1,120. Weighted AIS: 1,12/3=0,373.

26. X. He, V.D. Rădulescu, Small linear perturbations of fractional Choquard equations with critical exponent, *J. Differential Equations* **282** (2021), 481-540. AIS: 1,416. Weighted AIS: 1,416/2=0,708.

27. C. Ji, V.D. Rădulescu, Concentration phenomena for nonlinear magnetic Schrödinger equations with critical growth, *Israel J. Math.* **241** (2021), 465-500. AIS: 1,069. Weighted AIS: 1,069/2=0,534.

28. S. Chen, V.D. Rădulescu, X. Tang, Normalized solutions of non-autonomous Kirchhoff equations: sub- and super-critical cases, *Applied Mathematics and Optimization* **84** (2021), 773-806. AIS: 1,010. Weighted AIS: 1,01/3=0,336.

29. X. Mingqi, V.D. Rădulescu, B. Zhang, Nonlocal Kirchhoff problems with singular exponential nonlinearity, *Applied Mathematics and Optimization* **84** (2021), 915-954. AIS: 1,010. Weighted AIS: 1,01/3=0,336.

30. F. Gao, V.D. Rădulescu, M. Yang, Y. Zheng, Standing waves for the pseudo-relativistic Hartree equation with Berestycki-Lions nonlinearity, *Journal of Differential Equations* **295** (2021), 70-112. AIS: 1,416. Weighted AIS: 1,416/4=0,354.

31. N. Papageorgiou, V.D. Rădulescu, D. Repovs, Anisotropic (p,q)-equations with gradient dependent reaction, *Nonlinearity* **34** (2021), 5319-5343. AIS: 1,243. Weighted AIS: 1,243/3=0,414.

32. A. Aghajani, C. Cowan, V.D. Rădulescu, Positive supersolutions of fourth-order nonlinear elliptic equations: explicit estimates and Liouville theorems, *Journal of Differential Equations* **298** (2021), 323-345. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

33. C. Ji, V.D. Rădulescu, Multi-bump solutions for quasilinear elliptic equations with variable exponents and critical growth in $\mathbb{R}^N$, *Commun. Contemp. Math.* **23** (2021), No. 5, 2050013. AIS: 1,227. Weighted AIS: 1,227/2=0,613.

34. C. Ji, V.D. Rădulescu, Multiplicity and concentration of solutions for Kirchhoff equations with magnetic field, *Advanced Nonlinear Studies* **21** (2021), 501-521. AIS: 1,131. Weighted AIS: 1,131/2=0,565.

35. Y. Zhang, V.D. Rădulescu, X. Tang, Concentration of solutions for fractional double-phase problems: critical and supercritical cases, *Journal of Differential Equations* **302** (2021), 139-184. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

36. A. Bahrouni, V.D. Rădulescu, D. Repovs, Nonvariational and singular double phase problems for the Baouendi-Grushin operator, *Journal of Differential Equations* **303** (2021), 645-666. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

37. W. Lian, V.D. Rădulescu, R. Xu, Y. Yang, N. Zhao, Global well-posedness for a class of fourth order nonlinear strongly damped wave equations, *Advances in Calculus of Variations* **14** (2021), 589-611. AIS: 1,344. Weighted AIS: 1,344/5=0,268.

38. A. Alsaedi, V.D. Rădulescu, B. Ahmad, Bifurcation analysis for degenerate problems with mixed regime and absorption, *Bull. Math. Sci.* **11** (2021), no. 1, Paper No. 2050017, 18 pp. AIS: 1,995. Weighted AIS: 1,995/3=0,665.

39. C. Ji, V.D. Rădulescu, Multi-bump solutions for the nonlinear magnetic Choquard equation with deepening potential well, *Journal of Differential Equations* **306** (2022), 251-279. AIS: 1,416. Weighted AIS: 1,416/2=0,708.

40. Z. Liu, V.D. Rădulescu, C. Tang, J. Zhang, Another look at planar Schrödinger-Newton systems, *Journal of Differential Equations* **328** (2022), 65-104. AIS: 1,416. Weighted AIS: 1,416/4=0,354.

41. L. Shen, V.D. Rădulescu, M. Yang, Planar Schrödinger-Choquard equations with potentials vanishing at infinity: the critical case, *Journal of Differential Equations* **329** (2022), 206-254. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

42. S. Yao, H. Chen, V.D. Rădulescu, J. Sun, Normalized solutions for lower critical Choquard equations with critical Sobolev perturbation, *SIAM Journal on Mathematical Analysis* **54** (2022),
no. 3, 3696-3723. AIS: 1,533. Weighted AIS: 1,533/4=0,383.

43. Y. Fang, V.D. Rădulescu, C. Zhang, X. Zhang, Gradient estimates for multi-phase problems in Campanato spaces, *Indiana University Mathematics Journal* **71** (2022), 1079-1099. AIS: 1,199. Weighted AIS: 1,199/4=0,299.

44. L. Jeanjean, V.D. Rădulescu, Nonhomogeneous quasilinear elliptic problems: linear and sublinear cases, *Journal d'Analyse Mathématique* **146** (2022), no. 1, 327-350. AIS: 1,081. Weighted AIS: 1,081/2=0,54.

45. M. Yang, V.D. Rădulescu, X. Zhou, Critical Stein-Weiss elliptic systems: symmetry, regularity and asymptotic properties of solutions, *Calculus of Variations and Partial Differential Equations* **61** (2022), issue 3, Article 109, 38 pp. AIS: 1,792. Weighted AIS: 1,792/3=0,597.

46. S. Zeng, V.D. Rădulescu, P. Winkert, Double phase implicit obstacle problems with convection and multivalued mixed boundary value conditions, *SIAM Journal on Mathematical Analysis* **54** (2022), 1898-1926. AIS: 1,533. Weighted AIS: 1,533/3=0,511.

47. C. Yang, V.D. Rădulescu, R. Xu, M. Zhang, Global well-posedness analysis for the nonlinear extensible beam equations in a class of modified Woinowsky-Krieger models, *Advanced Nonlinear Studies* **22** (2022), 436-468. AIS: 1,148. Weighted AIS: 1,148/4=0,287.

48. R. Shen, M. Xiang, V.D. Rădulescu, Time-space fractional diffusion problems: existence, decay estimates and blow-up of solutions, *Milan J. Math.* **90** (2022), 103-129. AIS: 1,210. Weighted AIS: 1,21/3=0,40.

49. W. Yan, V.D. Rădulescu, The inviscid limit for the incompressible stationary magnetohydrodynamics equations in three dimensions, *Bull. Math. Sci.* **12** (2022), no. 1, Paper No. 2150006, 37 pp. AIS: 1,995. Weighted AIS: 1,995/2=0,997.

50. N.S. Papageorgiou, A. Pudelko, V.D. Rădulescu, Non-autonomous (p,q)–equations with unbalanced growth, *Mathematische Annalen* **385** (2023), 1707-1745. AIS: 1,671. Weighted AIS: 1,671/3=0,557.

51. A. Aghajani, V.D. Rădulescu, Positive supersolutions of non-autonomous quasilinear elliptic equations with mixed reaction, *Annales de l'Institut Fourier* **73** (2023) , 2543-2566 AIS: 1,313. Weighted AIS: 1,313/2=0,656.

52. C. Lei, V.D. Rădulescu, B. Zhang, Low perturbations and combined effects of critical and singular nonlinearities in Kirchhoff problems, *Applied Mathematics and Optimization* **87**, (2023), Paper 9. AIS: 1,010. Weighted AIS: 1,010/3=0,336.

53. S. Zeng, Y. Bai, N.S. Papageorgiou, V.D. Rădulescu, Double phase implicit obstacle problems with convection term and multivalued operator, *Analysis and Applications* **21** (2023), 1013-1038. AIS: 0,985. Weighted AIS: 0,985/4=0,246.

54. M. Zhen, V.D. Rădulescu, B. Zhang, Multi-peak solutions for coupled nonlinear Schrödinger systems in low dimensions, *Applied Mathematics and Optimization* **88** (2023), Paper 4. AIS: 1,010. Weighted AIS: 1,010/3=0,336.

55. Y. Fang, V.D. Rădulescu, C. Zhang, Equivalence of weak and viscosity solutions for the nonhomogeneous double phase equation, *Math. Annalen* (2023).
DOI: 10.1007/s00208-023-02593-y. AIS: 1,671. Weighted AIS: 1,671/3=0,557.

56. W. Zhang, J. Zhang, V.D. Rădulescu, Concentrating solutions for singularly perturbed double phase problems with nonlocal reaction, *Journal of Differential Equations* **347** (2023), 56-103. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

57. S. Zeng, L. Gasinski, V.D. Rădulescu, P. Winkert, Anisotropic and isotropic implicit obstacle problems with nonlocal terms and multivalued boundary conditions, Communications in Nonlinear Science and Numerical Simulation **118C** (2023) 106997. AIS: 0,817. Weighted AIS: 0,817/4=0,208.

58. X. Chang, V.D. Rădulescu, R. Wang, D. Yan, Convergence of least energy sign-changing solutions for logarithmic Schrödinger equations on locally finite graphs, Commun. Nonlinear Sci. Numer. Simul. **125** (2023), Paper 107418. AIS: 0,817. Weighted AIS: 0,817/4=0,208.

59. W. Guan, V.D. Rădulescu, D. Wang, Bound states of fractional Choquard equations with Hardy-Littlewood-Sobolev critical exponent, *Journal of Differential Equations* **355** (2023), 219-247. AIS: 1,416. Weighted AIS: 1,416/3=0,472.

60. S. Zeng, Y. Bai, V.D. Rădulescu, P. Winkert, An inverse problem for a double phase implicit obstacle problem with multivalued terms, *ESAIM Control Optim. Calc. Var.* **29** (2023), Paper 30. AIS: 0,978. Weighted AIS: 0,978/4=0,244.

