Curriculum Vitae Vicențiu D. Rădulescu

HIGHLIGHTS

1. Education:

Ph.D.: Université Pierre et Marie Curie (Paris 6), 1995. Adviser: Haim Brezis (awarded with the highest distinction: *très honorable avec félicitations*)

Habilitation: Université Pierre et Marie Curie (Paris 6), 2003. Adviser: Haim Brezis

2. Main Positions:

Professorial Fellow, Mathematics Institute of the Romanian Academy

Full Professor, University of Craiova, Romania

Full Professor, AGH University of Science and Technology, Kraków, Poland

3. Distinctions:

"Simion Stoilow" Prize of the Romanian Academy (1999)

Distinguished Foreign Professor, University of Ljubljana, Slovenia (2008)

Best Associate Editor of the Journal of Mathematical Analysis and Applications (2009)

Member of the Accademia Peloritana dei Pericolanti from Messina, founded in 1729 (since 2014)

Honorary Director, Institute of Mathematics of the Heilongjiang Institute of Technology, Harbin, China (since 2014)

In 2014, I became a *Highly Cited Researcher* (Thomson Reuters)

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

Distinguished Adjunct Professor, King Abdulaziz University, Jeddah, Saudi Arabia (2014-2017) Senior Research Fellow, City University of Hong Kong (2015)

Member of the Accademia delle Scienze dell'Umbria from Perugia, Italy (since 2017)

According to Google Scholar, I have 6954 citations and my Hirsch Index is 45. According to MathScinet, I am cited 4142 times by 1343 authors and my Hirsch Index is 35. My most cited paper has 286 citations (Google Scholar) and 182 citations (MathScinet).

4. Editorial Activities:

Member of the Editorial Board of the Academic Press *Mathematics in Science and Engineering* Book Series (Elsevier);

Editor of the De Gruyter Series in Nonlinear Analysis and Applications;

Editor-in-Chief and founder of Advances in Nonlinear Analysis (Walter de Gruyter);

Editor-in-Chief of *Nonlinear Analysis* (Elsevier, starting with January 2019);

Editor-in-Chief of *Boundary Value Problems* (Springer);

Associate Editor of Journal of Mathematical Analysis and Applications (Elsevier), Mathematical Methods in the Applied Sciences (Wiley), Complex Variables and Elliptic Equations (Taylor & Francis), Asymptotic Analysis (IOS Press), Advances in Pure and Applied Mathematics (de Gruyter), Discrete and Continuous Dynamical Systems–S (AIMS), Electronic Journal of Differential Equations, Opuscula Mathematica (AGH University), Journal of Numerical Analysis and Approximation Theory (Romanian Academy)

I am co-editor of volumes published by the American Mathematical Society (3 volumes), Birkhäuser (2 volumes), and the American Institute of Physics. I am the Guest Editor of Special Issues published by the Journal of Mathematical Analysis and Applications, Nonlinear Analysis, Complex Variables and Elliptic Equations, Communications in Pure and Applied Analysis, Boundary Value Problems

5. Main Fields of Research:

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 our case, there are distinguished 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. We 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. We have proved that the monotonicity assumption can be removed and that 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. We work 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. We 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. We prove 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.

Variational analysis on fractal domains. Using the definition of the Laplace operator on selfsimilar fractals, we extend the classical variational analysis to these irregular domains.

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

Refinement of Morse-type arguments for the qualitative analysis of solutions of Neumann and Robin problems.

Study of nonlinear problems described by nonlocal fractional operators.

6. Publications:

More than 300 research papers and 10 books. Some renowned journals where my papers have been published: J. Math. Pures Appl. (Journal de Liouville) (5 papers), Transactions Amer. Math. Soc. (2 papers), J. Differential Equations (5 papers), Nonlinearity (3 papers), Proceedings Amer. Math. Soc. (5 papers), Proc. Royal Soc. London: Mathematical, Physical and Engineering Sciences (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), Journal d'Analyse Mathématique (one paper), Israel Journal of Mathematics (3 papers), Ann. Inst. Fourier-Grenoble (one paper), Calculus of Variations and Partial Differential Equations (3 papers), Proc. Royal Soc. Edinburgh (5 papers), Bull. London Math. Soc. (one paper), Comm. Contemp. Math. (4 papers), Ann. Mat. Pura Appl. (one paper), Math. Scand. (2 papers), Optimization (one paper), Optimization Letters (2 papers), J. Global Optimiz. (5 papers), Nonlinear Anal.: Real World Appl. (5 papers), Nonlinear Anal.: Theory, Methods & Appl. (13 papers), J. Math. Anal. Appl. (9 papers), Manuscripta Mathematica (3 papers), Ann. Acad. Sci. Fenn. (4 papers), Analysis and Applications (5 papers), ZAMP (3 papers), C. R. Acad. Sci. Paris (22 papers).

7. Other Mathematical Activities:

I published 10 proposed problems in the American Mathematical Monthly and 2 problems in SIAM Problems and Solutions. I also published the Opinion "Agenda for a Mathematical Renaissance" in the Notices of the American Mathematical Society.

EXTENDED CURRICULUM VITAE

Last name: Rădulescu

First name: Vicențiu

Date and place of birth: 11 May 1958 at Caracal, Romania

Education:

• B. Sc., Master and Ph.D.: Faculty of Mathematics, University of Craiova, Romania

• Ph.D.: Laboratoire d'Analyse Numérique, Université Pierre et Marie Curie (Paris 6)

• Habilitation: Laboratoire Jacques-Louis Lions, Université Pierre et Marie Curie (Paris 6)

Present positions:

• Professorial Fellow at the Institute of Mathematics "Simion Stoilow" of the Romanian Academy, Bucharest, Romania

• Full Professor at the Department of Mathematics, University of Craiova, Romania

• Distinguished Adjunct Professor, King Abdulaziz University, Jeddah, Saudi Arabia (2014-2017)

• Honorary Director of the Institute of Applied Mathematics, Harbin, China (since 2014)

• Researcher in the *Topology, Geometry and Nonlinear Analysis Group* of the Institute for Mathematics, Physics and Mechanics, University of Ljubljana, Slovenia (since 2009)

• Full Professor at the AGH University of Science and Technology, Kraków, Poland (since 2018)

Address: Department of Mathematics, University of Craiova, 200 585 Craiova, Romania, phone: (+40) 251.412615; fax: (+40) 251.411688

E-mail: vicentiu.radulescu@math.cnrs.fr vicentiu.radulescu@imar.ro

Web page: http://www.math.ucv.ro/~radulescu

Degrees:

• December 1993: Ph. D. at the University of Craiova, Romania with the thesis Applications of Operator Theory to Nonlinear Analysis. Adviser: Prof. Constantin Niculescu.

• June 1995: Ph.D. at the Laboratoire d'Analyse Numérique, Université Pierre et Marie Curie from Paris under the coordination of Professor Haim Brezis, with the thesis *Analysis of Some Problems Related to the Ginzburg-Landau Equation*. The commission was composed by the following Professors: Haim Brezis, 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.

• February 2003: Habilitation "à diriger des recherches" at the Université Pierre et Marie Curie (Paris 6): Analyse de quelques problèmes aux limites elliptiques non linéaires. Mémoire realized under the coordination of Professor Haim Brezis (member of the French Academy - Institut de France). The reports have been written by Prof. Catherine Bandle, Prof. Otared Kavian and Prof. Michel Willem. The other members of the commission were Prof. Fabrice Bethuel, Prof. Doina Cioranescu and Prof. Laurent Véron.

Scientific and honorary awards:

- Simion Stoilow Prize of the Romanian Academy, 1999

- Prize for Excellence in Research of the Romanian Research Council, 2007

- Distinguished Foreign Professor, University of Ljubljana (July-September 2008)

- Best Associate Editor of the Journal of Mathematical Analysis and Applications, 2009

– Award of the Editors-in-Chief of the Journal of Mathematical Analysis and Applications for the activity as Associate Editor, 2013

– Member of the Accademia Peloritana dei Pericolanti, Messina (since January 2014)

– Highly Cited Researcher 2014

– Honorary Director, Institute of Mathematics of the Heilongjiang Institute of Technology, Harbin, China (since 2014)

- Senior Research Fellow, City University of Hong Kong, 2015

– Member of the Accademia delle Scienze dell'Umbria, Perugia (since 2017)

Academic experience:

• 1977–1982: Faculty of Mathematics, University of Craiova, Romania

• 1982–1990: High-school Mathematics teacher

• 1990–1992: Assistant, Department of Mathematics, University of Craiova, Romania

• 1992–1995: Lecturer, University of Craiova, Romania

• 1995–1998: Associate Professor, University of Craiova, Romania

• 1998 to Present : Full Professor, Department of Mathematics, University of Craiova, Romania

• 2007 to Present : Professorial Fellow, Institute of Mathematics "Simion Stoilow" of the Romanian Academy, Bucharest, Romania

• 2008-2015 : Associate Professor at the University A.I. Cuza of Iaşi

• 2008 to Present : 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

• 2011-2015 : Member of the National Council for Titles, Diplomas and Certificates (Mathematics and Natural Sciences Commission)

• 2014-2017 : Distinguished Adjunct Professor, King Abdulaziz University, Jeddah, Saudi Arabia

• 2014 to Present : Honorary Director of the Institute of Applied Mathematics, Harbin, China

Editorial activities:

- Member of the Editorial Board of the new Academic Press *Mathematics in Science and Engineering* Book Series (Elsevier)

- Editor of the De Gruyter Series in Nonlinear Analysis and Applications

- Acquisition Editor, De Gruyter Open Book Publishing Program in Mathematics

- Editor-in-Chief of Advances in Nonlinear Analysis (Walter de Gruyter, 2017 ISI Impact Factor: 4.674)

- Editor-in-Chief (starting with January 2019) of Nonlinear Analysis: Theory, Methods & Applications (Elsevier, 2017 ISI Impact Factor: 1.291)

- Editor-in-Chief of Boundary Value Problems (Springer, 2017 ISI Impact Factor: 1.156)

- Associate Editor of the Journal of Mathematical Analysis and Applications (Elsevier, 2017 ISI Impact Factor: 1.138)

- Advisory Editor of *Mathematical Methods in the Applied Sciences* (Wiley, 2017 ISI Impact Factor: 1.18)

- Associate Editor of Asymptotic Analysis (IOS Press, 2017 ISI Impact Factor: 0.748)

- Member of the Editorial Board of *Complex Variables and Elliptic Equations* (Taylor & Francis, 2017 ISI Impact Factor: 0.832)

- Associate Editor of the *Electronic Journal of Differential Equations* (2017 ISI Impact Factor: 0.944)

- Editor of Advances in Pure and Applied Mathematics (Walter de Gruyter)

- Associate Editor of *Discrete and Continuous Dynamical Systems, Series S* (American Institute of Mathematical Sciences, 2017 ISI Impact Factor: 0.561)

- Member of the Editorial Committee of *Opuscula Mathematica* (Krakow University)

- Member of the Editorial Board of the *Journal of Mathematics and Applications* (Rzeszow University of Technology)

- Member of the Editorial Board of "MATHlics Research Paper Series Applied MATHematics JournaL for EconomICS" (edited by MEDAlics–Research Centre on Mediterranean Relations)

- Member of the Editorial Board of Journal of Numerical Analysis and Approximation Theory (Romanian Academy)

- Member of the Editorial Board of Ann. St. Univ. Ovidius Constanta (2017 ISI Impact Factor: 0.452)

- Member of the Editorial Advisory Board of the Journal of Advanced Mathematical Studies

- Editor in Chief of the Annals of the University of Craiova - Mathematics and Computer Science Series

- Member of the Editorial Board of Publications of the Centre for Nonlinear Analysis and its Applications

Fields of interest:

- nonlinear partial differential equations of elliptic type

- degenerate and singular phenomena in mathematical physics (logistic equations with blow-up boundary, nonlinear PDEs with singular terms, PDEs on fractal domains)

- topological and variational methods with applications to nonlinear partial differential equations and unilateral problems

- bifurcation theory and applications to mathematical physics, chemistry, and mathematical biology

- spectral analysis for non-homogeneous differential operators and applications to electrorheological fluids

Courses:

- Functional Analysis (10 hours, Central European University, Budapest, September 2002)

- Nonlinear Analysis and Mathematical Physics (52 hours, École Normale Supérieure, Bucharest, Academic year 2005-2006)

- Applied Functional Analysis and Partial Differential Equations (48 hours, École Normale Supérieure, Bucharest, Academic year 2010-2011)

- Comparison Principles and Critical Point Methods in Nonlinear Analysis, Mini-courses in Mathematical Analysis, University of Padova, June 18-22, 2012

- Singular Phenomena in Nonlinear Elliptic Equations, Mini-courses in Partial Differential Equations, Women in Mathematics Summer School, ICTP, Trieste, May 27–June 1, 2013

- Nonlinear Analysis (60 hours), AGH University of Science and Technology, Krakow, November 2017

Between 2002 and 2014 I organized the *Ateliers d'Écriture Scientifique* at the Doctoral School of the Université de Picardie "Jules Verne", Amiens.