61. N.S. Papageorgiou, V.D. Rădulescu, X. Sun, Indefinite perturbations of the eigenvalue problem for the nonautonomous p-Laplacian, *Milan J. Math.* **91** (2023), 353-373. AIS: 1,210. Weighted AIS: 1,21/3=0,40.

62. Z. Liu, V.D. Rădulescu, J. Zhang, A planar Schrödinger-Newton system with Trudinger-Moser critical growth, *Calculus of Variations and Partial Differential Equations* **62** (2023), Article 122 (2023). AIS: 1,792. Weighted AIS: 1,792/3=0,597.

63. S. Chen, V.D. Rădulescu, X. Tang, S. Yuan, Normalized solutions for Schrödinger equations with critical exponential growth in $\mathbb{R}^2$, *SIAM Journal on Mathematical Analysis* **55** (2023), 7704-7740. AIS: 1,533. Weighted AIS: 1,533/4=0,383.

64. W. Ye, F. Gao, V.D. Rădulescu, M. Yang, Construction of infinitely many solutions for two-component Bose-Einstein condensates with nonlocal critical interaction, *Journal of Differential Equations*, **375** (2023), 415-474. AIS: 1,416. Weighted AIS: 1,416/4=0,354.

65. X. Dou, X. He, V.D. Rădulescu, Multiplicity of positive solutions for the fractional Schrödinger-Poisson system with critical nonlocal term, *Bulletin of Mathematical Sciences* (2023). DOI: 10.1142/S1664360723500121. AIS: 1,230. Weighted AIS: 1,230/3=0,410.

66. T. Gou, V.D. Rădulescu, Non-autonomous double phase eigenvalue problems with indefinite weight and lack of compactness, *Bull. London Math. Soc.* (2023). DOI: 10.1112/blms.12961. AIS: 1,120. Weighted AIS: 1,12/2=0,560.

67. S. Zeng, V.D. Rădulescu, P. Winkert, Nonlocal double phase implicit obstacle problems with multivalued boundary conditions, *SIAM J. Math. Anal.* (2023). `https://doi.org/10.1137/22M1501040`. AIS: 1,533. Weighted AIS: 1,533/3=0,511.

3.2 Highly Cited Researchers ranking

In 2014, 2019, 2020 and 2021, I have been selected as *Highly Cited Researcher* in the field of Mathematics, cf. Thomson Reuters and Clarivate. Details can be found on my WoS page:
`https://www.webofscience.com/wos/author/record/24132`

3.3 Principal investigator of research projects with a budget of at least 100.000 EUR

1. 2010-2013: *Differential systems in nonlinear analysis and applications*, grant funded by the Romanian Research Agency CNCS, the only grant in Mathematics approved in the competition "Complex Research Exploratory Projects" (No. PCCE-8/2010). Budget: 6.300.000 RON.

2. 2011-2016: *Qualitative and numerical analysis of nonlinear problems on fractals*, grant funded by the Romanian Research Agency CNCS, approved in the competition "Research Exploratory Projects" (No. PCE-47/2011). Budget: 1.500.000 RON.

3. 2014-2017: *Information security assurance systems based on non-linear analysis models a informational flow*, grant CNCS–PCCA "Advanced Research Exploratory Projects" (No. PN-II-PT-PCCA-2013-4-0614). Budget: 1.250.000 RON.

4. 2017-2020: *Qualitative and numerical analysis of some classes of anisotropic differential systems and applications*, grant funded by the Romanian Research Agency UEFISCDI and approved in the competition "Research Exploratory Projects" (No. PN-III-P4-ID-PCE-2016-0130). Budget: 850.000 RON.

5. 2021-2023: *Nonlinearity and anisotropy*, grant funded by the Romanian Research Agency UEFISCDI and approved in the competition "Research Exploratory Projects" No. (PN-III-P4-ID-PCE-2020-0068). Budget: 1.195.032 RON.

6. 2023-2026: *Nonlinear Differential Systems in Applied Sciences*, PNRR research project funded by the Romanian Ministry of Research, Innovation and Digitization, within PNRR-III-C9-2022-I8 (Grant No. 22). Budget: 7.000.000 RON.

3.4 Invited professor in foreign universities (selection)

3.4.1 Extended research visits

1. December 15, 1997–February 15, 1998: Universities of Sussex and Oxford, with a Royal Society Research Fellowship

2. 1998-2001 (4 months every year): PAST Visiting Professor at the Laboratoire d'Analyse Numérique, Université Pierre et Marie Curie–Paris 6 (now, Paris Sorbonne University)

3. September 1–November 30, 2002: Université de Savoie–Chambéry with a CNRS research visiting position (Poste Rouge)

4. January 6–July 4, 2014: Isaac Newton Institute, Cambridge, Programme *Free Boundary Problems and Related Topics* (G.-Q. Chen, H. Shahgholian, J.-L. Vázquez, organizers)

3.4.2 Other visiting positions

1. University of Uppsala (two weeks in October 1995)
2. Politecnico di Milano (March 1996, with a CNR research grant)
3. Freie Universität in Berlin (two weeks in May 1996)
4. Aristotle University in Thessaloniki (June 1996)
5. Leiden University (October and November 1996)
6. Università Cattolica di Brescia (March 1997, with a CNR research grant)
7. Aristotle University in Thessaloniki (May 15 - June 15, 1997)
8. Université Catholique de Louvain (Belgium) in November 1998
9. University of Perugia (Nov. 15 - Dec. 15, 1999, with a CNR research grant)
10. Université Pierre et Marie Curie (March 1 - May 31, 2001) with a CNRS research visiting position at the Laboratoire d'Analyse Numérique
11. Université Catholique de Louvain (Belgium) in October 2001
12. Université de Picardie "Jules Verne", Amiens (February 2002)
13. Politecnico di Milano (June–July 2002, with a GNAMPA–INdAM Visiting Professor position)
14. Université de Picardie "Jules Verne", Amiens (February 2003)
15. Université de Tunis El Manar (two weeks in April 2003)
16. Institut Elie Cartan, Université Henri Poincaré (Nancy I) (May 2003)
17. Mathematisches Institut, Basel Universität (two weeks in June 2003)
18. Université de Perpignan (July 2003)
19. Université de Picardie "Jules Verne", Amiens (February 2004)
20. Université de Savoie–Chambéry (two weeks in March 2004)
21. Université de Tunis El Manar (two weeks in April 2004)
22. Université Catholique de Louvain (Belgium) in November 2004
23. Université de Picardie "Jules Verne", Amiens (February 2005)
24. Universidad Complutense de Madrid (one week in March 2005)

25. City University of Hong Kong (two weeks in April 2005)
26. Université de Tunis El Manar (two weeks in May 2005)
27. Université de Franche Comté and Université de Limoges (two weeks in November 2005)
28. Université de Picardie "Jules Verne", Amiens (February 2006)
29. Université de Tunis El Manar (one week in May 2006)
30. Université de Poitiers (June 2006)
31. Université de Savoie (two weeks in August 2006)
32. Université de Picardie "Jules Verne", Amiens (one week in October 2006)
33. University of Perugia (November 2006, with a GNAMPA–INdAM Visiting Professor position)
34. Université de Picardie "Jules Verne", Amiens (February 2007)
35. Université de Tunis El Manar (one week in March 2007)
36. Université de Haute Alsace (May 2007)
37. Université de La Rochelle (one week in July 2007)
38. Approximation and Wavelets, Bilateral Workshop Romania-Germany, October 1-4, 2007, Königswinter, Germany
39. Université Catholique de Louvain (December 2007)
40. Université de Picardie "Jules Verne", Amiens (February 2008)
41. Université de Tunis El Manar (two weeks in March 2008)
42. Université de Limoges (May 2008)
43. Université de Tours (June 2008)
44. University of Perugia (two weeks in July 2008) with a GNAMPA–INdAM Visiting Professor position
45. Visiting Professor, Institute of Mathematics, Physics and Mechanics, University of Ljubljana (July–September 2008)
46. University of Cagliari (two weeks in October 2008)
47. Scuola Normale Superiore di Pisa (one week in October 2008)
48. City University of Hong Kong (one week in December 2008)

49. Université de Picardie "Jules Verne", Amiens (February 2009)
50. Université de Tunis El Manar (one week in April 2009)
51. University of Rzeszów (one week in May 2009)
52. University of Ljubljana (one week in May 2009)
53. Université Pierre et Marie Curie Paris VI (one week in August 2009)
54. Université de La Rochelle (one week in September 2009)
55. Université de Picardie "Jules Verne", Amiens (February 2010)
56. University of Messina, Italy (one week in April 2010)
57. Institut Henri Poincaré, Paris (one week in November 2010)
58. Université de Tunis El Manar (one week in January 2011)
59. Université de Picardie "Jules Verne", Amiens (May 2011)
60. University of Oxford (one week in November 2011)
61. University of Monastir (one week in March 2012)
62. Université de Poitiers (one week in March 2012)
63. Jagiellonian and AGH University of Science and Technology of Krakow (one week in May 2012)
64. University of Perugia (15 May–15 June 2012) with a GNAMPA–INdAM Visiting Professor position
65. Université de Picardie "Jules Verne", Amiens (November 2012)
66. Universities of Catania and Reggio Calabria (two weeks in January 2013)
67. Université de Besançon (March 2013)
68. Université de Poitiers (April 2013)
69. ICTP Trieste (one week in May 2013)
70. King Abdulaziz University, Jeddah, Saudi Arabia (one week in September 2013)
71. Universities of Reggio Calabria and Messina (one week in October 2013)
72. Université de Picardie "Jules Verne", Amiens (November 2013)
73. University of Ljubljana (one week in January 2014)

74. Université Cadi Ayyad, Marrakech (one week in March 2014)

75. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2014)

76. University of Pisa (one week in May 2014)

77. Recent Trends in Nonlinear Partial Differential Equations and Applications Celebrating Enzo Mitidieri's 60th Birthday, University of Trieste, 28–30 May 2014

78. Université de Picardie "Jules Verne", Amiens (November 2014)

79. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2014)

80. University of Perugia (one week in January 2015)

81. Senior Research Fellow, City University of Hong Kong (February 2015)

82. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2015)

83. King Saud University, Riyadh, Saudi Arabia (one week in May 2015)

84. Isaac Newton Institute, Cambridge, Programme *Coupling Geometric PDEs with Physics for Cell Morphology, Motility and Pattern Formation* (R. Leube, A. Madzvamuse, R. Merkel, H. Othmer, organizers), 13 July–18 December, 2015

85. Université de Pau (two weeks in October 2015)

86. King Saud University, Riyadh, Saudi Arabia (one week in November 2015)

87. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2015)

88. University of Stockholm (one week in January 2016)

89. Université de Tunis (one week in March 2016)

90. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2016)

91. University of Perugia (one week in September 2016)

92. King Saud University, Riyadh, Saudi Arabia (one week in October 2016)

93. Université de Picardie "Jules Verne", Amiens (November 2016)

94. King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2016)

95. University of Perugia (one week in January 2017)

96. AGH University of Science and Technology, Krakow (November 2017)

97. University of Perugia (one week in January 2018)

98. University of Stockholm (one week in February 2018)
99. King Saud University, Riyadh, Saudi Arabia (one week in April 2018)
100. Harbin Engineering University, China (three weeks in November 2018)
101. Université de Picardie "Jules Verne", Amiens (one week in December 2018)
102. University of Trieste (three weeks in March 2019)
103. King Saud University, Riyadh, Saudi Arabia (one week in April 2019)
104. University of Pisa, Italy (one week in April 2019)
105. Università di Urbino Carlo Bo, Urbino, Italy (one week in May 2019)
106. Université de Picardie "Jules Verne", Amiens (one week in May 2019)
107. Central South University, Changsha, China (one month in November 2019)
108. Brno University of Technology (one week in September 2021 and September 2022)
109. Central South University, Changsha, China (six weeks in March-April 2024)
110. University of Perugia (one week in May 2024)
111. Lodz University of Technology (one week in June 2024)

3.5 Invited lectures (selection)

1. University of Wisconsin, Madison, USA (June 1991), on the occasion of the Conference *Mary Ellen Rudin and Her Work*
2. Hyères, France (May 1993) at the 25ème Congrès National d'Analyse Numérique
3. Almeria, Spain (June 1993) at the Summer School organized by Universidad Complutense from Madrid
4. Université Pierre et Marie Curie (Paris 6), Laboratoire d'Analyse Numérique (1994 and 1995)
5. École Normale Supérieure Paris (May 1994), at the 2nd French-Romanian Colloquium
6. University of Uppsala (October 1995)
7. Plenary lecture at the 3rd French-Romanian Colloquium (September 1996)
8. University of Delaware (June 3-7, 1997): ISAAC'97, the First International Congress of the International Society for Analysis, its Applications and Computation, with the paper "Perturbation techniques for hemivariational eigenvalue problems"

9. University of Sussex at Brighton (February 1998)

10. Plenary lecture at the 5th French-Romanian Colloquium (August 2000)

11. Université de Paris 6 (Analyse Numérique and Théorie du Potentiel, May 2001)

12. CIMPA-UNESCO-CEU School on Functional Analysis, Partial Differential Equations and Numerical Analysis, Budapest, Central-European University, September 2002 [10 courses (=20h) on Functional Analysis]

13. Mathematisches Institut, Universität Basel (June 2003)

14. 21st IFIP TC 7 Conference on System Modelling and Optimization, Sophia Antipolis, France, July 21-25, 2003. Organized by the International Federation for Information Processing.

15. Fifth European Conference on Elliptic and Parabolic Problems: A Special Tribute to the Work of Haim Brezis, Gaeta, May 30 - June 3, 2004

16. Fourth European Congress of Mathematics, Stockholm, June 27 - July 2, 2004

17. Universidad Complutense de Madrid (March 2005)

18. City University of Hong Kong (April 2005)

19. Journée sur les équations aux dérivées partielles non linéaires, Université de La Rochelle (June 2006)

20. 6th International Conference on Dynamical Systems and Differential Equations (American Institute of Mathematical Sciences), Poitiers, June 2006

21. Conférence Francophone sur la Modélisation Mathématique en Biologie et en Médecine, Craiova, July 12-14, 2006

22. Plenary lecture at the 8th French-Romanian Colloquium, Chambéry, August 2006

23. International Conference on Applied Analysis and Differential Equations, Iasi, September 4-9, 2006

24. Workshop on Potential Analysis, Institute of Mathematics "Simion Stoilow" of the Romanian Academy, Bucharest (October 2006)

25. Plenary lecture at the 15th Colloque de la Société Mathématique de Tunisie (Sousse, 19-22 March 2007)

26. Plenary lecture at the International Conference on Nonlinear Operators, Differential Equations and Applications, Cluj, July 4-8, 2007

27. Summer School "Critical Point Theory and Applications", Cluj, July 9-13, 2007

28. International Conference on Theory and Applications in Mathematics and Informatics, Alba Iulia, August 30 - September 2, 2007

29. Bilateral Workshop Romania-Germany Approximation and Wavelets, Königswinter, Germany, October 1-4, 2007

30. Second Romanian-German Round Table for Research, Bucharest, November 8-9, 2007

31. The Future of Mathematical Education in Europe, Lisbon, December 17-18, 2007

32. Plenary lecture at the International Conference *Liouville Theorems and Detours*, INdAM Conference, Cortona, May 18-25, 2008

33. Scuola Normale Superiore di Pisa (October 2008)

34. Plenary lecture at the *International Conference on Partial Differential Equations and Applications - in Honor of Professor Philippe G. Ciarlet's 70th Birthday*, City University, Hong Kong, December 5-8, 2008

35. Romania-Germany Workshop Nonlinear Analysis and Mathematical Physics, University Lucian Blaga of Sibiu, May 14-16, 2009

36. Premier Séminaire Roumain–Tunisien en Mathématiques (4th Workshop Series on Mathematics), IMAR Bucharest, November 2009

37. International Workshop *Variational, Topological and Set-Valued Methods For Nonlinear Differential Problems*, University of Messina, Italy (April 2010)

38. International Conference on Nonlinear Operators, Differential Equations and Applications (ICNODEA 2011), Cluj, July 5-8, 2011

39. Partial Differential Equations in Mathematical Physics and their Numerical Approximation, Levico Terme, Trento, Italy, September 4-9, 2011

40. Oxford PDE Seminar, University of Oxford (November 2011)

41. 18e Colloque de la Société Mathématique de Tunisie, Mahdia, 19-22 March 2012

42. Jagiellonian University of Krakow (two talks in May 2012)

43. Mini-symposium *Variational Methods and Nonlinear PDEs*, 7th European Conference on Elliptic and Parabolic Problems, Gaeta, May 20–25, 2012

44. Plenary lecture at the International Conference in Honor of Professor Patrizia Pucci's 60th birthday, University of Perugia, May 28–June 1, 2012

45. Mini-courses in Mathematical Analysis, University of Padova, June 18-22, 2012

46. 10th International Conference on Fixed Point Theory and its Applications, Cluj, July 9-15, 2012

47. International Winter School on Mathematical Fluid Dynamics, Levico Terme, Trento, Italy, December 16-21, 2012

48. Workshop "Meeting on Mathematics", University of Reggio Calabria (January 2013)

49. Mini-courses in Nonlinear Partial Differential Equations, Women in Mathematics, Mathematics of Planet Earth, Summer School ICTP Trieste, May 27 – June 1, 2013

50. International Workshop on Variational Problems and PDE's, September 2–6, 2013, Sao Paulo, Brazil

51. Programme *Free Boundary Problems and Related Topics* (G.-Q. Chen, H. Shahgholian, J.-L. Vázquez, organizers), Isaac Newton Institute, Cambridge, 6 January–4 July, 2014

52. Institute Isaac Newton, University of Cambridge (January 2014)

53. University of Swansea (January 2014)

54. University of Cardiff (January 2014)

55. University of Nottingham (January 2014)

56. Plenary lecture at the International Conference "Recent Advances in PDEs and Applications (on occasion of Professor Hugo Beirao da Veiga's 70th birthday)", Levico Terme, Trento, Italy, February 17-21, 2014

57. Université Cadi Ayyad, Marrakech (March 2014)

58. King Abdulaziz University, Jeddah, Saudi Arabia (April 2014)

59. University of Pisa (May 2014)

60. Mini-symposium *Recent Trends in Nonlinear Analysis and its Applications*, 8th European Conference on Elliptic and Parabolic Problems, Gaeta, May 26–30, 2014

    - Plenary lecture at the International Conference "Recent Trends in Nonlinear Partial Differential Equations and Applications Celebrating Enzo Mitidieri's 60th Birthday", University of Trieste, 28–30 May 2014

61. Invited speaker at the conference *Recent Trends on Nonlinear Phenomena*, Reggio Calabria, 5-7 November 2014

62. International Conference on Nonlinear Operators, Differential Equations and Applications, Cluj, 14-17 July 2015

63. Séminaires "Analyse-E.D.P.", Université Toulouse 1 (October 2015)

64. Equilibrium and Optimization Methodology in Finance and Economics, King Saud University, Riyadh, Saudi Arabia, 9-11 November 2015

65. University of Stockholm (January 2016)

66. Journée d'Équations aux Dérivées Partielles, Kairouan, Tunisia (18 March 2016)

67. Plenary lecture at the 21st Colloque de la Société Mathématique de Tunisie (Sousse, 21-24 March 2016)

68. Invited speaker at the "Third Conference on Recent Trends in Nonlinear Phenomena", University of Perugia (28-30 September 2016)

69. Plenary speaker at the international workshop "James Serrin: from his legacy to the new frontiers", University of Perugia (30 January–3 February 2017)

70. Plenary speaker at the "Fourth Conference on Recent Trends in Nonlinear Phenomena", University of Messina (18-20 September 2017)

71. Accademia delle Scienze dell'Umbria, January 2018

72. Plenary speaker at the international conference "Two Nonlinear Days in Perugia on the occasion of Patrizia Pucci's 65th birthday", University of Perugia (11-12 January 2018)