Visiting Professor Positions:

- University of Uppsala (two weeks in October 1995)

- Politecnico di Milano (March 1996, with a CNR research grant)

- Freie Universität in Berlin (two weeks in May 1996)

- Aristotle University in Thessaloniki (June 1996)

- Leiden University (October and November 1996)

- Università Cattolica di Brescia (March 1997, with a CNR research grant)

- Aristotle University in Thessaloniki (May 15 - June 15, 1997)

- Universities of Sussex and Oxford (December 15, 1997 - February 15, 1998), with a Royal Society Research Fellowship

- 1998-2000: PAST Visiting Professor at the Laboratoire d'Analyse Numérique, Université Pierre et Marie Curie (Paris 6)

- Université Catholique de Louvain (Belgium) in November 1998

- University of Perugia (Nov. 15 - Dec. 15, 1999, with a CNR research grant)

- Université Pierre et Marie Curie (March 1 - May 31, 2001) with a CNRS research visiting position at the Laboratoire d'Analyse Numérique

- Université Catholique de Louvain (Belgium) in October 2001
- Université de Picardie "Jules Verne", Amiens (February 2002)
- Politecnico di Milano (June–July 2002, with a GNAMPA–INdAM Visiting Professor position)

- Université de Savoie–Chambéry (September 1 - November 30, 2002) with a CNRS research visiting position

- Central-European University, Budapest (10 days in September 2002)
- Université de Picardie "Jules Verne", Amiens (February 2003)
- Université de Tunis El Manar (two weeks in April 2003)
- Institut Elie Cartan, Université Henri Poincaré (Nancy I) (May 2003)
- Mathematisches Institut, Basel Universität (two weeks in June 2003)
- Université de Perpignan (July 2003)
- Université de Picardie "Jules Verne", Amiens (February 2004)
- Université de Savoie–Chambéry (two weeks in March 2004)
- Université de Tunis El Manar (two weeks in April 2004)
- Université Catholique de Louvain (Belgium) in November 2004
- Université de Picardie "Jules Verne", Amiens (February 2005)
- Universidad Complutense de Madrid (one week in March 2005)
- City University of Hong Kong (two weeks in April 2005)
- Université de Tunis El Manar (two weeks in May 2005)
- Université de Franche Comté and Université de Limoges (two weeks in November 2005)
- Université de Picardie "Jules Verne", Amiens (February 2006)
- Université de Tunis El Manar (one week in May 2006)
- Université de Poitiers (June 2006)
- Université de Savoie (two weeks in August 2006)
- Central European University in Budapest (one week in September 2006)
- Université de Picardie "Jules Verne", Amiens (one week in October 2006)
- University of Perugia (November 2006, with a GNAMPA-INdAM Visiting Professor position)
- Université de Picardie "Jules Verne", Amiens (February 2007)
- Université de Tunis El Manar (one week in March 2007)
- Université de Haute Alsace (May 2007)
- Université de La Rochelle (one week in July 2007)

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

- Université Catholique de Louvain (December 2007)
- Université de Picardie "Jules Verne", Amiens (February 2008)
- Université de Tunis El Manar (two weeks in March 2008)
- Université de Limoges (May 2008)
- Université de Tours (June 2008)

- University of Perugia (two weeks in July 2008) with a GNAMPA–INdAM Visiting Professor position

- Visiting Professor, Institute of Mathematics, Physics and Mechanics, University of Ljubljana (July–September 2008)

- University of Cagliari (two weeks in October 2008)
- Scuola Normale Superiore di Pisa (one week in October 2008)
- City University of Hong Kong (one week in December 2008)
- Université de Picardie "Jules Verne", Amiens (February 2009)
- Université de Tunis El Manar (one week in April 2009)
- University of Rzeszów (one week in May 2009)
- University of Ljubljana (one week in May 2009)
- Université Pierre et Marie Curie Paris VI (one week in August 2009)
- Université de La Rochelle (one week in September 2009)
- Université de Picardie "Jules Verne", Amiens (February 2010)
- University of Rousse, Bulgaria (one week in April 2010)
- University of Messina, Italy (one week in April 2010)
- Universidad Autónoma de Madrid (one week in June 2010)
- University of Oulu, Finland (one week in June 2010)
- Institut Henri Poincaré, Paris (one week in November 2010)
- Université de Tunis El Manar (one week in January 2011)
- Université de Picardie "Jules Verne", Amiens (May 2011)
- University of Oxford (one week in November 2011)
- University of Monastir (one week in March 2012)
- Université de Poitiers (one week in March 2012)
- Jagiellonian and AGH University of Science and Technology of Krakow (one week in May 2012)
- University of Perugia (15 May–15 June 2012) with a GNAMPA–INdAM Visiting Professor position
- Université de Picardie "Jules Verne", Amiens (November 2012)
- Universities of Catania and Reggio Calabria (two weeks in January 2013)
- Université de Besançon (March 2013)
- Université de Poitiers (April 2013)
- Université de Tanger, Maroc (two weeks in May 2013)
- ICTP Trieste (one week in May 2013)
- King Abdulaziz University, Jeddah, Saudi Arabia (one week in September 2013)
- Universities of Reggio Calabria and Messina (one week in October 2013)
- Université de Picardie "Jules Verne", Amiens (November 2013)
- Isaac Newton Institute, Cambridge, Programme Free Boundary Problems and Related Topics (G.-
- Q. Chen, H. Shahgholian, J.-L. Vázquez, organizers), 6 January–4 July, 2014
 - University of Ljubljana (one week in January 2014)
 - Université Cadi Ayyad, Marrakech (one week in March 2014)
 - King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2014)
 - University of Pisa (one week in May 2014)

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

- Universidad Autónoma de Madrid (one week in July 2014)
 - Université de Picardie "Jules Verne", Amiens (November 2014)
 - King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2014)

- University of Perugia (one week in January 2015)

- Senior Research Fellow, City University of Hong Kong (February 2015)
- King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2015)
- King Saud University, Riyadh, Saudi Arabia (one week in May 2015)
- 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

- Université de Pau (two weeks in October 2015)
- King Saud University, Riyadh, Saudi Arabia (one week in November 2015)
- King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2015)
- University of Stockholm (one week in January 2016)
- Université de Tunis (one week in March 2016)
- King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in April 2016)
- University of Perugia (one week in September 2016)
- King Saud University, Riyadh, Saudi Arabia (one week in October 2016)
- Université de Picardie "Jules Verne", Amiens (November 2016)
- King Abdulaziz University, Jeddah, Saudi Arabia (two weeks in December 2016)
- University of Perugia (one week in January 2017)
- AGH University of Science and Technology, Krakow (November 2017)
- University of Perugia (one week in January 2018)
- University of Stockholm (one week in February 2018)
- King Saud University, Riyadh, Saudi Arabia (one week in April 2018)

- University of Trieste (three weeks in March 2019)

Lectures delivered abroad:

- University of Wisconsin, Madison, USA (June 1991), on the occasion of the Conference Mary Ellen Rudin and Her Work

- Hyères, France (May 1993) at the 25ème Congrès National d'Analyse Numérique

- Almeria, Spain (June 1993) at the Summer School organized by Universidad Complutense from Madrid

- Université Pierre et Marie Curie (Paris 6), Laboratoire d'Analyse Numérique (1994 and 1995)

- ENS Paris (May 1994), at the 2nd French-Romanian Colloquium

- University of Uppsala (October 1995)

- Universities of Brescia, Trento, Padova, Milano, Politecnico di Torino and Politecnico di Milano (March 1996)

- Freie Universität from Berlin (two talks in May 1996)

- Plenary lecture at the 3rd French-Romanian Colloquium (September 1996)

- Universities of Leiden (5 talks), Delft, Louvain-la-Neuve, Namur, Aachen (2 talks) and Rouen (October-November 1997)

- Universities of Brescia, Povo-Trento, Milano, Roma - Tor Vergata and Politecnico di Milano (March 1997)

- 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"

- University of Sussex at Brighton (February 1998)

- Université de Limoges (May 1998, June 1999, May 2000 and November 2002)

- Universités Catholique de Louvain-la-Neuve and Libre de Bruxelles (November 1998, April 2000, October 2001)

- Universités de Montpellier (April 1999) et de Nancy (June 1999, May 2001, May 2003)

- Universities of Rome Tor-Vergata, Politecnico Milano, Brescia, Trento-Povo and Perugia (Nov.-Dec. 1999)

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

- Romanian Academy of Sciences (February 2001)

- Université de Savoie-Chambéry (April 2001, October 2002, February 2006)

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

- Université de Picardie-Amiens (May 2001, three talks in February 2002, two talks in February 2004, Edwards 2006)

2003, three talks in February 2004, November 2004, February 2005, February 2006)

- Université de Strasbourg (May 2001)

- 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]

- Université de Tunis El Manar (April 2003, April 2004, May 2005, May 2006)

- Mathematisches Institut, Universität Basel (June 2003)

- Université de Perpignan (July 2003)

- 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.

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

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

- Université Catholique de Louvain (two talks in November 2004)

- Universidad Complutense de Madrid (March 2005)

- City University of Hong Kong (April 2005)

- Université de Franche Comté (November 2005)

- Université d'Orléans (February 2006)

- Institute of Mathematics "Simion Stoilow" of the Romanian Academy (March 2006)

- Université de La Rochelle (June 2006)

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

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

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

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

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

- Central European University, Budapest, September 2006

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

- Politecnico di Milano and Universities of Perugia (3 talks), La Sapienza (Rome 1), Tor Vergata (Rome 2), Naples, Milano, Florence, Pise and Bologna (November 2006)

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

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

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

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

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

- 9th Conference on Mathematical Analysis and Applications, Iasi, October 26-27, 2007

- Second Workshop Series on Applied Mathematics, Piteşti, November 2-4, 2007

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

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

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

- University of Ljubljana (July and August 2008)

- Scuola Normale Superiore di Pisa (October 2008)

- University Ovidius of Constanta (November 2008)

- 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

- Université de Picardie Jules Verne (February 2009)

- University of Rzeszów (two talks in May 2009)

- Panstwowa Wyzsza Szkola Zawodowa, Jaroslaw, Poland (May 2009)

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

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

- University Ovidius of Constanta (May 2009)

- Université de Picardie Jules Verne (February 2010)

- International Workshop Nonlinear Difference and Differential Equations and their Applications, University of Rousse, Bulgaria (April 2010)

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

- Workshop on Asymptotic Analysis and Stochastic Methods for Heterogeneous Media, Alba Iulia (June 9-13, 2010)

- International Conference Variable Exponent Analysis, Oulu, Finland, June 29–July 2, 2010 (two conferences on Eigenvalue Problems Associated to Nonhomogeneous Differential Operators in Spaces with Variable Exponent)

- XIVth Conference of the Romanian Mathematical Society, Alba Iulia (October 15-17, 2010)

- Institute of Mathematics "Simion Stoilow" of the Romanian Academy (October 2010)

- International Conference on Nonlinear Operators, Differential Equations and Applications (ICN-ODEA 2011), Cluj, July 5-8, 2011

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

- University Ovidius of Constanta (October 2011)

- Oxford PDE Seminar, University of Oxford (November 2011)

- Université de Poitiers (March 2012)

- Université de Monastir (March 2012)

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

- Jagiellonian University of Krakow (two talks in May 2012)

- AGH University of Science and Technology of Krakow (two talks in May 2012)

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

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

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

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

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

- University of Catania (January 2013)

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

- Université de Besançon (March 2013)

- International Workshop "New Trends in Pure and Applied Nonlinear Analysis", Sibiu, April 2013

- Université de Poitiers (April 2013)

- Workshop et École de Recherche CIMPA *EDP Non Linéaires et Applications: Étude Théorique et Numérique*, Université de Tanger, Maroc, 5-17 Mai 2013

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

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

- King Abdulaziz University, Jeddah, Saudi Arabia (September 2013)

- Seminars on Nonlinear Analysis, Reggio Calabria (October 22, 2013)

- International School on Computational Commutative Algebra and Algebraic Geometry, Messina (October 23-26, 2013)

- 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

- University of East Anglia (January 2014)

- Institute Isaac Newton, University of Cambridge (January 2014)

- University of Swansea (January 2014)

- University of Cardiff (January 2014)

- University of Nottingham (January 2014)

- 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

- Université Cadi Ayyad, Marrakech (March 2014)

- King Abdulaziz University, Jeddah, Saudi Arabia (April 2014)