73. University of Stockholm (February 2018)

74. Keynote speaker at Fourth Conference on Mathematical Sciences and Applications, King Saud University, Riyadh, 11-12 April 2018

75. Chinese Academy of Sciences, Beijing (November 2018)

76. "Potentiel et Probabilité", Institute of Mathematics of the Romanian Academy, Bucharest, (January 2019)

77. University of Pisa, Italy (April 2019)

78. Università di Urbino Carlo Bo, Urbino, Italy (two talks in May 2019)

79. Workshop on Nonlinear PDEs and Applications, University of Perugia (3-5 February 2020)

80. Center for Applied Mathematics, Guangzhou University (8 July 2020)

81. East China University of Science and Technology, Shanghai (21 September 2020)

82. Plenary Lecture, ICMC Summer Meeting on Differential Equations (2021 Chapter), Sao Carlos, Brazil, 1-3 February 2021

83. Nonlinear Differential Problems via Variational, Topological and Set-valued Methods, Webinar, University of Messina (9th and 23th April 2021)

84. Methods of Nonlinear Analysis in Differential and Integral Equations, Rzeszów University of Technology (15-16 May and 22-23 May 2021)

85. International Conference "Qualitative Properties of Nonlinear Partial Differential Equations" dedicated to Professor Ildefonso Diaz on the occasion of his 70th anniversary, Universidad Complutense de Madrid (13-15 July 2021)

86. 5th Conference on Mathematical Sciences and Applications, The Saudi Association for Mathematical Sciences (SAMS) and King Abdullah University of Science and Technology (KAUST), 16-18 November 2021 (Plenary Lecture)

3.5.1 Full list of talks in 2022-2023

1. *New results in the study of double phase equations*, 14th Summer Workshop in Mathematics, University of Brasília, 17-21 January 2022 (Plenary Lecture)

2. *Combined effects in nonlinear problems with unbalanced growth*, One Day in Double Phase Problems in Ancona, Università Politecnica delle Marche, INdAM - GNAMPA Project 2020 "Studio di problemi frazionari nonlocali tramite tecniche variazionali", 28 January 2022

3. *Singular elliptic problems and beyond*, ICMC Summer Meeting on Differential Equations - Chapter 2022, Universidade de Sao Paulo, 31 January - 2 February 2022

4. *Double phase problems: new results and perspectives*, University of Electronic Science and Technology of China, Chengdu, 8 January 2022

5. *Hardy-Littlewood-Sobolev, Stein-Weiss, and applications to Choquard problems*, Guangzhou University, 10 January 2022

6. *Isotropic and anisotropic equations with unbalanced growth*, International Workshop Recent Developments in PDEs and Applications, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, 16-17 March 2022

7. *Nonstandard phenomena in the study of double phase problems*, Seminar of the Department of Differential Equations, AGH University of Science and Technology, Kraków, 10 May 2022

8. *Double phase problems: concentration of the spectrum and equations with mixed regime*, Honghe University, 26 May 2022

9. *Hardy-Littlewood-Sobolev, Stein-Weiss, and beyond*, International Workshop "Advances in Nonlinear Analysis and PDEs", Shandong University of Technology and Business, Qingdao, 28-29 May 2022

10. *Anisotropic double phase problems with mixed regime in the applied sciences*, International Workshop Mathematical Modeling of Self-Organizations in Medicine, Biology and Ecology, Palermo, 29 May - 3 June 2022

11. *Non-autonomous double phase problems with unbalanced growth*, Three Gorges University, Yichang, Hubei, 15 June 2022

12. *New phenomena in the study of double phase problems*, Seminário de EDP e Matemática Aplicada, Universidade Federal Fluminense, Rio de Janeiro, June 15, 2022

13. *Ambrosetti-Prodi problems for Robin (p,q)-equations*, Central South University, Changsha, 20 June 2022

14. *A new differential operator: difficulties and perspectives*, Central South University, Changsha, 11 July 2022

15. *Ambrosetti-Prodi double phase problems with Robin boundary condition*, International Workshop on Nonlinear Analysis and PDEs, East China University of Science and Technology, Shanghai, 27 August 2022

16. *Resonant non-autonomous double phase Dirichlet equations*, Zhejiang Normal University, Jinhua, 30 August 2022

17. *Double-phase elliptic equations: concentration of the spectrum and problems with mixed regime*, Brno University of Technology, 31 August 2022

18. *Introduction to double phase problems: new results and some perspectives*, Nanchang University, 6 September 2022

19. *Introduction to double phase problems: new results and some perspectives*, Baotou Teachers' College, 7 September 2022

20. *Ambrosetti-Prodi double phase problems with Robin boundary condition*, Seminar of Functional Analysis, AGH University of Science and Technology, Kraków, 12 October 2022

21. *Two striking results in the analysis of double phase problems*, Numerical Analysis, Numerical Modeling, Approximation Theory, Tiberiu Popovici Institute of Numerical Analysis, Cluj Napoca, 26-28 October 2022

22. *New results in the analysis of unbalanced stationary problems*, Recent and New Perspectives in Nonlinear Analysis, Università degli Studi di Urbino, 3-4 November 2022

23. *New phenomena in the study of double phase equations*, Honghe University, 5 September 2023

24. *Elliptic equations driven by the Stuart differential operator*, Seminar of Functional Analysis, AGH University of Kraków, 11 October 2023

25. *Problems with unbalanced growth: a trip around "nonlinearity and anisotropy"*, Hot Topics in Science and Technology, Lodz University of Technology, 24 October 2023

26. Two Nonlinear Days at the anniversary of Patrizia Pucci's retirement, University of Perugia, 17-18 May 2024

27. Dynamical Systems and Applications VI, DSA 2024, Lodz University of Technology, 26-28 June 2024

3.6 Organizer of international conferences

1. 7ème Colloque Franco–Roumain de Mathématiques Appliquées, Craiova (Romania), 30 août–3 septembre 2004

2. 8th International Conference of Mathematical Analysis and Applications, Craiova, September 23–24, 2005

3. Conférence Francophone sur la Modélisation Mathématique en Biologie et en Médecine, Craiova (Romania), 12–14 juillet 2006

4. 6th Congress of Romanian Mathematicians, Bucharest, June 28–July 4, 2007

5. Bilateral Workshop Romania–Germany Approximation and Wavelets, Königswinter, Germany, October 1–4, 2007

6. Current and Prospective Trends in Mathematical Research, Institute of Mathematics Simion Stoilow of the Romanian Academy, Bucharest, September 17–18, 2008

7. International Conference on Partial Differential Equations and Applications - in Honor of Professor Philippe G. Ciarlet's 70th Birthday, City University, Hong Kong, December 5-8, 2008

8. Romania-Germany Workshop Nonlinear Analysis and Mathematical Physics, University Lucian Blaga of Sibiu, May 14–16, 2009

9. 7th Congress of Romanian Mathematicians, Braşov, June 29–July 5, 2011

10. New Trends in Modern Analysis: Probabilistic and Analytic Methods in PDEs and Spectral Theory, Hammamet (Tunisia), October 24-28, 2011

11. Lectures on Partial Differential Equations, International Conference in Honor of Professor Patrizia Pucci's 60th birthday, University of Perugia, May 28–June 1, 2012

12. Special Session "Analyse et Analyse des Équations aux Dérivées Partielles" (with L. Rifford), XIème Colloque Franco-Roumain de Mathématiques Appliquées, Bucharest, August 24-30, 2012

13. Workshop "New Trends in Pure and Applied Nonlinear Analysis", Sibiu, March 2013

14. International Conference "Recent Advances in PDEs and Applications" (on occasion of Professor Hugo Beirao da Veiga's 70th birthday), Levico Terme (Trento), Italy, February 17-21, 2014

15. Special Session "Discrete and Continuous Boundary Value Problems and Applications", 10th AIMS Conference in Dynamical Systems, Differential Equations and Applications, Madrid, July 7-11, 2014

16. International Workshop on Nonlinear Analysis and Applications to Economics dedicated to Professor Dušan Repovš on his 60th birthday, University of Craiova, 25 September 2014

17. Section "Ordinary and Partial Differential Equations, Variational Methods", 8th Congress of Romanian Mathematicians, Iaşi, June 26–July 1, 2015

18. Equilibrium and Optimization Methodology in Finance and Economics, King Saud University, Riyadh, Saudi Arabia, 9-11 November 2015

19. 9th Congress of Romanian Mathematicians, Galaţi, June 28–July 3, 2019

20. Elsevier–JMAA Conference on Nonlinear Analysis at AGH-UST, Krakow, 11–12 October 2019

21. Methods of Nonlinear Analysis in Differential and Integral Equations, Rzeszów University of Technology, 15-16 May and 22-23 May 2021

22. Recent and New Perspectives in Nonlinear Analysis, Università degli Studi di Urbino, 3-4 November 2022

23. Two Nonlinear Days at the anniversary of Patrizia Pucci's retirement, University of Perugia, 17-18 May 2024

3.7 Coordination of PhD theses and postdoctoral researchers

Starting with October 2000, I coordinate PhD theses at the University of Craiova. Starting with 2023, I am also a PhD adviser at the AGH University of Kraków. I received the Habilitation degree in February 2003 at the Paris Sorbonne University and in June 2023 at the AGH University of Kraków. According with Mathematics Genealogy Project, I have coordinated 16 PhD theses at the University of Craiova. At this moment, I coordinate one PhD thesis at the University of Craiova (Bogdan Maxim) and two PhD theses at the AGH University of Kraków (K. Bien and C. Yang). I also coordinated eight Master theses at the University of Craiova and two Master theses at the AGH University of Kraków. Some of my former PhD students received academic positions, for instance Marius Ghergu is an Associate Professor at the University College of Dublin, while other eight former PhD students have various positions in Romanian universities.