- University of Pisa (May 2014)

- 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

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

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

- University of Perugia (January 2015)

- Talks at the School and the Conference on Partial Differential Equations, München, 25-29 March 2015

- King Abdulaziz University, Jeddah, Saudi Arabia (April 2015)

- King Saud University, Riyadh, Saudi Arabia (May 2015)

- Recent Advances in Dynamics of Variational Inequalities and Equilibrum Problems, EuroXXVII Annual Conference, Glasgow, 12-15 July 2015

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

- International Workshop "Variational Analysis and Applications", Erice, 28 August–5 September 2015

- Université de Pau (October 2015)

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

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

- University of Stockholm (January 2016)

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

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

- Invited speaker at the "International Conference on Applied Mathematics and Numerical Methods", Craiova (14-16 April 2016)

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

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

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

- Faculty of Applied Mathematics, AGH University of Science and Technology, Krakow (8 November 2017)

- Faculty of Mathematics and Applied Physics, Rzeszow University of Technology, Rzeszow (17 November 2017)

- Chair of Optimization and Control, Jagiellonian University, Krakow (23 November 2017)

- Accademia delle Scienze dell'Umbria, January 2018

- 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)

- University of Stockholm (February 2018)

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

Organizer of International Conferences:

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

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

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

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

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

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

- 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

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

- 7th Congress of Romanian Mathematicians, Brasov, June 29–July 5, 2011

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

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

- 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

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

- 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

- International Congress in Nonlinear Analysis, Uludag University, Bursa, Turkey, June 23-26, 2014

- 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

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

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

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

Director of research grants

1. Grants funded in Romania

1998: Aplicatii ale ecuatiilor fizicii matematice in mecanica neneteda si fizica energiilor inalte. Grant CNCSIS (CNCSIS 9/1998/A/1)

1999-2001: Sisteme guvernate de ecuatiile fizicii matematice, sisteme expert si aplicatii in fizica. Grant CNCSIS (CNCSIS 79/1999/A/1, 1/2000/A/1, 340/2001/A/1)

2003-2004: Analiza unor clase de probleme la limita singulare in medii anizotrope: existenta, unicitatea si comportamentul asymptotic al solutiilor. Grant with the Romanian Academy (GAR 12/2004).

2004-2006: Neliniaritati si singularitati in fizica matematica. Grant CNCSIS (CNCSIS 308/2006). 2005-2006: Probleme singulare de tip Lane-Emden-Fowler cu convectie. Grant with the Romanian Academy (GAR 80/2006).

2007-2008: Analiza si controlul sistemelor diferentiale neliniare. Grant CNCSIS (CNCSIS 589/2008)

2007-2008: Probleme degenerate si singulare in analiza neliniara. Grant with the Romanian Academy (GAR 315/2007)

2007-2010: Procese neliniare degenerate si singulare. Grant CNCSIS Idei (CNCSIS ID-79/2007)

2009: Workshop "Nonlinear Analysis and Mathematical Physics", Sibiu, 14-16 May 2009. Organized with CNCSIS financement within the Program PNII–Exploratory Workshops

2010-2013: Sisteme diferentiale in analiza neliniara si aplicatii. Grant CNCS, the only grant in Mathematics approved in the competition "Proiecte Complexe de Cercetare Exploratorie" (CNCS PCCE-8/2010)

2011-2016: Qualitative and numerical analysis of nonlinear problems on fractals. Grant CNCS Idei approved in the competition "Proiecte de Cercetare Exploratorie" (CNCS PCE-47/2011)

2013: International Workshop "New Trends in Pure and Applied Nonlinear Analysis", Sibiu, March 2013. Organized with CNCS financement within the Program PNII–Exploratory Workshops

2014-2017: Sisteme de asigurare a securitatii informatiei bazate pe modele neliniare de analiza a fluxului informational. Grant CNCS "Proiecte Complexe de Cercetare Avansata" (CNCS PN-II-PT-PCCA-2013-4-0614)

2017-2020: Analiza calitativa si numerica a unor clase de sisteme diferentiale anizotrope si aplicatii. Grant CNCS-UEFISCDI approved in the competition "Proiecte de Cercetare Exploratorie" (PN-III-P4-ID-PCE-2016-0130)

2. International grants

2003-2004: Analiza neliniara si aplicatii in mecanica solidelor, Vicențiu Rădulescu and Mircea Sofonea (co-directors). Program EGIDE-Brancusi between University of Craiova and University of Perpignan, France

2005-2007: *Ecuatii cu derivate partiale si aplicatii*, Vicențiu Rădulescu and Olivier Goubet (codirectors). Program EGIDE-Brancusi (PAI 08915PG) between University of Craiova and Université de Picardie Jules Verne, Amiens, France

2014: Qualitative Analysis of Some Degenerate and Singular Phenomena in Nonlinear Analysis, HiCi Program No. 39-130-35-HiCi, King Abdulaziz University, Jeddah, Saudi Arabia

2017: Limiting sets of iterative systems in dimensions 3 and 4, grant BI-US/17-18-002 between Slovenia and United States (University of Ljubljana and Oregon State University)

2017: Analiza zveznih in diskretnih matematičnih modelov v biologiji, kemiji in genetiki (Analysis of continuous and discrete mathematical models in biology, chemistry and genetics), grant N1-0064 between Slovenia (Institute of Mathematics, Physics and Mechanics, Ljubljana) and Hungary (Eötvös Loránd, Budapest), 91.553 EUR

I have been member in the following Romanian or international research grants:

(i) Project P.I.C.S. between France and Romania (1999-2003), directors: H. Brezis and M. Iosifescu

(ii) Project P.I.C.S. between France and Romania (2005-2009), directors: D. Cioranescu and M. Iosifescu

(iii) European Project Smart Systems: New Materials, Adaptive Systems and Their Nonlinearities. Modelling, Control and Numerical Simulation, director: B. Miara

(iv) Grant CNCSIS D4-2001 Sisteme dinamice si probleme de evolutie (contract MEN26044/2001 funded by the World Bank), director: C. Niculescu

(v) Grant CNCSIS 341/2001 Teoria sistemelor hamiltoniene si aplicatii in fizica particulelor elementare, director: R. Constantinescu

(vi) Grant CNCSIS 132/1995 Metode algebrice, topologice, variationale si de ordine in studiul analizei neliniare si al analizei functionale, director: C. Niculescu (vii) Grant CNCSIS 447/1996 Aplicatii ale metodelor topologice si variationale in studiul problemelor fizicii matematice, director: C. Niculescu

(viii) Grant CNCSIS 195/1997 Metode topologice si variationale in studiul problemelor de evolutie, director: C. Niculescu

(ix) Grant CNCSIS 10/1998 Aplicatii ale metodelor topologice, variationale si statistice in studiul problemelor de evolutie, director: C. Niculescu

(x) Grant CNCSIS 303/1999 Aplicatii ale metodelor topologice, variationale si ergodice in studiul problemelor de evolutie, director: C. Niculescu

(xi) Grant CNCSIS 143/2001 Noi inegalitati analitice si algebrice si aplicatii, director: C. Niculescu

(xii) Grant CEx05-D11-36 Analiza si controlul sistemelor diferentiale, director: V. Barbu

(xiii) Grant 2-CEx06-11-18/2006 Metode diferentiale deterministe si stocastice in studiul unor modele de evolutie, director: R. Purice

(xiv) Grant J1-9643 (2007-2010, funded by the Slovenian Research Agency) New methods in geometry and topology and their applications, director: D. Repovš (Univ. Ljubljana)

(xv) Grant J1-2057 (2009-2012, funded by the Slovenian Research Agency) Nestandardne vložitve Cantorjeve množice v Evklidski 3-prostor, director: D. Repovš (Univ. Ljubljana)

(xvi) Grant P1-0292 (2009-2014, funded by the Slovenian Research Agency) *Topology and geometry*, director: D. Repovš (Univ. Ljubljana)

(xvii) Grant J1-4144 (2011-2014, funded by the Slovenian Research Agency) Geometry and topology of 3-manifolds, director: D. Repovš (Univ. Ljubljana)

(xviii) Grant J1-6721 (2014-2017, funded by the Slovenian Research Agency) Limiting sets of iterative systems in dimensions 3 and 4, director: D. Repovš (Univ. Ljubljana)

(xix) Grant J1-7025 (2016-2018, funded by the Slovenian Research Agency) *Izbrani problemi nelinearne analize*, director: D. Repovš (Univ. Ljubljana)

ResearcherID: http://www.researcherid.com/rid/A-1503-2012

Google Scholar: http://scholar.google.com/citations?user=bQqf4NQAAAAJ&hl=fr&oi=ao

Citations: my papers have been cited 4142 times by 1343 authors (until 1st of August 2018, according to *MathSciNet*). My Hirsch Index is 35 (MathScinet) and 45 (Google Scholar). My G-index is 44 and my i10-index is 73.

Miscellanea. I am reviewer for *Mathematical Reviews* (since 1993), *Zentralblatt für Mathematik* (since 1995), *Applied Mechanics Review* (since 1999), and *MAA Reviews* (since 2007). I am also member of the American Mathematical Society (since 1995), the European Mathematical Society (since 2001), the Société de Mathématiques Appliquées et Industrielles (SMAI) de France (since 2002) and of ISAAC - the International Society for Analysis, its Applications and Computation (since 1997). I am an Expert Reviewer of the National Commission for Scientific and Technological Research of the Government of Chile (since 2013). I am the organizer of the Nonlinear Analysis Seminar at the Institute of Mathematics "Simion Stoilow" of the Romanian Academy.

Scientific Works

Theses

1. Applications de la théorie des opérateurs à l'analyse non linéaire, Ph.D. thesis, University of Craiova, 17 December 1993.

2. Analyse de quelques problèmes liés à l'équation de Ginzburg-Landau, Ph.D. thesis, Université Pierre et Marie Curie (Paris VI), 29 June 1995.

3. Analyse de quelques problèmes aux limites elliptiques non linéaires, Habilitation à Diriger des Recherches, Université Pierre et Marie Curie (Paris VI), 25 February 2003.

BOOKS

1) Treatment Methods of the Elliptic Problems, Craiova University Press, 1998.

2) Partial Differential Equations, Craiova University Press, 1999.

3) (with D. Motreanu) 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; (see www.springer.com/prod/b/1-4020-1385-X).

4) (with C. Niculescu, Editors), Mathematical Analysis and Applications: International Conference on Mathematical Analysis and Applications, Craiova (Romania), 23-24 September 2005, AIP Conference Proceedings Volume 835, American Institute of Physics, 176 pp., 2006; (see http://proceedings.aip.org/proceedings/confproceed/835.jsp and

http://www.springer.com/east/home/generic/search/results?SGWID=5-40109-22-173663783-0).

5) Qualitative Analysis of Nonlinear Elliptic Partial Differential Equations, Contemporary Mathematics and Its Applications, vol. 6, Hindawi Publ. Corp., 210 pp., 2008; (see http://www.hindawi.com/books.html).

6) (with M. Ghergu) 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; (see

http://www.us.oup.com/us/catalog/general/subject/Mathematics/AppliedMathematics).

7) (with T.-L. Rădulescu and T. Andreescu) Problems in Real Analysis: Advanced Calculus on the Real Axis, Springer, New York, xx+452 pp., 2009 (see

http://www.springer.com/mathematics/analysis/book/978-0-387-77378-0).

8) (with A. Kristály and 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 (see http://www.cambridge.org/catalogue/catalogue.asp?isbn=9780521117821).

9) (with M. Ghergu) Nonlinear PDEs: Mathematical Models in Biology, Chemistry and Population Genetics, Springer Monographs in Mathematics, Springer-Verlag, Heidelberg, xviii+392 pp., 2012 (see

http://www.springer.com/mathematics/dynamical+systems/book/978-3-642-22663-2?changeHeader)

10) (with E. Mitidieri and J. Serrin) Recent Trends in Nonlinear Partial Differential Equations I: Evolution Problems, Contemporary Mathematics Series, vol. 594, American Mathematical Society, 307 pp., 2013 (see http://www.ams.org/bookstore?fn=20&arg1=whatsnew&ikey=CONM-594)

11) (with E. Mitidieri and J. Serrin) Recent Trends in Nonlinear Partial Differential Equations II: Stationary Problems, Contemporary Mathematics Series, vol. 595, American Mathematical Society, 340 pp., 2013 (see http://www.ams.org/bookstore?fn=20&arg1=whatsnew&ikey=CONM-595)

12) (with P. Pucci and H. Weinberger, Editors), *Selected Papers of James Serrin*, vol. I, 796 pp., Contemporary Mathematicians, Birkhäuser, Basel, 2013 (see

http://www.springer.com/birkhauser/history+of+science/book/978-3-0348-0684-8)

13) (with P. Pucci and H. Weinberger, Editors), *Selected Papers of James Serrin*, vol. II, 796 pp., Contemporary Mathematicians, Birkhäuser, Basel, 2013 (see

http://www.springer.com/birkhauser/history+of+science/book/978-3-0348-0686-2)

14) (with 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 (see http://www.crcpress.com/product/isbn/9781498703413).