During the past years, I have coordinated at the University of Craiova the following 16 doctoral and postdoctoral researchers from Central South University in Changsha, Harbin Engineering University, Jilin University, Southeast University and Guangzhou University: Youpei

Zhang, Wen Zhang, Jian Zhang, Lixi Wen, Shuai Yuan, Qiang Lin, Siyan Guo, Chunxia Ma, Tiantian Pang, Yitian Wang, Yue Pang, Xueying Sun, Li Cai, Yitian Wang, Zhuang Han and Shuaishuai Liang. They visited the University of Craiova for one or two years with the financial support of the China Scholarship Council. Another researcher from Shandong University of Science and Technology works now under my supervision at the AGH University of Kraków with one-year financial support of the China Scholarship Council.

3.8 Editor-in-chief of journals indexed by Web of Science

1. Editor-in-Chief and founder of the Q1 journal *Advances in Nonlinear Analysis* (Walter de Gruyter). The journal is ranked 5/330 in Mathematics (7/267 in Applied Mathematics) by Clarivate Analytics 2023 according with the Impact Factor and 4/485 in Mathematics (3/327 in Applied Mathematics) according with the Journal Citation Indicator. Other details:

- Journal Impact Factor: 4,2;
- Article Influence Score: 2,576;
- CiteScore: 8,2;
- Web page: `https://www.degruyter.com/journal/key/anona/html`

In December 2023, the Chinese Academy of Sciences ranked this journal 12th among 558 journals in the field "Mathematics".

2. Editor-in-Chief of *Boundary Value Problems* (Springer Nature). The journal is ranked 51/330 in Mathematics (95/267 in Applied Mathematics) by Clarivate Analytics 2023 according with the Impact Factor and 74/485 in Mathematics (66/327 in Applied Mathematics) according with the Journal Citation Indicator. Other details:

- Journal Impact Factor: 1,7;
- Article Influence Score: 0,514;
- Web page: `https://boundaryvalueproblems.springeropen.com/`

Additionally, I am Associate Editor of the following journals: *Journal of Geometric Analysis* (Springer); *Bulletin of Mathematical Sciences* (World Scientific); *Mathematical Methods in the Applied Sciences* (Wiley); *Asymptotic Analysis* (IOS Press); *Complex Variables and Elliptic Equations* (Taylor & Francis); *Rendiconti del Circolo Matematico di Palermo* (Springer); *Demonstratio Mathematica* (Walter de Gruyter); *Discrete and Continuous Dynamical Systems, Series S* (American Institute of Mathematical Sciences); *Opuscula Mathematica* (AGH University of Kraków); *Journal of Numerical Analysis and Approximation Theory* (Romanian Academy).

I am also a member of the Editorial Board of the new Academic Press *Mathematics in Science and Engineering* Book Series (Elsevier, Oxford) and an editor of the *De Gruyter Series in Nonlinear Analysis and Applications* (Berlin).

3.9 Total and cumulative AIS of the Q1 papers published in the last 5 years

In connection with the Article Influence Scores (AIS) pointed out for my 67 researchers papers published in 2019-2023 and mentioned in section 3.1, the total and cumulative AIS are the following:

Total AIS: 92,216

Cumulative AIS: 32,012

4 Related achievements

In this section I provide information about activities associated with my research work.

4.1 Other publications

I published about 500 research papers, as well as 10 books with the most prestigious publishers. I was the editor of 6 books published by very distinguished publishing houses. Complete details will be given in the next sections.

Some renowned journals where my papers have been published: *J. Math. Pures Appliquées–Journal de Liouville* (8 papers), *J. Differential Equations* (20 papers), *Nonlinearity* (7 papers), *Proceedings Amer. Math. Soc.* (9 papers), *Transactions Amer. Math. Soc.* (2 papers), *Math. Annalen* (2 papers), *Math. Zeitschrift* (3 papers), *SIAM J. Math. Analysis* (4 papers), *Proc. Royal Soc. London: Mathematical, Physical and Engineering Sciences* (one paper), *J. d'Analyse Math.* (2 papers), *Indiana Univ. Math. J.* (one paper), *Comm. Partial Differential Equations* (one paper), *Ann. Inst. H. Poincaré–Analyse Non Linéaire* (one paper), *Annali della Scuola Normale Superiore di Pisa, Classe di Scienze* (one paper), *Israel Journal of Mathematics* (5 papers), *Ann. Inst. Fourier-Grenoble* (2 papers), *Calculus of Variations and Partial Differential Equations* (9 papers), *Proc. Royal Soc. Edinburgh* (8 papers), *Bull. London Math. Soc.* (5 papers), *Comm. Contemp. Math.* (7 papers), *Ann. Mat. Pura Appl.* (2 papers), *Math. Scand.* (2 papers), *Optimization* (one paper), *Optimization Letters* (2 papers), *J. Global Optimiz.* (5 papers), *Nonlinear Anal.: Real World Appl.* (8 papers), *Nonlinear Anal.: Theory, Methods & Appl.* (18 papers), *J. Math. Anal. Appl.* (13 papers), *Manuscripta Math.* (3 papers), *Ann. Acad. Sci. Fenn.* (6 papers), *Analysis and Applications* (8 papers), *ZAMP* (6 papers), *C.R. Acad. Sci. Paris* (23 papers), *Journal of Mathematical Physics* (3 papers).

4.1.1 Books and edited volumes (selection)

1. D. Motreanu, V.D. Rădulescu, *Variational and Nonvariational Methods in Nonlinear Analysis and Boundary Value Problems*, Nonconvex Optimization and Its Applications, Vol. 67, Kluwer Academic Publishers, Dordrecht, 388 pp., 2003.

2. C. Niculescu, V.D. Rădulescu (Editors), *Mathematical Analysis and Applications: International Conference on Mathematical Analysis and Applications*, AIP Conference Proceedings Volume 835, American Institute of Physics, 176 pp., 2006.

3. V.D. Rădulescu, *Qualitative Analysis of Nonlinear Elliptic Partial Differential Equations*, Contemporary Mathematics and Its Applications, vol. 6, Hindawi Publ. Corp., 210 pp., 2008.

4. M. Ghergu, V.D. Rădulescu, *Singular Elliptic Problems: Bifurcation and Asymptotic Analysis*, Oxford Lecture Series in Mathematics and its Applications (John M. Ball, Series Editor), vol. 37, Oxford University Press, New York, 320 pp., 2008.

5. T.-L. Rădulescu, V.D. Rădulescu, T. Andreescu, *Problems in Real Analysis: Advanced Calculus on the Real Axis*, Springer, New York, xx+452 pp., 2009.

6. A. Kristály, V.D. Rădulescu, C. Varga, *Variational Principles in Mathematical Physics, Geometry and Economics: Qualitative Analysis of Nonlinear Equations and Unilateral Problems*, Encyclopedia of Mathematics (No. 136), Cambridge University Press, Cambridge, 384 pp., 2010.

7. M. Ghergu, V.D. Rădulescu, *Nonlinear PDEs: Mathematical Models in Biology, Chemistry and Population Genetics*, Springer Monographs in Mathematics, Springer-Verlag, Heidelberg, xviii+392 pp., 2012.

8. E. Mitidieri, V.D. Rădulescu, J. Serrin (Editors), *Recent Trends in Nonlinear Partial Differential Equations I: Evolution Problems*, Contemporary Mathematics Series, vol. 594, American Mathematical Society, 307 pp., 2013.

9. E. Mitidieri, V.D. Rădulescu, J. Serrin (Editors), *Recent Trends in Nonlinear Partial Differential Equations II: Stationary Problems*, Contemporary Mathematics Series, vol. 595, American Mathematical Society, 340 pp., 2013.

10. P. Pucci, V.D. Rădulescu, H. Weinberger (Editors), *Selected Papers of James Serrin*, vol. I, 796 pp., Contemporary Mathematicians, Birkhäuser, Basel, 2013.

11. P. Pucci, V.D. Rădulescu, H. Weinberger (Editors), *Selected Papers of James Serrin*, vol. II, 796 pp., Contemporary Mathematicians, Birkhäuser, Basel, 2013.

12. V.D. Rădulescu, D. Repovš, *Partial Differential Equations with Variable Exponents: Variational Methods and Qualitative Analysis*, Monographs and Research Notes in Mathematics, Taylor & Francis, Chapman and Hall/CRC, 320 pp., 2015.

13. V.D. Rădulescu, A. Sequeira, V. Solonnikov (Editors), *Recent Advances in PDEs and Applications*, Contemporary Mathematics Series, American Mathematical Society, Vol. 666, 404 pp., 2016.

14. G. Molica Bisci, V.D. Rădulescu, R. Servadei, *Variational Methods for Nonlocal Fractional Problems*, Encyclopedia of Mathematics and its Applications, Cambridge University Press, Cambridge, Vol. 162, 400 pp., 2016.

15. G. Kassay, V.D. Rădulescu, *Equilibrium Problems and Applications*, Mathematics in Science and Engineering, Academic Press, Elsevier, Oxford, 440 pp., 2018.

16. N. Papageorgiou, V.D. Rădulescu, D. Repovš, *Nonlinear Analysis–Theory and Methods*, Springer Monographs in Mathematics, Springer-Verlag, Cham, 577 pp., 2019.

According with MathSciNet, this Springer monograph is the most cited book published in the world in 2019 (364 citations, recorded on December 31, 2023).

4.1.2 Editor of special issues

1. H. Le Dret, V.D. Rădulescu, R. Wong, Special Issue of *Communications in Pure and Applied Analysis* dedicated to the 70th anniversary of Professor Philippe G. Ciarlet, Vol. 8, Issue 1, 491 pp., 2009.

2. V.D. Rădulescu, Special Issue *Degenerate and Singular Partial Differential Equations and Phenomena, Journal of Mathematical Analysis and Applications*, Vol. 352, Issue 1, 572 pp., 2009.

3. C. Alves, V.D. Rădulescu, Special Issue *Degenerate and Singular Differential Operators with Applications to Boundary Value Problems, Boundary Value Problems*, Volume 2010 (2010).