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

16) (with G. Molica Bisci and R. Servadei), Variational Methods for Nonlocal Fractional Problems, Encyclopedia of Mathematics and its Applications, Cambridge University Press, Cambridge, Vol. 162, 400 pp., 2016.

17) (with G. Kassay), *Equilibrium Problems and Applications*, Mathematics in Science and Engineering, Academic Press, Elsevier, Oxford, book in progress, to appear in 2017.

18) (with G. Kassay) *Equilibrium Problems and Applications*, Academic Press, Elsevier, Oxford, book in progress, 2018.

19) (with N. Papageorgiou and D. Repovš) Modern Nonlinear Analysis: Theory and Applications, I-II, Springer Monographs in Mathematics, Springer-Verlag, Heidelberg, to appear in 2019.

20) (with M. Rădulescu and S. Rădulescu) *Selected Problems in Mathematical Analysis*, Problem Books in Mathematics, Springer-Verlag, Heidelberg, book in progress.

21) Elliptic Partial Differential Equations, Cornerstones Series, Birkhäuser, Boston, book in progress.

EDITOR OF SPECIAL ISSUES

1) Guest Editor (with M. Iosifescu and M. Sofonea) of the Proceedings of the Sixth Franco-Romanian Colloquium on Applied Mathematics, Held in Perpignan, September 2–6, 2002, Annals Univ. Craiova Ser. Mat. Inform. **30** (2003).

2) Guest Editor (with M. Iosifescu) of the Proceedings of the Seventh Franco-Romanian Colloquium on Applied Mathematics, Held in Craiova, August 30 – September 3, 2004, Annals Univ. Craiova Ser. Mat. Inform. **32** (2005).

3) Guest Editor (with Hervé Le Dret – University of Paris 6 and Roderick Wong, City University of Hong Kong) of the 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.

4) Guest Editor of the Special Issue Degenerate and Singular Partial Differential Equations and Phenomena, Journal of Mathematical Analysis and Applications, Vol. 352, Issue 1, 572 pp., 2009.

5) Guest Editor (with Claudianor Alves) of the Special Issue Degenerate and Singular Differential Operators with Applications to Boundary Value Problems, Boundary Value Problems, Volume 2010 (2010).

6) Guest Editor (with Alexander Pankov, Robert P. Gilbert, and Stanislav Antontsev) of the Special Issue Sobolev Spaces with Variable Exponent and Related Elliptic Problems: Theory and Applications, Complex Variables and Elliptic Equations 56, Issue 7–9, 2011.

7) Guest Editor (with Giuseppe Da Prato, Scuola Normale Superiore di Pisa) of the Special Issue Stochastic PDEs in Fluid Dynamics, Particle Physics and Statistical Mechanics, Journal of Mathematical Analysis and Applications **384** (2011), Issue 1.

8) Guest Editor of the Special Issue Singular and Degenerate Phenomena in Nonlinear Analysis, Nonlinear Analysis: Theory, Methods & Applications **119** (2015), 1-500.

9) Guest Editor of the Special Issue dedicated to Acad. Marius Iosifescu on the occasion of his 80th anniversary, Annals Univ. Craiova Ser. Mat. Inform. 43, No. 1, (2016).

10) Guest Editor (with Patrizia Pucci) of the Special Issue Progress in Nonlinear Kirchhoff Problems, Nonlinear Analysis: Theory, Methods and Applications, in progress.

11) Guest Editor (with Dušan Repovš) of the Special Issue *Elliptic Equations and Their Synergies*, Complex Variables and Elliptic Equations, in progress.

12) Guest Editor (with Steven Krantz) of the Special Issue Perspectives of Geometric Analysis in PDEs, Journal of Geometric Analysis, in progress.

TRANSLATIONS

1) H. Brezis, Analyse fonctionnelle: théorie, méthodes et applications, Masson, Paris, 1992. Translation from French. Romanian title: Analiză funcțională: teorie, metode și aplicații, Editura Academiei Române, București, 2002, 275 pp.

Course Notes

1) H. Brezis, Équations de Ginzburg-Landau et singularités, Notes de cours à l'Université Pierre et Marie Curie (Paris 6) rédigées par Vicentiu Radulescu, 2001.

ARTICLES

1) "Variational aspects of generalized eigenvalue and eigenvector problems", *Proceedings of the National Colloquium on Probability Theory and Operational Research (Craiova, 1982)*, 164-167, Univ. Bucharest, Bucharest, 1982.

2) "Subspaces with the $1\frac{1}{2}$ -ball property in Banach spaces", Ann. Univ. Craiova **XV** (1987), 19-25.

3) "A generalization of a classical result concerning the duality of regular spaces", *Revue Roum.* Math. Pures Appl. **33** (1988), 785-788.

4) "A study of some special functions with Lie theory", Studii Cerc. Mat. 43 (1991), 67-71.

5) "Sur la théorie de Lusternik-Schnirelman en dimension finie", *Matarom*, Laboratoire d'Analyse Numérique, Université de Paris 6, No. 2 (juin 1992), 9-17.

6) "Nonlinear Sturm-Liouville type problems with a finite number of solutions", *Matarom*, Laboratoire d'Analyse Numérique, Université de Paris 6, No. 3 (juillet 1993), 54-67 (with P. Mironescu).

7) "Mountain pass type theorems for non-differentiable functions and applications", *Proc. Japan Acad.* **69A** (1993), 193-198.

8) "A bifurcation problem associated to a convex, asymptotically linear function", C.R. Acad. Sci. Paris, Ser. I **316** (1993), 667-672 (with P. Mironescu).

9) "On the Volterra theorem", Ann. Univ. Craiova XX (1993), 11-12.

10) "Problems at resonance via critical point theorems for non-smooth functionals", *Tübingen Berichte zür Funktionanalysis*, Heft 3, Jahrgang 93/94, 169-183 (with C. Niculescu).

11) "Periodic solutions of the equation $-\Delta v = v(1 - |v|^2)$ in \mathbb{R} and \mathbb{R}^2 ", Houston Math. Journal **20** (1994), 653-670 (with P. Mironescu).

12) "Vector norms and duality properties in Riesz spaces", Annals New York Acad. **728** (1994), 330-338.

13) "On the Ginzburg-Landau energy with weight", C.R. Acad. Sci. Paris, Ser. I **319** (1994), 843-848 (with C. Lefter).

14) "Mountain pass type theorems for non-differentiable convex functions", *Revue Roum. Math. Pures Appl.* **39** (1994), 53-62.

15) "On a duality theorem", Studii Cerc. Mat. 46 (1994), 393-396 (with P. Mironescu).

16) "On the Ginzburg-Landau energy with vanishing weight", Ann. Univ. Craiova XXI (1994), 3-11 (with C. Lefter).

17) "A Lusternik-Schnirelman type theorem for locally Lipschitz functionals with applications to multivalued periodic problems", *Proc. Japan Acad.* **71A** (1995), 164-167.

18) "A multiplicity theorem for locally Lipschitz periodic functionals", J. Math. Anal. Appl. 195 (1995), 621-637 (with P. Mironescu).

19) "The renormalized energy associated to a harmonic map", *PanAmerican Math. Journal* **3** (1995), No. 2, 1-7 (with C. Lefter).

20) "Locally Lipschitz functionals with the strong Palais-Smale property", *Revue Roum. Math. Pures Appl.* **40** (1995), 355-372.

21) "Convergence properties for general solutions of the Ginzburg-Landau energy with weight", *Revue Roum. Math. Pures Appl.* **40** (1995), 633-639 (with C. Lefter).

22) "Minimization problems and renormalized energies related to the Ginzburg-Landau equation", Ann. Univ. Craiova XXII (1995), 1-13 (with C. Lefter).

23) "Nontrivial solutions for a multivalued problem with strong resonance", *Glasgow Math. Journal* **38** (1996), 53-61.

24) "On the Ginzburg-Landau energy with weight", Ann. Inst. H. Poincaré, Analyse Non-linéaire **13** (1996), 171-184.

25) "The study of a bifurcation problem associated to an asymptotically linear function", *Nonlinear Analysis*, *T.M.A.* **26** (1996), 857-875 (with P. Mironescu).

26) "A Saddle Point type theorem and applications to the study of some problems with strong resonance at infinity", Ann. Acad. Sci. Fennicae **21** (1996), 117-131 (with C. Niculescu).

27) "Minimization problems and corresponding renormalized energies", *Diff. Integral Equations* 9 (1996), 903-918 (with C. Lefter).

28) "Asymptotics for the minimizers of the Ginzburg-Landau energy with vanishing weight", Advances Math. Sci. Appl. 7 (1997), 259-271.

29) "Sur l'équation multigroupe stationnaire de la diffusion des neutrons", C.R. Acad. Sci. Paris, Ser. I **323** (1996), 765-768.

30) "Problèmes elliptiques avec non-linéarité discontinue et second membre L^{1} ", C.R. Acad. Sci. Paris, Ser. I **324** (1997), 169-172 (with M. Bocea).

31) "Existence theorems for some classes of boundary value problems involving the *p*-Laplacian", *PanAmerican Math. Journal* 7 (1997), No. 2, 53-66 (with D. Motreanu).

32) "Perturbations of hemivariational inequalities with constraints and applications", J. Global Optimiz. **12** (1998), 285-297 (with P.D. Panagiotopoulos).

33) "Multivalued problems with strong resonance at infinity and L^1 data", Revue Roumaine Math. Pures Appl. 43 (1998), 533-540.

34) "An eigenvalue Dirichlet problem with weight and L^1 data", *Math. Nachr.* **198** (1999), 5-17 (with M. Bocea).

35) "Existence theorems of Hartmann-Stampacchia type for hemivariational inequalities and applications", J. Global Optimiz. 15 (1999), 41-54 (with M. Fundos and P.D. Panagiotopoulos).

36) "Existence and uniqueness of positive solutions to a semilinear elliptic problem in \mathbb{R}^{N} ", J. Math. Anal. Appl. **229** (1999), 417-425 (with F. Cîrstea).

37) "A perturbation result for a double eigenvalue hemivariational inequality and applications", J. Global Optimiz. 14 (1999), 137-156 (with M. Bocea and P.D. Panagiotopoulos).

38) "Perturbations of nonsmooth symmetric nonlinear eigenvalue problems", C.R. Acad. Sci. Paris **329** (1999), 281-286 (with M. Degiovanni).

39) "Perturbations of hemivariational inequalities with constraints", *Revue Roum. Math. Pures Appl.* 44 (1999), 455-461.

40) "Double eigenvalue hemivariational inequalities with non-locally Lipschitz energy functional", *Commun. Appl. Nonlin. Anal.* 6 (1999), No. 4, 17-29 (with M. Bocea and P.D. Panagiotopoulos).

41) "Approximation of the ground state with solutions on bounded domains with corners", *Revue Roum. Math. Pures Appl.* 44 (1999), 845-855.

42) "KKM techniques for hemivariational inequalities and applications", Ann. Univ. Craiova XXVI (1999), 29-42 (with C. Vladimirescu).

43) "A nonsmooth critical point theory approach to some nonlinear elliptic equations in unbounded domains", *Differential and Integral Equations* **13** (2000), 47-60 (with F. Gazzola).

44) "Existence and nonexistence results for quasilinear problems with nonlinear boundary condition", J. Math. Anal. Appl. **244** (2000), 169-183 (with F. Cîrstea).

45) "Multiple solutions of hemivariational inequalities with area-type term", *Calculus of Variations and PDE* **10** (2000), 355-387 (with M. Degiovanni and M. Marzocchi).

46) "Hemivariational inequalities associated to multivalued problems with strong resonance", in *Nonsmooth/Nonconvex Mechanics: Modeling, Analysis and Numerical Methods*, dedicated to the memory of Professor P.D. Panagiotopoulos, Eds.: D.Y. Gao, R.W. Ogden, G.E. Stavroulakis, Kluwer Academic Publishers, 2000, pp. 333-348.

47) "Minimization of the renormalized energy in the unit ball of \mathbb{R}^2 ", Nieuw Archief voor Wiskunde **5/1**, No. 3 (2000), 150-152 (with L. Ignat and C. Lefter).

48) "Existence results for inequality problems with lack of convexity", Numer. Funct. Anal. Optimiz. **21** (2000), No. 7-8, 869-884 (with D. Motreanu).

49) "Multiple solutions of degenerate perturbed elliptic problems involving a subcritical Sobolev exponent", *Topol. Meth. Nonlin. Anal.* **15** (2000), 281-298 (with F. Cîrstea).

50) "Multiplicity of solutions for a class of non-symmetric eigenvalue hemivariational inequalities", J. Global Optimiz. 17 (1/4) (2000), 43-54 (with F. Cîrstea).

51) "On the uniqueness of solutions to a class of singular anisotropic elliptic boundary value problems", *RGMIA Research Report Collection*, vol. 3 (2000), 405-414 (with F. Cîrstea).

52) "On a double bifurcation quasilinear problem arising in the study of anisotropic continuous media", *Proc. Edinburgh Math. Soc.* **44** (2001), 527-548 (with F. Cîrstea).

53) "Perturbations of eigenvalue problems with constraints for hemivariational inequalities", From Convexity to Nonconvexity, volume dedicated to the memory of Prof. G. Fichera, Nonconvex Optim.

Appl., 55, Kluwer Acad. Publ., Dordrecht, 2001 (R. Gilbert, P. Pardalos, Eds.), 243-253.

54) "Existence implies uniqueness for a class of singular anisotropic elliptic boundary value problems", *Math. Methods Appl. Sciences* **24** (2001), 771-779 (with F. Cîrstea).

55) "Weak solutions of quasilinear problems with nonlinear boundary conditions", *Nonlinear Analysis, T.M.A.* **43** (2001), 623-636 (with F. Cîrstea and D. Motreanu).

56) "Nonlinear eigenvalue problems for quasilinear operators on unbounded domains", Nonlinear Diff. Equations Appl. (NoDEA) 8 (2001), 481-497 (with E. Montefusco).

57) "On a class of quasilinear eigenvalue problems on unbounded domains", Archiv der Mathematik (Basel) 77 (2001), 337-346 (with F. Cîrstea).

58) "Blow-up solutions for semilinear elliptic problems", Nonlinear Analysis, T.M.A. 48 (2002), 541-554 (with F. Cîrstea).

59) "Perturbations of symmetric hemivariational inequalities", in *Nonsmooth/Nonconvex Mechanics* with Applications in Engineering, Editions Ziti, Thessaloniki, 2002 (C. Baniotopoulos, Ed.), 61-72.

60) "Existence and uniqueness of blow-up solutions for a class of logistic equations", *Commun. Contemp. Math.* 4 (2002), 559-586 (with F. Cîrstea).

61) "Hardy-Sobolev inequalities with remainder terms", *Topol. Meth. Nonlin. Anal.* **20** (2002), 145-149 (with M. Willem and D. Smets).

62) "Uniqueness of the blow-up boundary solution of logistic equations with absorption", C. R. Acad. Sci. Paris, Ser. I **335** (2002), 447-452 (with F. Cîrstea).

63) "Entire solutions blowing-up at infinity for semilinear elliptic systems", J. Math. Pures Appliquées 81 (2002), 827-846 (with F. Cîrstea).

64) "Explosive solutions of elliptic equations with absorption and nonlinear gradient term", *Proc. Indian Acad. (Math. Sciences)* **112** (2002), 1-11 (with M. Ghergu and C. Niculescu).

65) "Solutions with boundary blow-up for a class of nonlinear elliptic problems", *Houston J. Math.* **29** (2003), 821-829 (with F. Cîrstea).

66) "Elliptic systems involving finite Radon measures", *Differential and Integral Equations* 16 (2003), 221-229 (with M. Willem).

67) "Multiplicity of solutions for a class of non-symmetric eigenvalue hemivariational inequalities", *Math. Methods Appl. Sciences* **26** (2002), 801-814 (with C. Ciulcu and D. Motreanu).

68) "Asymptotics for the blow-up boundary solution of the logistic equation with absorption", C. R. Acad. Sci. Paris, Ser. I **336** (2003), 231-236 (with F. Cîrstea).

69) "Ground state solutions of nonlinear singular Schrödinger equations with lack of compactness", *Math. Methods Appl. Sciences* **26** (2003), 897-906 (with M. Mihăilescu).

70) "Multi-valued boundary value problems involving Leray-Lions operators and discontinuous nonlinearities", *Rend. Circ. Mat. Palermo* **52** (2003), 57-69 (with S. Dăbuleanu).

71) "Asymptotics of minimizers and pinning of vortices for a variational problem with discontinuous weight related to superconductivity", in *Proceedings of the National Conference on Mathematical Analysis and Applications*, Timişoara, December 12-13 2000, Timişoara University Press, 2003 (M. Megan, N. Suciu, Eds.), pp. 337-356.

72) "Inequality problems with nonlocally Lipschitz energy functional: existence results and applications to nonsmooth mechanics", *Applicable Anal.* **82** (2003), 561-574 (with M. Bocea and P.D. Panagiotopoulos).

73) "Sublinear singular elliptic problems with two parameters", J Differential Equations 195 (2003), 520-536 (with M. Ghergu).

74) "Critical singular problems on infinite cones", *Nonlinear Analysis*, *T.M.A.* **54** (2003), 1153-1164 (with D. Smets).

75) "Existence and non-existence of entire solutions to the logistic differential equation", *Abstract* and *Applied Analysis* **17** (2003), 995-1003 (with M. Ghergu).

76) "Nonlinear eigenvalue problems arising in earthquake initiation", Adv. Differential Equations 8 (2003), 769-786 (with I. Ionescu).

77) "Bifurcation and asymptotics for the Lane-Emden-Fowler equation", C. R. Acad. Sci. Paris, Ser. I 337 (2003), 259-264 (with M. Ghergu).

78) "Explosive solutions of semilinear elliptic systems with gradient term", *RACSAM Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A Mat.* **97** (2003), 437-445 (with M. Ghergu).

79) Éditorial [Actes du 6-ème Colloque Franco-Roumain de Mathématiques Appliquées], Proceedings of the Sixth Franco-Romanian Colloquium on Applied Mathematics, Held in Perpignan, September 2-6, 2002, Ann. Univ. Craiova **30** (2003), No. 1, p. 1 (with M. Iosifescu and M. Sofonea).

80) "On a spectral variational problem arising in the study of earthquakes. Multiplicity and perturbation from symmetry", in *Control and Boundary Analysis, Proceedings of the 21st IFIP Conference on System Modeling and Optimization*, Sophia Antipolis, France, July 21-25, 2003 (J. Cagnol, J.-P. Zolesio, Eds.), Lecture Notes in Pure and Applied Mathematics Series, Marcel Dekker, Inc., 2004, pp. 191-202.

81) "Nonradial blow-up solutions of sublinear elliptic equations with gradient term", Commun. Pure Appl. Anal. 3 (2004), 465-474 (with M. Ghergu).

82) "Bifurcation for a class of singular elliptic problems with quadratic convection term", C. R. Acad. Sci. Paris, Ser. I 338 (2004), 831-836 (with M. Ghergu).

83) "Extremal singular solutions for degenerate logistic-type equations in anisotropic media", C. R. Acad. Sci. Paris, Ser. I **339** (2004), 119-124 (with F. Cîrstea).

84) "Septième Colloque franco-roumain de mathématiques appliquées", *Gazette des Mathématiciens*, No. 103 (2005), 57-58 (with M. Iosifescu) [see also *Matapli*, No. 76 (mars 2005), 47-48].

85) "Finitely many solutions for a class of boundary value problems with superlinear convex nonlinearity", Archiv der Mathematik (Basel) 84 (2005), 538-550.

86) "Combined effects of asymptotically linear and singular nonlinearities in bifurcation problems of Lane-Emden-Fowler type", J. Math. Pures Appl. (Journal de Liouville) 84 (2005), 493-508 (with F. Cîrstea and M. Ghergu).

87) "Multiparameter bifurcation and asymptotics for the singular Lane-Emden-Fowler equation with a convection term", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)* **135** (2005), 61-84 (with M. Ghergu).

88) "Eigenvalue problems for degenerate nonlinear elliptic equations in anisotropic media", *Bound-ary Value Problems* 1 (2005), 107-128 (with D. Motreanu).

89) "On a class of sublinear singular elliptic problems with convection term", J. Math. Anal. Appl. **311** (2005), 635-646 (with M. Ghergu).

90) Préambule [Actes du 7-ème Colloque Franco-Roumain de Mathématiques Appliquées], Proceedings of the Seventh Franco-Romanian Colloquium on Applied Mathematics, Held in Craiova, August 30-September 3, 2004, Ann. Univ. Craiova **32** (2005), p. 1 (with M. Iosifescu).

91) "Bifurcation and asymptotics for elliptic problems with singular nonlinearity", in *Studies in Nonlinear Partial Differential Equations: In Honor of Haim Brezis, Fifth European Conference on Elliptic and Parabolic Problems: A special tribute to the work of Haim Brezis*, Gaeta, Italy, May 30 - June 3, 2004 (C. Bandle, H. Berestycki, B. Brighi, A. Brillard, M. Chipot, J.-M. Coron, C. Sbordone, I. Shafrir, V. Valente, G. Vergara Caffarelli, Eds), Birkhäuser, 2005, pp. 349-362.

92) "Nonlinear problems with boundary blow-up: a Karamata regular variation theory approach", Asymptotic Analysis 46 (2006), 275-298 (with F. Cîrstea).

93) "Singular elliptic problems with lack of compactness", Ann. Matem. Pura Appl. 185 (2006), 63-79 (with M. Ghergu).

94) "A multiplicity result for a nonlinear degenerate problem arising in the theory of electrorheological fluids", *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences* **462** (2006), 2625-2641 (with M. Mihăilescu).

95) "Singular elliptic problems with convection term in anisotropic media", in *Mathematical Analysis and Applications: International Conference on Mathematical Analysis and Applications*, Craiova (Romania), 23-24 September 2005, AIP Conference Proceedings Volume 835 (C. Niculescu and V. Rădulescu, Editors), American Institute of Physics, 2006, pp. 74-89 (with M. Ghergu).

96) "Existence and multiplicity of solutions for quasilinear nonhomogeneous problems: an Orlicz-Sobolev space setting", J. Math. Anal. Appl. **330** (2007), 416-432 (with M. Mihăilescu).

97) "Singular phenomena in nonlinear elliptic problems. From blow-up boundary solutions to equations with singular nonlinearities", in *Handbook of Differential Equations: Stationary Partial Differential Equations, Vol.* 4 (Michel Chipot, Editor), North Holland, Elsevier, Amsterdam, 2007, pp. 483-591.

98) "On the influence of a subquadratic convection term in singular elliptic problems", in *Applied Analysis and Differential Equations* (O. Carja, I. Vrabie, Eds.), World Scientific, 2007, pp. 127-138 (with M. Ghergu).

99) "An infinite dimensional version of the Schur convexity property and applications", Analysis and Applications 5 (2007), 123-136 (with C. Vallée).

100) "Nonhomogeneous boundary value problems in Orlicz-Sobolev spaces", C. R. Acad. Sci. Paris, Ser. I 344 (2007), 15-20 (with M. Mihăilescu).

101) "On a class of singular Gierer-Meinhardt systems arising in morphogenesis", C. R. Acad. Sci. Paris, Ser. I 344 (2007), 163-168 (with M. Ghergu).

102) "Boundary blow-up in nonlinear elliptic equations of Bieberbach–Rademacher type", *Transactions Amer. Math. Soc.* **359** (2007), 3275-3286 (with F. Cîrstea).

103) "On a nonhomogeneous quasilinear eigenvalue problem in Sobolev spaces with variable exponent", *Proceedings Amer. Math. Soc.* **135** (2007), 2929-2937 (with M. Mihăilescu).

104) "Ground state solutions for the singular Lane-Emden-Fowler equation with sublinear convection term", J. Math. Anal. Appl. **333** (2007), 265-273 (with M. Ghergu).

105) "Back to the Keller-Osserman condition for boundary blow-up solutions", Advanced Nonlinear Studies 7 (2007), 271-298 (with S. Dumont, L. Dupaigne, and O. Goubet).

106) "Lane-Emden-Fowler equations with convection and singular potential", J. Math. Pures Appl. (Journal de Liouville) 87 (2007), 563-581 (with L. Dupaigne and M. Ghergu).

107) "Nonhomogeneous boundary value problems in anisotropic Sobolev spaces", C. R. Acad. Sci. Paris, Ser. I **345** (2007), 561-566 (with M. Mihăilescu and P. Pucci).

108) "Comparison principles and applications to nonlinear elliptic equations", in *Critical Point Theory and Its Applications*, Casa Cartii de Stiinta (C. Varga, A. Kristály, P. Blaga, Eds.), Cluj-Napoca, 2007, pp. 17-52.

109) "Laudatio for Professor Philippe G. Ciarlet", An. Univ. Craiova Ser. Mat. Inform. **34** (2007), 1-4.