4. A. Pankov, R. P. Gilbert, V.D. Rădulescu, S. Antontsev, Special Issue *Sobolev Spaces with Variable Exponent and Related Elliptic Problems: Theory and Applications, Complex Variables and Elliptic Equations* **56**, Issue 7–9, 2011.

5. G. Da Prato, V.D. Rădulescu, Special Issue *Stochastic PDEs in Fluid Dynamics, Particle Physics and Statistical Mechanics, Journal of Mathematical Analysis and Applications* **384** (2011), Issue 1.

6. V.D. Rădulescu, Special Issue *Singular and Degenerate Phenomena in Nonlinear Analysis, Nonlinear Analysis: Theory, Methods & Applications* **119** (2015), 1-500.

7. V.D. Rădulescu, Special Issue dedicated to Acad. Marius Iosifescu on the occasion of his 80th anniversary, *Annals Univ. Craiova Ser. Mat. Inform.* **43**, No. 1, 2016.

8. V.D. Rădulescu, Special Issue *Pure and Applied Nonlinear Analysis, Opuscula Mathematica* **39**, No. 2, 2019.

9. P. Pucci, V.D. Rădulescu, Special Issue *Progress in Nonlinear Kirchhoff Problems, Nonlinear Analysis: Theory, Methods and Applications* **186** (2019), 1-258.

10. V.D. Rădulescu, D. Repovš, Special Issue *Elliptic Equations and Their Synergies, Complex Variables and Elliptic Equations*, vol. 65, no. 7, 2020.

11. S. Krantz, V.D. Rădulescu, Special Issue *Perspectives of Geometric Analysis in PDEs, Journal of Geometric Analysis*, vol. 30, no. 2, 2020.

12. G. Mingione, V.D. Rădulescu, Special Issue *Non-uniformly elliptic problems and nonstandard elliptic equations, Journal of Mathematical Analysis and Applications*, vol. 501, issue 1, 2021.

13. V.D. Rădulescu, Special Issue *Nonlinear Analysis & its Synergies, Rendiconti del Circolo Matematico di Palermo Series 2* (3) **71** (2022), 923-1215.

4.1.3 Additional Q1/Q2 papers published in the period 2019-2024 (selection)

1. W. Li, V.D. Rădulescu, B. Zhang, Infinitely many solutions for fractional Kirchhoff-Schrödinger-Poisson systems, *J. Math. Phys.* **60** (2019), no. 1, 011506, 18 pp.

2. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Nonlinear Dirichlet problems with unilateral growth on the reaction, *Forum Math.* **31** (2019), no. 2, 319-340.

3. M. Marin, A. Öchsner, V.D. Rădulescu, A polynomial way to control the decay of solutions for dipolar bodies, *Contin. Mech. Thermodyn.* **31** (2019), no. 1, 331-340.

4. A. Bahrouni, H. Ounaies, V.D. Rădulescu, Bound state solutions of sublinear Schrödinger equations with lack of compactness, *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM* **113** (2019), no. 2, 1191-1210.

5. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Double-phase problems and a discontinuity property of the spectrum, *Proc. Amer. Math. Soc.* **147** (2019), no. 7, 2899-2910.

6. Z. Binlin, V.D. Rădulescu, L. Wang, Existence results for Kirchhoff-type superlinear problems involving the fractional Laplacian, *Proc. Roy. Soc. Edinburgh Sect. A* **149** (2019), no. 4, 1061-1081.

7. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Nonlinear singular problems with indefinite potential term, *Anal. Math. Phys.* **9** (2019), no. 4, 2237-2262.

8. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Ground state and nodal solutions for a class of double phase problems, *Z. Angew. Math. Phys.* **71** (2020), no. 1, Paper No. 15, 15 pp.

9. A. Bahrouni, V.D. Rădulescu, P. Winkert, Robin fractional problems with symmetric variable growth, *J. Math. Phys.* **61** (2020), no. 10, 101503, 14 pp.

10. S. Liang, V.D. Rădulescu, Least-energy nodal solutions of critical Kirchhoff problems with logarithmic nonlinearity, *Anal. Math. Phys.* **10** (2020), no. 4, Paper No. 45, 31 pp.

11. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Superlinear perturbations of the eigenvalue problem for the Robin Laplacian plus an indefinite and unbounded potential, *Results Math.* **75** (2020), no. 3, Paper No. 116, 22 pp.

12. C. Alves, V.D. Rădulescu, The Lane-Emden equation with variable double-phase and multiple regime, *Proc. Amer. Math. Soc.* **148** (2020), no. 7, 2937-2952.

13. G. Bonanno, R. Livrea, V.D. Rădulescu, Non-homogeneous Dirichlet problems with concave-convex reaction, *Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl.* **32** (2021), no. 4, 799-818.

14. A. Bahrouni, V.D. Rădulescu, P. Winkert, Small perturbations of Robin problems driven by the p-Laplacian plus a positive potential, *Topol. Methods Nonlinear Anal.* **57** (2021), no. 2, 663-673.

15. C. Ji, V.D. Rădulescu, Concentration phenomena for magnetic Kirchhoff equations with critical growth, *Discrete Contin. Dyn. Syst.* **41** (2021), no. 12, 5551-5577.

16. C. Albes, P. Garain, V.D. Rădulescu, High perturbations of quasilinear problems with double criticality, *Math. Z.* **299** (2021), no. 3-4, 1875-1895.

17. N. Papageorgiou, D. Qin, V.D. Rădulescu, Nonlinear eigenvalue problems for the (p,q)-Laplacian, *Bull. Sci. Math.* **172** (2021), Paper No. 103039, 29 pp.

18. G. Mingione, V.D. Rădulescu, Recent developments in problems with nonstandard growth and nonuniform ellipticity, *J. Math. Anal. Appl.* **501** (2021), no. 1, Paper No. 125197, 41 pp.

19. A. Bahrouni, V.D. Rădulescu, Singular double-phase systems with variable growth for the Baouendi-Grushin operator, *Discrete Contin. Dyn. Syst.* **41** (2021), no. 9, 4283-4296.

20. N. Papageorgiou, V.D. Rădulescu, X. Tang, Anisotropic Robin problems with logistic reaction, *Z. Angew. Math. Phys.* **72** (2021), no. 3, Paper No. 94, 21 pp.

21. V. Ambrosio, T. Isernia, V.D. Rădulescu, Concentration of positive solutions for a class of fractional p-Kirchhoff type equations, *Proc. Roy. Soc. Edinburgh Sect. A* **151** (2021), no. 2, 601-651.

22. C. Ji, V.D. Rădulescu, Multi-bump solutions for the nonlinear magnetic Schrödinger equation with exponential critical growth in $\mathbb{R}^2$, *Manuscripta Math.* **164** (2021), no. 3-4, 509-542.

23. L. Wen, V.D. Rădulescu, X. Tang, S. Chen, Ground state solutions of magnetic Schrödinger equations with exponential growth, *Discrete Contin. Dyn. Syst.* **42** (2022), no. 12, 5783-5815.

24. Z. Liu, V.D. Rădulescu, Z. Yuan, Concentration of solutions for fractional Kirchhoff equations with discontinuous reaction, *Z. Angew. Math. Phys.* **73** (2022), no. 5, Paper No. 211, 23 pp.

25. X. He, V.D. Rădulescu, W. Zou, Normalized ground states for the critical fractional Choquard equation with a local perturbation, *J. Geom. Anal.* **32** (2022), no. 10, Paper No. 252, 51 pp.

26. D. Kumar, zvdr, K. Sreenadh, Unbalanced fractional elliptic problems with exponential nonlinearity: subcritical and critical cases, *Topol. Methods Nonlinear Anal.* **59** (2022), no. 1, 277-302.

27. J. Zhang, W. Zhang, V.D. Rădulescu, Double phase problems with competing potentials: concentration and multiplication of ground states, *Math. Z.* **301** (2022), no. 4, 4037-4078.

28. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Ambrosetti-Prodi problems for the Robin (p,q)-Laplacian, *Nonlinear Anal. Real World Appl.* **67** (2022), Paper No. 103640, 22 pp.

29. N.S. Papageorgiou, V.D. Rădulescu, D. Repovš, Anisotropic singular Neumann equations with unbalanced growth, *Potential Anal.* **57** (2022), no. 1, 55-82.

30. Y. He, X. Luo, V.D. Rădulescu, Nodal multi-peak standing waves of fourth-order Schrödinger equations with mixed dispersion, *J. Geom. Anal.* **32** (2022), no. 1, Paper No. 30, 36 pp.

31. N. Papageorgiou, V.D. Rădulescu, J. Zhang, Parametric anisotropic singular equations with [p(z),q(z)]-growth conditions and indefinite perturbation, *Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A Mat. RACSAM* **116** (2023), no. 1, Paper No. 14, 21 pp.

32. Q. Li, V.D. Rădulescu, J. Zhang, X. Zhao, Normalized solutions of the autonomous Kirchhoff equation with Sobolev critical exponent: sub- and super-critical cases, *Proc. Amer. Math. Soc.* **151** (2023), no. 2, 663-678.

33. V.D. Rădulescu, C. Vetro, Anisotropic Navier Kirchhoff problems with convection and Laplacian dependence, *Math. Methods Appl. Sci.* **46** (2023), no. 1, 461-478.

34. T. Huo, L. Li, V.D. Rădulescu, Existence and concentration properties for the 1-biharmonic equation with lack of compactness, *Bull. Sci. Math.* **186** (2023), Paper No. 103275, 37 pp.

35. N. Papageorgiou, V.D. Rădulescu, Y. Zhang, Multiple solutions for superlinear double phase Neumann problems, *Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A Mat. RACSAM* **117** (2023), no. 4, Paper No. 158, 22 pp.

36. X. Luo, V.D. Rădulescu, M. Zhen, Standing waves with prescribed norm for the coupled Hartree-Fock system, *Discrete Contin. Dyn. Syst.* **43** (2023), no. 8, 3131?3167.

37. J. Diblik, M. Galewski, V.D. Rădulescu, Z. Smarda, Multiplicity of solutions for nonlinear coercive problems, *J. Math. Anal. Appl.* **528** (2023), no. 1, Paper No. 127473, 13 pp.