110) "Eigenvalue problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces", *Analysis and Applications* **6** (2008), 83-98 (with M. Mihăilescu).

111) "Existence and non-existence results for quasilinear elliptic exterior problems with nonlinear boundary conditions", *Communications in Partial Differential Equations* **33** (2008), 706-717 (with R. Filippucci and P. Pucci).

112) "Eigenvalue problems for anisotropic quasilinear elliptic equations with variable exponent", J. Math. Anal. Appl. **340** (2008), 687-698 (with M. Mihăilescu and P. Pucci).

113) "Continuous spectrum for a class of nonhomogeneous differential operators", *Manuscripta Mathematica* **125** (2008), 157-167 (with M. Mihăilescu).

114) "Nonhomogeneous Neumann problems in Orlicz-Sobolev spaces", C. R. Acad. Sci. Paris, Ser. I **346** (2008), 401-406 (with M. Mihăilescu).

115) "A singular Gierer-Meinhardt system with different source terms", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)* **138A** (2008), 1215-1234 (with M. Ghergu).

116) "Neumann problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces", Ann. Inst. Fourier 58 (2008), 2087-2111 (with M. Mihăilescu).

117) "Combined effects of singular nonlinearities and potentials in elliptic equations", Bull. St. Univ. Pitesti 14 (2008), 95-112.

118) "Combined effects in nonlinear singular elliptic problems with convection", *Revue Roumaine de Mathématiques Pures et Appliquées* (5–6) **53** (2008), 543-553.

119) "Spectrum consisting in an unbounded interval for a class of nonhomogeneous differential operators", *Bull. London Math. Soc.* **40** (2008), 972-984 (with M. Mihăilescu).

120) "Rodrigues-type formulae for Hermite and Laguerre polynomials", An. St. Univ. Ovidius Constanta 16 (2008), 109-116.

121) "The influence of the distance function in some singular elliptic problems", in *Potential Theory* and Stochastics in Albac. Aurel Cornea Memorial Volume, Albac, September 4-8, 2007 (D. Bakry, L. Beznea, N. Boboc, M. Röckner, Eds.), Theta Series in Advanced Mathematics, vol. 11, Amer. Math. Soc., 2009, pp. 125-138 (with M. Ghergu).

122) "Two nontrivial solutions for a non-homogeneous Neumann problem: an Orlicz-Sobolev setting", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)* **139 A** (2009), 367-379 (with A. Kristály and M. Mihăilescu).

123) "Perturbation effects in nonlinear eigenvalue problems", Nonlinear Analysis, T.M.A. **70** (2009), 3030-3038 (with D. Repovš).

124) "Eigenvalue problems for anisotropic discrete boundary value problems", *Journal of Difference Equations and Applications* **15** (2009), 557-567 (with M. Mihăilescu and S. Tersian).

125) "Sublinear eigenvalue problems on compact Riemannian manifolds with applications in Emden-Fowler equations", *Studia Mathematica* **191** (2009), 237-246 (with A. Kristály).

126) "Continuous spectrum for a class of nonhomogeneous differential operators", *Mathematica Scandinavica* **104** (2009), 132-146 (with M. Mihăilescu).

127) "A Tribute to Professor Philippe G. Ciarlet on His 70th Birthday", *Comm. Pure Appl. Anal.* 8 (2009), No. 1, 1-4 (with H. Le Dret and R. S. C. Wong).

128) "Foreword: JMAA Special Issue on Degenerate and Singular PDEs and Phenomena in Analysis and Mathematical Physics", J. Math. Anal. Appl. **352** (2009), 1-2.

129) "New trends of the mathematical education in Europe", in *Educatie-Identitate in Procesul Integrarii Romaniei in Uniunea Europeana*, Editura Academiei, Bucuresti, 2008, pp. 86-95 (with T. Rădulescu).

130) "Eigenvalue problems in anisotropic Orlicz-Sobolev spaces", C. R. Acad. Sci. Paris, Ser. I **347** (2009), 521-526 (with M. Mihăilescu and G. Moroşanu).

131) "Existence results for hemivariational inequalities involving relaxed monotone mappings", Commun. Appl. Anal. 13 (2009), 293-304 (with N. Costea).

132) "Large and bounded solutions for a class of nonlinear Schrödinger stationary systems", *Analysis and Applications* 7 (2009), 391-404 (with A. Ghanmi, H. Maagli and N. Zeddini).

133) "Hartman-Stampacchia results for stably pseudomonotone operators and nonlinear hemivariational inequalities", *Applicable Analysis* **89** (2010), 175-188 (with N. Costea).

134) "On a non-homogeneous eigenvalue problem involving a potential: an Orlicz-Sobolev space setting", *J. Math. Pures Appliquées (Journal de Liouville)* **93** (2010), 132-148 (with M. Mihăilescu and D. Repovš).

135) "Turing patterns in general reaction-diffusion systems of Brusselator type", *Communications in Contemporary Mathematics* **12** (2010), 661-679 (with M. Ghergu).

136) "Eigenvalue problems with weight and variable exponent for the Laplace operator", Analysis and Applications 8 (2010), 235-246 (with M. Mihăilescu).

137) "Spectral estimates for a nonhomogeneous difference problem", *Communications in Contemporary Mathematics* **12** (2010), 1015-1029 (with A. Kristály, M. Mihăilescu and S. Tersian).

138) "Concentration phenomena in nonlinear eigenvalue problems with variable exponents and signchanging potential", *Journal d'Analyse Mathématique* **111** (2010), 267-287 (with M. Mihăilescu).

139) "Remarks on eigenvalue problems for nonlinear polyharmonic equations", C. R. Acad. Sci. Paris, Ser. I 348 (2010), 161-164 (with P. Pucci).

140) "Existence results for variational-hemivariational problems with lack of convexity", *Nonlinear Analysis*, *T.M.A.* **73** (2010), 99-104 (with D. Repovš).

141) "Eigenvalue problems for anisotropic elliptic equations: An Orlicz–Sobolev space setting", Nonlinear Analysis, T.M.A. **73** (2010), 3239-3253 (with M. Mihăilescu and G. Moroşanu).

142) "A 21st century mathematical renaissance", *I, Mathematician*, Mathematical Association of America, (P. Casazza, S. Krantz, Eds.), Washington, DC, 2014 (with T.-L. Rădulescu).

143) "Agenda for a mathematical renaissance", Notices Amer. Math. Soc. (09) 57 (2010), p. 1079 (with T.-L. Rădulescu).

144) "The impact of the mountain pass theory in nonlinear analysis: a mathematical survey", *Boll. Unione Mat. Ital.* Ser. **IX**, No. 3 (2010), 543-584 (with P. Pucci).

145) "Remarks on a limiting case in the treatment of nonlinear problems with mountain pass geometry", *Studia Universitatis Babes-Bolyai Mathematica*, vol. **LV**, No. 4 (2010), 99-106.

146) "Picard and Krasnoselski sequences: applications to fixed point problems", *Gazeta Matematică*, *Seria A (Romanian Mathematical Society)* **XXVIII (CVII)** (2010), 77-92 (with T.-L. Rădulescu).

147) "Degenerate and singular differential operators with applications to boundary value problems", *Boundary Value Problems*, Volume 2010 (2010), pp. 1-2 (with C.O. Alves).

148) "Combined effects and degenerate phenomena in nonlinear stationary problems", *Le Matematiche* **65** (2010), 169-191.

149) "Discrete boundary value problems involving oscillatory nonlinearities: small and large solutions", *Journal of Difference Equations and Applications* **17** (2011), 1431-1440 (with A. Kristály and M. Mihăilescu).

150) "Preface", *Complex Variables and Elliptic Equations* **56** (2011), 543-544 (with Yu. Alkhutov, S. Antontsev, R. Gilbert, and A. Pankov).

151) "A Caffarelli-Kohn-Nirenberg type inequality with variable exponent and applications to PDE's", *Complex Variables and Elliptic Equations* **56** (2011), 659-669 (with M.Mihăilescu and D.Stancu).

152) "Multiplicity of solutions for a class of anisotropic elliptic equations with variable exponent", *Complex Variables and Elliptic Equations* **56** (2011), 755-767 (with M. Boureanu and P. Pucci).

153) "Infinitely many solutions for the Dirichlet problem on the Sierpinski gasket", Analysis and Applications 9 (2011), 235-248 (with B. Breckner and C. Varga).

154) "Infinitely many solutions for a class of nonlinear eigenvalue problem in Orlicz-Sobolev spaces", C. R. Acad. Sci. Paris, Ser. I **349** (2011), 263-268 (with G. Bonanno and G. Molica Bisci).

155) "Sublinear eigenvalue problems associated to the Laplace operator revisited", *Israel J. Math.* **181** (2011), 317-326 (with M. Mihăilescu).

156) "Homoclinic solutions of difference equations with variable exponent", *Topological Methods in Nonlinear Analysis* **37** (2011), 277-289 (with M. Mihăilescu and S. Tersian).

157) "Combined effects in quasilinear elliptic problems with lack of compactness", Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei Mat. Appl. **22** (2011), 189-205 (with P. Pucci).

158) "Multiple solutions of generalized Yamabe equations on Riemmanian manifolds and applications to Emden–Fowler problems", *Nonlinear Analysis: Real World Applications* **12** (2011), 2656-2665 (with G. Bonanno and G. Molica Bisci). 159) "Existence of three solutions for a non-homogeneous Neumann problem through Orlicz-Sobolev spaces", *Nonlinear Analysis*, *T.M.A.* **74** (2011), 4785-4795 (with G. Bonanno and G. Molica Bisci).

160) "Foreword: Special Issue on Stochastic PDEs in Fluid Dynamics, Particle Physics and Statistical Mechanics", J. Math. Anal. Appl. **384** (2011), p. 1 (with G. Da Prato).

161) "Combined effects in nonlinear problems arising in the study of anisotropic continuous media", Nonlinear Analysis, T.M.A. **75** (2012), 1523-1529 (with D. Repovš).

162) "Arbitrarily small weak solutions for a nonlinear eigenvalue problem in Orlicz-Sobolev spaces", Monatshefte für Mathematik 165 (2012), 305-318 (with G. Bonanno and G. Molica Bisci).

163) "Inequality problems of quasi-hemivariational type involving set-valued operators and a nonlinear term", J. Global Optimization 52 (2012), 743-756 (with N. Costea).

164) "Anisotropic Neumann problems in Sobolev spaces with variable exponent", Nonlinear Analysis, T.M.A. **75** (2012), 4471-4482 (with M. Boureanu).

165) "Noncoercive elliptic equations with subcritical growth", Discrete and Continuous Dynamical Systems – Series S 5 (2012), 857-864.

166) "A note on elliptic equations involving the critical Sobolev exponent", in International Conference on Differential & Difference Equations and Applications: Conference in honor of Professor Ravi P. Agarwal, Springer Proceedings of Mathematics & Statistics, vol. 47, 2013, pp. 311-319 (with G. Bonanno and G. Molica Bisci).

167) "Variational analysis for a nonlinear elliptic problem on the Sierpiński gasket", *ESAIM: Control, Optimisation and Calculus of Variations* **18** (2012), 941-953 (with G. Bonanno and G. Molica Bisci).

168) "Quasilinear elliptic non-homogeneous Dirichlet problems through Orlicz-Sobolev spaces", Nonlinear Analysis, T.M.A. **75** (2012), 4441-4456 (with G. Bonanno and G. Molica Bisci).

169) "Foreword", in *Selected Papers of James Serrin*, 2 volumes, Contemporary Mathematicians, Birkhäuser, Basel, 2013 (with P. Pucci and H. Weinberger).

170) "Infinitely many solutions for a class of nonlinear elliptic problems on fractals", C. R. Acad. Sci. Paris, Ser. I **350** (2012), 187-191 (with G. Bonanno and G. Molica Bisci).

171) "Multiple solutions for Lane–Emden equations with mixed nonlinearities", Annals Univ. Bucharest LXI (2012), 227-232.

172) "Critical Point Theory", in *Selected Papers of James Serrin*, Vol. 2, Contemporary Mathematicians, Springer, Basel, 2014, pp. 431-433 (P. Pucci, V. Radulescu, H. Weinberger, Editors).

173) "Weak solutions and energy estimates for a class of nonlinear elliptic Neumann problems", *Advanced Nonlinear Studies* **13** (2013), 373-389 (with G. Bonanno and G. Molica Bisci).

174) "Nonlinear elliptic problems on Riemannian manifolds and applications to Emden-Fowler type equations", *Manuscripta Mathematica* **142** (2013), 157-185 (with G. Bonanno and G. Molica Bisci).

175) "Multiple symmetric solutions for a Neumann problem with lack of compactness", C. R. Acad. Sci. Paris, Ser. I **351** (2013), 37-42 (with G. Molica Bisci).

176) "Semilinear Neumann problems with indefinite and unbounded potential and crossing nonlinearity", in *Recent Trends in Nonlinear Partial Differential Equations II: Stationary Problems*, Contemporary Mathematics, American Mathematical Society, vol. 595 (2013), pp. 293-315 (with N. Papageorgiou).

177) "Qualitative analysis of gradient-type systems with oscillatory nonlinearities on the Sierpiński gasket", *Chinese Annals of Mathematics* **34** (2013), 381-398 (with G. Bonanno and G. Molica Bisci).

178) "Combined effects for a stationary problem with indefinite nonlinearities and lack of compactness", *Dynamic Systems and Applications* **22** (2013), 371-384.

179) "Variational analysis for Dirichlet impulsive differential equations with oscillatory nonlinearity", *Portugaliae Mathematica* **70** (2013), 225-242 (with G. Afrouzi and A. Hadjian).

180) "Qualitative phenomena for some classes of quasilinear elliptic equations with multiple resonance", *Applied Mathematics & Optimization* **69** (2014), 393-430 (with N. Papageorgiou).

181) "Mountain pass solutions for nonlocal equations", Annales Academiæ Scientiarum Fennicæ **39** (2014), 579-592 (with G. Molica Bisci).

182) "Positive homoclinic solutions for the discrete *p*-Laplacian with a coercive potential", *Differential and Integral Equations* **27** (2014), 35-44 (with A. Iannizzotto).

183) "Variational approach to fourth-order impulsive differential equations with two control parameters", *Results in Mathematics* **65** (2014), 371-384 (with G. Afrouzi and A. Hadjian).

184) "Low and high energy solutions of nonlinear elliptic oscillatory problems", C. R. Acad. Sci. Paris, Ser. I **352** (2014), 117-122 (with G. Molica Bisci and R. Servadei).

185) "Qualitative properties of anisotropic elliptic Schrödinger equations", Advanced Nonlinear Studies 14 (2014), 719-736 (with G. Afrouzi and M. Mirzapour).

186) "The stationary Navier-Stokes equations in variable exponent spaces of Clifford-valued functions", Advances in Applied Clifford Algebras 24 (2014), 231-252 (with B. Zhang and Y. Fu).

187) "Existence and multiplicity results for anisotropic stationary Schrödinger equations", *Atti* Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei Mat. Appl. **25** (2014), 91-108 (with G. Afrouzi and M. Mirzapour).

188) "Morse theory and local linking for a nonlinear degenerate problem arising in the theory of electrorheological fluids", *Nonlinear Analysis: Real World Applications* **17C** (2014), 311-321 (with B. Zhang).

189) "Multiple solutions with precise sign for nonlinear parametric Robin problems", J. Differential Equations 256 (2014), 2449-2479 (with N. Papageorgiou).

190) "Nonlinearities in elliptic curve authentication", *Entropy* **16** (2014), 5144-5158 (with R. Alsaedi).

191) "Positive solutions for nonlinear nonhomogeneous Neumann equations of superdiffusive type", J. Fixed Point Theory Appl. 15 (2014), 519-535 (with N. Papageorgiou).

192) "Bifurcation near the origin for the Robin problem with concave-convex nonlinearities", C. R. Acad. Sci. Paris, Ser. I **352** (2014), 627-632 (with N. Papageorgiou).

193) "Positive solutions for Neumann problems with indefinite and unbounded potential", *Applied Mathematics Letters* **35C** (2014), 7-11 (with N. Papageorgiou).

194) "Combined effects of singular and sublinear nonlinearities in some elliptic problems", *Nonlinear Analysis* **109** (2014), 236-244 (with N. Papageorgiou).

195) "Bifurcation near infinity for the Neumann problem with concave-convex nonlinearities", C. R. Acad. Sci. Paris, Ser. I **352** (2014), 811-816 (with N. Papageorgiou).

196) "Applications of local linking to nonlocal Neumann problems", *Communications in Contemporary Mathematics* **17**, 1450001 (2015), 17 pages (with G. Molica Bisci).

197) "Positive bounded solutions for semilinear elliptic systems with indefinite weights in the half"-space, *Electron. J. Diff. Equ.*, Vol. 2015 (2015), No. 177, pp. 1-8 (with R. Alsaedi, H. Maagli and N. Zeddini).

198) "Positive solutions of singular elliptic systems with multiple parameters and Caffarelli-Kohn-Nirenberg exponents", *Periodica Mathematica Hungarica* **70** (2015), 145-152 (with G. Afrouzi and S. Shakeri).

199) "Resonant (p, 2)-equations with asymmetric reaction", Analysis and Applications 13 (2015), 481-506 (with N. Papageorgiou).

200) "Infinitely many solutions for a class of sublinear Schrödinger equations with indefinite potentials", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)* **145** (2015), 445-465 (with A. Bahrouni and H. Ounaies). Preprint NI14008-FRB/2014 at the Isaac Newton Institute, Cambridge.

201) "Equilibrium problems techniques in the qualitative analysis of quasi-hemivariational inequalities", *Optimization* **64** (2015), 1855-1868 (with B. Alleche). Preprint NI14009-FRB/2014 at the Isaac Newton Institute, Cambridge.

202) "Solutions with sign information for nonlinear nonhomogeneous elliptic equations", *Topological Methods in Nonlinear Analysis* **45** (2015), 575-600 (with N. Papageorgiou).

203) "A characterization for elliptic problems on fractal sets", *Proceedings Amer. Math. Soc.* 143 (2015), 2959-2968 (with G. Molica Bisci).

204) "Bifurcation analysis of a singular elliptic problem modelling the equilibrium of anisotropic continuous media", *Topological Methods in Nonlinear Analysis* **45** (2015), 493-508 (with G. Molica Bisci).

205) "Multiplicity theorems for semilinear Robin problems", Advances in Calculus of Variations 8 (2015), 203-220 (with N. Papageorgiou).

206) "The Tikhonov regularization for equilibrium problems and applications to quasi-hemivariational inequalities", *Optimization Letters* **9** (2015), 483-503 (with B. Alleche and M. Sebaoui). Preprint NI14044-FRB/2014 at the Isaac Newton Institute, Cambridge.

207) "Multiple solutions for asymptotically linear elliptic equations with sign changing weight", *Kyoto Journal of Mathematics* **55** (2015), 593-605 (with N. Papageorgiou).

208) "Ground state solutions of scalar field fractional Schrödinger equations", *Calculus of Variations and Partial Differential Equations* **54** (2015), 2985-3008 (with G. Molica Bisci).

209) "Existence of stationary states for A-Dirac equations with variable growth", Advances in Applied Clifford Algebras 25 (2015), 385-402 (with G. Molica Bisci and B. Zhang).

210) "Resonant Neumann problems with indefinite and unbounded potential", *Applied Mathematics Letters* **40** (2015), 49-52 (with N. Papageorgiou).

211) "Combined concave-convex effects in anisotropic elliptic equations with variable exponent", Nonlinear Differential Equations and Applications (NoDEA) 22 (2015), 391-410 (with I. Stancut).

212) "Bifurcation of positive solutions for nonlinear nonhomogeneous Robin and Neumann problems with competing nonlinearities", *Discrete and Continuous Dynamical Systems A* **35** (2015), 5003-5036 (with N. Papageorgiou).

213) "Multiplicity of solutions for resonant Neumann problems with an indefinite and unbounded potential", *Transactions Amer. Math. Soc.* **367** (2015), 8723-8756 (with N. Papageorgiou).

214) "Neumann problems with indefinite and unbounded potential and concave terms", *Proceedings* Amer. Math. Soc. **143** (2015), 4803-4816 (with N. Papageorgiou).

215) "Positive solutions for perturbations of the eigenvalue problem for the Robin *p*-Laplacian", Annales Academiæ Scientiarum Fennicæ 40 (2015), 255-277 (with N. Papageorgiou).

216) "Nonlinear elliptic equations with variable exponent: old and new", *Nonlinear Analysis* **121** (2015), 336-369.

217) "The Ekeland variational principle for equilibrium problems revisited and applications", Nonlinear Analysis: Real World Applications 23 (2015), 17-25 (with B. Alleche).

218) "The variational analysis of a nonlinear anisotropic problem with no-flux boundary condition", Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales, Serie A, Matemáticas (RACSAM) **109** (2015), 581-595 (with G. Afrouzi and M. Mirzapour). 219) "Facility location in linear normed spaces", *Optimization Letters* **9** (2015), 1353-1369 (with D. Alexandrescu and S. Rădulescu).

220) "Multiplicity results for elliptic fractional equations with subcritical term", Nonlinear Differential Equations and Applications (NoDEA) 22 (2015), 721-739 (with G. Molica Bisci).

221) "Combined effects of concave-convex nonlinearities and indefinite potential in some elliptic problems", *Asymptotic Analysis* **93** (2015), 259-279 (with N. Papageorgiou).

222) "Bifurcation near infinity for the Robin *p*-Laplacian", *Manuscripta Mathematica* **148** (2015), 415-433 (with N. Papageorgiou).

223) "Asymptotic behaviour of positive large solutions of quasilinear logistic problems", *Electronic Journal of Qualitative Theory of Differential Equations* No. 28 (2015), 1-15 (with R. Alsaedi, H. Maagli and N. Zeddini).

224) "Editorial: Special issue Degenerate and singular phenomena in nonlinear analysis", Nonlinear Analysis **119** (2015), 1-2.

225) "Bifurcation analysis for nonhomogeneous Robin problems with competing nonlinearities", *Applied Mathematics Letters* **48** (2015), 69-74 (with N. Papageorgiou).

226) "Nonlinear parametric Robin problems with combined nonlinearities", Advanced Nonlinear Studies 15 (2015), 715-748 (with N. Papageorgiou).

227) "A variational approach of Sturm-Liouville problems with the nonlinearity depending on the derivative", *Boundary Value Problems* (2015) 2015:81, 17 pp. (with G. Afrouzi and A. Hadjian).

228) "Hodge decomposition of variable exponent spaces of Clifford-valued functions and applications to Dirac and Stokes equations", *Computers & Mathematics with Applications* **70** (2015), 691-704 (with Y. Fu and B. Zhang).

229) "Coercive and noncoercive nonlinear Neumann problems with indefinite potential", *Forum Mathematicum* **28** (2016), 545-571 (with N. Papageorgiou).

230) "Set-valued equilibrium problems with applications to Browder variational inclusions and to fixed point theory", *Nonlinear Analysis: Real World Applications* **28** (2016), 251-268 (with B. Alleche).

231) "Existence of solutions for perturbed fractional *p*-Laplacian equations", *Journal of Differential Equations* **260** (2016), 1392-1413 (with M. Xiang and B. Zhang).

232) "Robin problems with indefinite, unbounded potential and reaction of arbitrary growth", *Revista Matemática Complutense* **29** (2016), 91-126 (with N. Papageorgiou).

233) "Existence of solutions for a bi-nonlocal fractional *p*-Kirchhoff type problem", Computers & Mathematics with Applications **71** (2016), 255-266 (with M. Xiang and B. Zhang).

234) "New variational principles for solving extended Dirichlet-Neumann problems", *Journal of Elasticity* **123** (2016), 1-18 (with C. Vallée and K. Atchonouglo).

235) "Numerical solutions to heat equations via the spectral method", *Electron. J. Diff. Equ.*, Vol. 2016 (2016), No. 68, pp. 1-11 (with N. Chorfi).

236) "Nonlocal fourth-order Kirchhoff systems with variable growth: low and high energy solutions", *Collectanea Mathematica* **67** (2016), 207-223 (with G. Afrouzi and M. Mirzapour).

237) "Fractional Navier boundary value problems", *Boundary Value Problems* 2016 **2016**:79 (with I. Bachar and H. Mâagli).

238) "Infinitely many nodal solutions for nonlinear nonhomogeneous Robin problems", Advanced Nonlinear Studies 16 (2016), 287-299 (with N. Papageorgiou).

239) "Multiplicity theorems for resonant and superlinear nonhomogeneous elliptic equations", *Topological Methods in Nonlinear Analysis* **48** (2016), 283-320 (with N. Papageorgiou).

240) "Infinitely many solutions for a nonlinear difference equation with oscillatory nonlinearity", *Ricerche di Matematica* **65** (2016), 193-208 (with M. Malin).

241) "Combined effects of concave-convex nonlinearities in a fourth order problem with variable exponent", Advanced Nonlinear Studies 16 (2016), 409-420 (with S. Baraket).

242) "On the best constants in Sobolev inequalities on the solid torus in the limit case p = 1", Advances in Nonlinear Analysis 5 (2016), 261-291 (with N. Labropoulos).