38. T.V. Nguyen, V.D. Rădulescu, Multiplicity and concentration of solutions to fractional anisotropic Schrödinger equations with exponential growth, *Manuscripta Math.* **173** (2024), 499-554.

39. S. Yuan, V.D. Rădulescu, X. Tang, L. Zhang, Concentrating solutions for singularly perturbed fractional (N/s)-Laplacian equations with nonlocal reaction, *Forum Math.*, in press. DOI: 10.1515/forum-2023-0183.

40. N.S. Papageorgiou, V.D. Rădulescu, S. Yuan, Non-autonomous double phase equations with strong singularity and concave perturbation, *Bull. London Math. Soc.*, in press.

41. Z. Liu, V.D. Rădulescu, J. Zhang, Groundstates of the planar Schrödinger-Poisson system with potential well and lack of symmetry, *Proceedings of the Royal Society of Edinburgh: Section A Mathematics* (2023), 31 pp. DOI: 10.1017/prm.2023.43.

42. R. Arora, V.D. Rădulescu, Combined effects in mixed local-nonlocal stationary problems, *Proceedings of the Royal Society of Edinburgh: Section A Mathematics* (2023), 47 pp. DOI: 10.1017/prm.2023.80.

43. S. Chen, V.D. Rădulescu, X. Tang, Multiple normalized solutions for the planar Schrödinger-Poisson system with critical exponential growth, *Math. Zeitschrift* (2024), 39 pp. DOI: 10.1007/s00209-024-03432-9.

44. L. Cai, V.D. Rădulescu, Normalized solutions for (p,q)-Laplacian equations with mass supercritical growth, *Journal of Differential Equations*, in press.

4.1.4 AMM and SIAM proposed problems

1. *A Limit Problem*, Problem No. 11024, *Amer. Math. Monthly* **6/110** (2003).

2. *An Example with Periodic Orbits*, Problem No. 11073, *Amer. Math. Monthly* **3/111** (2004).

3. *Periodic Solution of a Differential Equation*, Problem No. 11104, *Amer. Math. Monthly* **8/111** (2004).

4. *Exponential Growth of a Solution*, Problem No. 11137, *Amer. Math. Monthly* **2/112** (2005).

5. *Ginzburg-Landau Energy*, Problem No. 11167, *Amer. Math. Monthly* **7/112** (2005).

6. *A Liouville-Type Property for Differential Inequalities*, Problem No. 06-005, *SIAM Problems and Solutions*, 2006.

7. *Abrikosov Lattices in Superconductivity*, Problem No. 06-006, *SIAM Problems and Solutions*, 2006.

8. *Signed Series Terms*, Problem No. 11304, *Amer. Math. Monthly* **6/114** (2007).

9. *A Cauchy-Schwarz Puzzle*, Problem No. 11458, *Amer. Math. Monthly* **8/116** (2009).

10. *A Prime Multiple of the Identity Matrix*, Problem No. 11532, *Amer. Math. Monthly* **9/117** (2010).

11. *Gamma and Beta Inequalities*, Problem No. 11542, *Amer. Math. Monthly* **10/117** (2010).

12. Problem No. 11799, *Amer. Math. Monthly* **8/121** (2014).

4.1.5 Reviewing activity

1. 1996 – present: 593 reviews written for Mathematical Reviews (MathSciNet)
2. 1995 – present: 1159 reviews written for Zentralblatt MATH
3. 2000 – present: reviewer of more than 30 Ph.D. and Habilitation theses defended in Romania, France, Italy, Australia, Saudi Arabia and Tunisia
4. I have reviewed research projects for *UEFISCDI, Narodowe Centrum Nauki (Poland), Czech Science Foundation, Swiss National Science Foundation,* and *Chilean Comisión Nacional de Investigación Cientifica y Tecnológica (CONICYT).*

4.1.6 Basic contributions in my research work (résumé)

Explicit formula for the renormalized energy of the Ginzburg-Landau functional and study of the minimal configuration of vortices. This solves an open problem of H. Brezis, F. Bethuel and F. Hélein.

Asymptotic analysis of the minimizers of the Ginzburg-Landau energy with weight and formula for the corresponding renormalized energy. I have also considered the singular case of vanishing weights. This solves an open problem of H. Brezis, F. Bethuel and F. Hélein.

Study of bifurcation problems with nonlinearity having asymptotic linear growth. This solves an open problem of H. Brezis and L. Nirenberg. The initial conjecture raised by H. Brezis and L. Nirenberg is related to the Gelfand problem. In the case I have studied, we distinguish two completely different situations and the study performed in both cases is exhaustive. The analysis has been extended to multiple nonlinear terms, in such a case being studied combined effects of these nonlinearities.

Introduction of the Karamata regular variation theory in the asymptotic analysis of singular solutions with boundary blow-up for the logistic equation. I introduced for the first time the Karamata regular variation theory in the asymptotic analysis of blow-up boundary solutions of logistic-type equations.

Improvement of the statements concerning blow-up boundary solutions for nonlinear elliptic equations. Usually it is assumed that the nonlinear term should satisfy a monotonicity assumption in combination with the Keller-Osserman condition. I have proved that the monotonicity assumption can be removed and the crucial role is played by the growth rate of the nonlinear term.

Contributions to the study of combined effects for nonlinear singular elliptic equations. There are studied multiple types of perturbations for nonlinear elliptic PDEs with singular terms and it is extended the Karamata approach to problems of this type.

Study of new spectral phenomena for differential operators with one or more variable exponents. Problems with variable exponents have important applications in electrorheological (non-Newtonian) fluids, image processing, or robotics. There are established several striking properties, which are due to this new type of nonlinearities.

Extension in a nonsmooth setting of several classical results from critical point theory. I have worked both in the framework of Clarke's generalized gradient derivative or by using the notion of "weak slope" introduced by De Giorgi. There are extended several classical results, including the Ambrosetti-Rabinowitz, Pucci-Serrin, Ghoussoub-Preiss, and Ljusternik-Schnirelmann theorems. There are provided several applications to nonsmooth mechanics or multi-valued problems.

Contributions to the study of hemivariational, variational-hemivariational and quasi-hemivariational inequality problems. I have established several qualitative properties in the case of the perturbations with constraints and we have established various applications. One of these applications concerns the study of inequality problems with area-type term.

Effect of non-symmetric perturbations for problems with a symmetric structure. I have proved that the number of solutions becomes larger and larger as the perturbation tends to zero with respect to a suitable topology. The method introduced in our works has been extended by other mathematicians to other classes of problems.

Contributions to mathematical biology. I have developed mathematical tools in the study of Gierer-Meinhardt systems or Turing patterns in reaction-diffusion systems.

The above contributions have been developed starting with my PhD and Habilitation theses under the coordination of Professor Haim Brezis and in my subsequent papers or books (as a single author or co-authored with other colleagues).

4.1.7 Perspectives and open problems

I include in what follows some competitive research directions in relationship with my recent research achievements.

(a) *Double phase Baouendi-Grushin operators.* The Baouendi-Grushin operator is a hypoelliptic operator extending the Tricomi operator and which is defined in $\mathbb{R}^{n+m}$ by $\Delta_G u := \Delta_x u + |x|^\alpha \Delta_y u$, where Δ_x and Δ_y stand for the standard Laplace operators on $\mathbb{R}^n$, respectively $\mathbb{R}^m$, α is a positive number and $u = u(x,y) \in \mathbb{R}^{n+m}$. The energy associated with this operator is of the type

$$u \mapsto \int_{\mathbb{R}^{n+m}} (|\nabla_x u|^2 + |x|^\alpha |\nabla_y u|^2) dx.$$

The study of this operator is motivated by the pioneering papers by Baouendi [7] and Grushin [17]. Relevant applications to transonic flow problems have been studied by Morawetz [32, 33]. The flow is supersonic in the elliptic region, while a shock wave is created at the boundary between the elliptic and hyperbolic regions.

In [4, 5], I extended the Baouendi-Grushin operator to the anisotropic setting and studied models described by the operator

$$\Delta_{G(x,y)} u = \operatorname{div}\left(\nabla_{G(x,y)} u\right) = \sum_{i=1}^{n} \left(|\nabla_x|^{G(x,y)-2} u_{x_i}\right)_{x_i} + |x|^\gamma \sum_{i=1}^{m} \left(|\nabla_y|^{G(x,y)-2} u_{y_i}\right)_{y_i},$$

where $G : \mathbb{R}^{n+m} \to (1, \infty)$ is a continuous function.

Here,

$$\nabla_{G(x,y)}u = \mathcal{A}(x)\begin{bmatrix} |\nabla_x|^{G(x,y)-2} & \nabla_x u \\ |x|^\gamma |\nabla_y|^{G(x,y)-2} & \nabla_y u \end{bmatrix}$$

and

$$\mathcal{A}(x) = \begin{bmatrix} I_n & 0_{n,m} \\ 0_{m,n} & |x|^\gamma I_m \end{bmatrix} \in \mathcal{M}_{N\times N}(\mathbb{R}).$$

This operator is degenerate along the m-dimensional subspace $M := \{0\} \times \mathbb{R}^m$ of $\mathbb{R}^N$. The analysis associated with this operator is of the type

$$u \mapsto \int_\Omega \frac{1}{G(x,y)} \left[|\nabla_x u|^{G(x,y)} + |x|^\gamma |\nabla_y u|^{G(x,y)} \right] dx\, dy, \tag{1}$$

which can be regarded as a degenerate anisotropic double phase energy.

The analysis developed in my papers [35, 52] corresponds to a double phase energy driven by the (p,q)-Laplace operator. I consider that a very interesting new research direction is to extend this analysis to the (isotropic or anisotropic) Baouendi-Grushin operator. At the same time, I do not have any information about double phase nonlocal problems driven by a fractional Baouendi-Grushin operator. Such analysis will extend in a substantial way the main contributions in [3].

Since the energy functionals defined in relation (1) has a degenerate action on the set where the gradient vanishes, it is a natural question to study what happens if the integrand is modified in such a way that, if $|\nabla u|$ is also small, there exists an imbalance between the two terms of every integrand.

(b) *Magnetic Baouendi-Grushin operators.* Aermark and Laptev [1] introduced the following Baouendi-Grushin operator with a magnetic field of Aharanov-Bohm type:

$$G_{\mathcal{A}} := -(\nabla_G + i\beta\mathcal{A}_0)^2 \quad \text{for } -\frac{1}{2} \le \beta \le \frac{1}{2},$$

where

$$\mathcal{A}_0 = (\mathcal{A}_1, \mathcal{A}_2, \mathcal{A}_3, \mathcal{A}_4) = \left(-\frac{\partial_y d}{d}, \frac{\partial_x d}{d}, -2y\frac{\partial_t d}{d}, 2x\frac{\partial_t d}{d} \right),$$

$$\nabla_G = (\partial_x, \partial_y, 2x\partial_t, 2y\partial_t),$$

with $z = (x,y)$, $|z| = \sqrt{x^2+y^2}$, and $d(z,t) = (|z|^4 + t^2)^{1/4}$ is the Kaplan distance.

The analysis developed in my paper [21] is done for problems driven by the nonlinear magnetic Schrödinger operators. In view of the thorough analysis of several interesting models in the applied sciences, I consider that an interesting new research direction corresponds to a related analysis in the framework of the magnetic operator $G_{\mathcal{A}}$.

(c) *Problems with mixed subcritical-critical-supercritical regime.* Consider the Lane-Emden equation with Dirichlet boundary condition

$$\begin{cases} -\Delta_p u = |u|^{q-2}u & \text{in } \Omega, \\ u = 0 & \text{on } \partial\Omega, \\ u \not\equiv 0 & \text{in } \Omega, \end{cases} \tag{2}$$

where $p, q \in (1, \infty)$.

Usually, the analysis of this problem is developed in relationship with the values of q with respect to the Sobolev critical exponent p^* of p and we distinguish the following situations:
(i) $q < p^*$ (*subcritical case*);
(ii) $q = p^*$, provided that $1 < p < N$ (*critical case*);
(iii) $q > p^*$, provided that $1 < p < N$ (*supercritical case*).

In the case of variable exponents, the Lane-Emden problem (2) becomes

$$\begin{cases} -\Delta_{p(x)} u = |u|^{q(x)-2}u & \text{in } \Omega, \\ u = 0 & \text{on } \partial\Omega, \\ u \not\equiv 0 & \text{in } \Omega. \end{cases} \tag{3}$$

Problem (3) can fulfill a mixed "subcritical-critical-supercritical" triple regime, in the sense that $\Omega = \Omega_1 \cup \Omega_2 \cup \Omega_3$ and

$$\begin{aligned} q(x) &< p^*(x) \quad \text{if } x \in \Omega_1, \\ q(x) &= p^*(x) \quad \text{if } x \in \Omega_2, \\ q(x) &> p^*(x) \quad \text{if } x \in \Omega_3. \end{aligned}$$

The study of these problems was initiated in my paper [2] but the analysis is far to be complete. A feature of this new abstract setting is that, under general hypotheses, the associated energy functional is not coercive or it does not have a mountain pass geometry. Also, the presence of critical and supercritical regions implies serious problems due to the lack of compactness of Sobolev embeddings. I propose to develop this research both in the local case (to extend results from my monograph [45]) but also in the nonlocal setting.

(d) *Anisotropic nonlocal problems.* It seems that the results obtained in my papers [3, 52] have not been extended to anisotropic nonlocal problems. They should be the local analogue of those that in the local case are given by functionals of the type

$$w \mapsto \int_\Omega \varphi_1(|Dw|) + \varphi_2(|Dw|)\, dx,$$

where the conditions satisfied by $\varphi_i(t)$ are typically given by

$$1 < i \leq \frac{\varphi_i'(t)t}{\varphi_i(t)} \leq s. \tag{4}$$

For instance, in the setting corresponding to paper [3] we have $\varphi_1(t) = t^p$ and $\varphi_2(t) = t^q$.

(e) *Superlinear and critical Stuart-type problems.* Paper [20] is concerned with a Dirichlet problem driven by the Stuart differential operator and there are studied the cases where the reaction is either sublinear or it has a linear growth at infinity. The cases where the nonlinearity is either superlinear or critical are still open.

(f) *Anisotropic double phase integrands.* Paper [35] addresses the study of unbalanced variational integrals of the type

$$u \mapsto \int_\Omega (a(x)|\nabla u|^p + |\nabla u|^q)\, dx. \tag{5}$$

As pointed out in my paper [53, p. 201], a very interesting research direction concerns the study of energy functionals like (5) for anisotropic integrands of the type

$$\Phi(x, |\xi|) = \begin{cases} a(x)|\xi|^p + |\xi|^q & \text{if } |\xi| \leq 1, \\ a(x)|\xi|^{p_1} + |\xi|^{q_1} & \text{if } |\xi| \geq 1. \end{cases}$$

4.2 Cooperation with social and economic environment

In the period 2014-2017, I was the Principal Investigator of the Research Project *Security information systems based on nonlinear information flow analysis.* This project was financed by the Romanian Research Agency in the framework of the Program "Advanced Research Exploratory Projects–Information Technology and Communication" (Project No. PN-II-PT-PCCA-2013-4-0614). The budget of this project was of 1.250.000 RON. The web page of this research project may be found at

`http://stiinte.ucv.ro/digsig/en/index.html`

The partnership in this applied research project was the Romanian company SIVECO:

`http://www.siveco.ro/en`

This is a renowned company that develops and exports software products and high value added consultancy projects to countries within the European Union, the Middle East, North Africa and the CIS area. The research activities in the framework of this project have been mainly developed in the Research Laboratory on Pure and Applied Nonlinear Analysis at the University of Craiova:

`https://sites.google.com/edu.ucv.ro/pana`

During my career, I was also involved in other projects strictly related with the industry and the applied sciences. For instance, I was the Project Manager of the grant *Analiza zveznih in diskretnih matematičnih modelov v biologiji, kemiji in genetiki (Analysis of continuous and discrete mathematical models in biology, chemistry and genetics).* This is the grant N1-0064 between Slovenia (Institute of Mathematics, Physics and Mechanics, Ljubljana) and Hungary (Eötvös Loránd, Budapest) during the period 01.11.2017 - 31.10.2020 and the budget of this

project is 91.553 EUR. The project was financed by the Hungarian National Research, Development and Innovation Office NKFIH – Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal and the web page of this project can be found at
`http://www.imfm.si/raziskave-in-projekti/raziskovalni-projekti/n1-0064-analiza-zveznih-in-diskretnih-matematicnih-modelov-v-biologiji-kemiji-in-genetiki`

4.3 Awards and honors

1999: Simion Stoilow Prize of the Romanian Academy

2008: Distinguished Foreign Professor, University of Ljubljana

2014-2021: Distinguished Adjunct Professor, King Abdulaziz University, Jeddah

2014-2019: Honorary Director, Institute of Mathematics of the Heilongjiang Institute of Technology, Harbin

2014, 2019, 2020, 2021: Highly Cited Researcher

2014: The Chinese Academy of Sciences and Thomson Reuters included me in the list of The World's Most Influential Scientific Minds 2014

2015: Senior Research Fellow, City University of Hong Kong

2016: Corresponding Member of the Accademia Peloritana dei Pericolanti from Messina, founded in 1729

2017: Corresponding Member of the Accademia delle Scienze dell'Umbria

2017-2023: First Prize at the Gala of the Best Researchers of the University of Craiova

2018-2023: Guest Professor, Harbin Engineering University

2019-2021: World's Top 2% Scientists List of Stanford University

2019, 2024: Senior Research Fellow, Central South University, Changsha

2020-2023: AGH University of Kraków Rector's Prize (1st degree)

2023: Gala of Romanian Personalities (highest prize in Mathematics)

During 2008 and 2015, I was a member of the Scientific Board of the Laboratoire Européen Associé CNRS Franco-Roumain Mathématiques & Modélisation between the Laboratoire de Mathématiques de l'Université Paris-Sud (Orsay) and the Simion Stoilow Mathematics Institute of the Romanian Academy.

On the occasion of my 60th and 65th anniversaries, there have been organized the following international conferences:

Recent Advances in Nonlinear Analysis, on the occasion of the 60th Birthday of Vicenţiu Rădulescu, Centro Internazionale per la Ricerca Matematica (CIRM), Bella Vista Relax Hotel, Levico Terme (Trento), Italy, May 28-30, 2018.
Web page: `http://stiinte.ucv.ro/conf/index.html`

Special Issue dedicated to Vicenţiu Rădulescu on his sixtieth anniversary, *Discrete and Continuous Dynamical Systems, Series S* (American Institute of Mathematics), April 2019, Vol. 12, No. 2 (Guest Editors: Hugo Beirao da Veiga, Marius Ghergu, Alberto Valli).
Web page: `https://www.aimsciences.org/DCDS-S/article/2019/12/2`

RISM Workshop Analysis and PDEs on the occasion of Vicenţiu Rădulescu's 65th birthday, 28-31 May 2023, Riemann International School of Mathematics, Varese, Italy.
Web page: `https://www.rism.it/events/analysis-and-pdes`

4.4 Identifiers and scientometric information

MathSciNet ID: 143765
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Google Scholar:
https://scholar.google.com/citations?user=Abvg2zEAAAAJ&hl=fr&oi=ao
AGH ID: https://badap.agh.edu.pl/autor/radulescu-vicentiu-034180
H-index: 54
Erdös Number: 2; Einstein Number: 4
Times cited: 14.102 (11.072, cf. MathSciNet)
Citing articles: 7.010
Publications: 561
Highly Cited Papers (January 2024, cf. Web of Science): 32
Hot Papers (January 2024, cf. Web of Science): 1
In 2014, 2019, 2020 and 2021, I have been selected as *Highly Cited Researcher* by Thomson Reuters, resp. Clarivate.

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