243) "On noncoercive elliptic problems", Nonlinear Differential Equations and Applications (NoDEA) (2016) 23:42 (with N. Papageorgiou).

244) "Solutions and approximate solutions of quasi-equilibrium problems in Banach spaces", *Journal* of Optimization Theory and Applications **170** (2016), 629-649 (with B. Alleche).

245) "Biharmonic problem with variable exponent and no-flux boundary condition", *Computers* and Mathematics with Applications **72** (2016), 2505-2515 (with M. Boureanu and N. Papageorgiou).

246) "Qualitative analysis of solutions for a class of anisotropic elliptic equations with variable exponent", *Proceedings of the Edinburgh Mathematical Society* **59** (2016), 541-557 (with G. Afrouzi and M. Mirzapour).

247) "Standing wave solutions of a quasilinear degenerate Schrödinger equation with unbounded potential", *Electronic Journal of the Qualitative Theory of Differential Equations* **37** (2016), 1-12 (with N. Chorfi).

248) "Entire solutions versus fixed points for nonlinear elliptic equations with indefinite weight", *Fixed Point Theory* **17** (2016), 255-265 (with R. Alsaedi, H. Maagli, N. Zeddini).

249) "Positive solutions of nonlinear Robin eigenvalue problems", *Proceedings of the American Mathematical Society* **144** (2016), 4913-4928 (with N. Papageorgiou).

250) "Multiplicity of solutions for a class of quasilinear Kirchhoff system involving the fractional *p*-Laplacian", *Nonlinearity* **29** (2016), 3186-3205 (with M. Xiang and B. Zhang).

251) "Nonlinear elliptic problems with superlinear reaction and parametric concave boundary condition", *Israel Journal of Mathematics* **212** (2016), 791-824 (with N. Papageorgiou).

252) "Nonlocal Kirchhoff superlinear equations with indefinite nonlinearity and lack of compactness", *International Journal of Nonlinear Sciences and Numerical Simulation* **17** (2016), 325-333 (with L. Li and D. Repovš).

253) "Nonlinear nonhomogeneous Robin problems with superlinear reaction term", Advanced Nonlinear Studies 16 (2016), 737-764 (with N. Papageorgiou).

254) "Multiplicity results for a nonlinear Robin problem with variable exponent", J. Nonlinear Convex Anal. 17 (2016), no. 8, 1567-1582 (with S. Saiedinezhad).

255) "Continuous spectrum for some classes of (p, 2)-equations with linear or sublinear growth", *Miskolc Math. Notes* **17** (2016), 817-826 (with N. Chorfi).

256) "On a class of parametric (p, 2)-equations", Applied Mathematics and Optimization **75** (2017), 193-228 (with N. Papageorgiou and D. Repovš).

257) "Robin problems with indefinite and unbounded potential, resonant at $-\infty$, superlinear at $+\infty$ ", Tohoku Mathematical Journal **69** (2017) (with N. Papageorgiou).

258) "Asymmetric, noncoercive, superlinear (p, 2)-equations", Journal of Convex Analysis 24 (2017), 769-793 (with N. Papageorgiou).

259) "Perturbation effects for a singular elliptic problem with lack of compactness and critical exponent", *Minimax Theory and its Applications* **2** (2017), 79-97 (with I. Stancut).

260) "Infinitely many nodal solutions for semilinear Robin problems with an indefinite linear part", Applied Mathematics Letters **64** (2017), 42-50 (with N. Papageorgiou).

261) "Competition phenomena for elliptic equations involving a general operator in divergence form", *Analysis and Applications* **15** (2017), 51-82 (with G. Molica Bisci and R. Servadei).

262) "Handling geometric singularities by the mortar spectral element method for fourth-order problems", *Electron. J. Differential Equations*, Vol. 2017 (2017), No. 82, pp. 1-13 (with M. Abdelwahed and N. Chorfi).

263) "The inverse of the sum of set-valued mappings and applications", Numerical Functional Analysis and Optimization **38** (2017), 139-159 (with B. Alleche).

264) "Positive solutions for perturbations of the Robin eigenvalue problem plus an indefinite potential", *Discrete and Continuous Dynamical Systems, Series A* **37** (2017), 2589-2618 (with N. Papageorgiou and D. Repovš).

265) "Multiplicity theorems for nonlinear nonhomogeneous Robin problems", *Revista Matematica Iberoamericana* **33** (2017), 251-289 (with N. Papageorgiou).

266) "Superlinear, noncoercive asymmetric Robin problems with indefinite, unbounded potential", Z. Anal. Anwend. **36** (2017), 10-41 (with N. Papageorgiou).

267) "Positive solutions for parametric semilinear Robin problems with indefinite and unbounded potential", *Mathematica Scandinavica* **121** (2017), 263-292 (with N. Papageorgiou).

268) "Multiple solutions of Neumann problems: an Orlicz-Sobolev space setting", *Bulletin of the Malaysian Mathematical Sciences Society* **40** (2017), 1591-1611 (with G. Afrouzi and S. Shokkoh).

269) "Non-autonomous eigenvalue problems with variable (p_1, p_2) -growth", Advanced Nonlinear Studies 17 (2017), 781-792 (with S. Baraket, S. Chebbi, N. Chorfi).

270) "Robin problems with indefinite linear part and competition phenomena", *Communications* on *Pure and Applied Analysis* **16** (2017), 1293-1314 (with N. Papageorgiou and D. Repovš).

271) "Multivalued periodic systems with maximal monotone terms", *Pure and Applied Functional Analysis* **3** (2018), 179-192 (with N. Papageorgiou).

272) "An infinity of nodal solutions for superlinear Robin problems with an indefinite and unbounded potential", *Bulletin des Sciences Mathématiques* **141** (2017), 251-266 (with N. Papageorgiou).

273) "A sharp eigenvalue theorem for fractional elliptic equations", *Israel Journal of Mathematics* **219** (2017), 331-351(with G. Molica Bisci).

274) ""Multiple solutions for resonant problems of Robin *p*-Laplacian plus an indefinite potential", *Calculus of Variations and Partial Differential Equations* (2017), 56:63 (with N. Papageorgiou and D. Repovš).

275) "Periodic solutions for time-dependent subdifferential evolution inclusions", *Evolution Equa*tions and Control Theory 6 (2017), 277-297 (with N. Papageorgiou).

276) "Robin problems near resonance at any nonprincipal eigenvalue", *Results in Mathematics* **71** (2017), 1389-1412 (with N. Papageorgiou).

277) "Sensitivity analysis for optimal control problems governed by nonlinear evolution inclusions", Advances in Nonlinear Analysis 6 (2017), 199-235 (with N. Papageorgiou and D. Repovš).

278) "Robin problems with a general potential and a superlinear reaction", *Journal of Differential Equations* **263** (2017), 3244-3290 ((with N. Papageorgiou and D. Repovš).

279) "Small perturbations of elliptic problems with variable growth", *Applied Mathematics Letters* **74** (2017), 167-173 (with N. Chorfi).

280) "On a p(x)-biharmonic problem with singular weights", Zeitschrift fuer angewandte Mathematik und Physik (ZAMP) 68 (2017), 68:80 (with K. Kefi).

281) "Infinitely many positive solutions of fractional boundary value problems, *Topological Methods* in Nonlinear Analysis **49** (2017), 647-664 (with B. Ge and J.-C. Zhang).

282) "Infinitely many solutions for degenerate Kirchhoff-type Schrödinger-Choquard equations", *Electronic Journal of Differential Equations*, Vol. 2017 (2017), No. 230, pp. 1-17 (with S. Liang).

283) "Positive solutions for superlinear Riemann-Liouville fractional boundary-value problems", *Electronic Journal of Differential Equations*, Vol. 2017 (2017), No. 240, pp. 1-16 (with I. Bachar and H. Maagli).

284) "Further on set-valued equilibrium problems and applications to Browder variational inclusions", *Journal of Optimization Theory and Applications* **175** (2017), 39-58 (with B. Alleche).

285) "Nonhomogeneous hemivariational inequalities with indefinite potential and Robin boundary condition", *Journal of Optimization Theory and Applications* **175** (2017), 293-323 (with N. Papageorgiou and D. Repovš).

286) "Pairs of positive solutions for resonant singular equations with the *p*-Laplacian", *Electronic Journal of Differential Equations*, Vol. 2017 (2017), No. 249, pp. 1-13 (with N. Papageorgiou and D. Repovš).

287) "Noncoercive resonant (p, 2)-equations", Applied Mathematics and Optimization **76** (2017), 621-639 (with N. Papageorgiou).

288) "Resonant semilinear Robin problems with a general potential", *Electronic Journal of Quali*tative Theory of Differential Equations **70** (2017), 1-15 (with N. Papageorgiou and D. Repovš).

289) "Nonhomogeneous Dirichlet problems without the Ambrosetti-Rabinowitz condition", *Topological Methods in Nonlinear Analysis* **51** (2018), 55-77 (with G. Li, D. Repovš and Q. Zhang).

290) "Approximation of the leading singular coefficient of an elliptic fourth-order equation", *Electron. J. Differential Equations* **2017** (2017), No. 305, pp. 1-15 (with M. Abdelwahed and N. Chorfi).

291) "Singular solutions of a nonlinear elliptic equation in a punctured domain", *Electronic Journal* of *Qualitative Theory of Differential Equations* **94** (2017), 1-19 (with I. Bachar and H. Maagli).

292) "A nonlinear eigenvalue problem with p(x)-growth and generalized Robin boundary value condition", Communications on Pure and Applied Analysis 17 (2018), 39-52 (with S. Saiedinezhad).

293) "Nodal solutions for the Robin *p*-Laplacian plus an indefinite potential and a general reaction term", *Communications on Pure and Applied Analysis* **17** (2018), 231-241 (with N. Papageorgiou and D. Repovš).

294) "Positive solutions for superdiffusive mixed problems", *Applied Mathematics Letters* **77** (2018), 87-93 (with N. Papageorgiou and D. Repovš).

295) "Multiplicity of solutions for nonlinear nonhomogeneous Robin problems", *Proceedings of the American Mathematical Society* **146** (2018), 601-611 (with N. Papageorgiou).

296) "Variational analysis of anisotropic Schrödinger equations without Ambrosetti-Rabinowitz condition", Z. Angew. Math. Phys. (ZAMP) **69** (2018), 69:9 (with G. Afrouzi and M. Mirzapour).

297) "Semilinear Robin problems resonant at both zero and infinity", Forum Mathematicum **30** (2018), 237-251 (with N. Papageorgiou).

298) "On a new fractional Sobolev space and applications to nonlocal variational problems with variable exponent", *Discrete and Continuous Dynamical Systems*, *Series S* **11** (2018), 379-389 (with A. Bahrouni).

299) "Nonlinear second order evolution inclusions with noncoercive viscosity term", *Journal of Differential Equations* **264** (2018), 4749-4763 (with N. Papageorgiou and D. Repovš).

300) "Existence and multiplicity of solutions for resonant (p, 2)-equations, Advanced Nonlinear Studies **18** (2018), 105-129 (with N. Papageorgiou and D. Repovš).

301) "Resonant Robin problems driven by the *p*-Laplacian plus an indefinite potential", Ann. Acad. Sci. Fennicae **43** (2018), 483-508 (with N. Papageorgiou and D. Repovš).

302) "A weighted anisotropic variant of the Caffarelli-Kohn-Nirenberg inequality and applications", *Nonlinearity* **31** (2018), 1516-1534 (with A. Bahrouni and D. Repovš).

303) "Periodic solutions for a class of evolution inclusions", *Computers and Mathematics with Applications* **75** (2018), 3047-3065 (with N. Papageorgiou and D. Repovš).

304) "Multiplicity of solutions for Robin problems with double resonance", Annali della Scuola Normale Superiore di Pisa, Classe di Scienze, Serie V XVIII (2018), 145-201 (with N. Papageorgiou).

305) "Positive solutions for nonlinear nonhomogeneous parametric Robin problems", *Forum Mathematicum* **30** (2018), 553-580 (with N. Papageorgiou and D. Repovš).

306) "Compactly supported solutions of Schrödinger equations with small perturbation", *Applied Mathematics Letters* **84** (2018), 148-154 (with A. Bahrouni and H. Ounaies).

307) "Nonlocal Kirchhoff diffusion problems: local existence and blow of solutions", *Nonlinearity* **31** (2018), 3228-3250 (with X. Mingqi and B. Zhang).

308) "Small perturbations of nonlocal biharmonic problems with variable exponent and competing nonlinearities", *Rendiconti Lincei Matematica e Applicazioni* **29** (2018), 439-463 (with K. Kefi).

309) "The maximum principle with lack of monotonicity", *Electronic Journal of Qualitative Theory* of Differential Equations 2018, No. 58, 1-11 (with P. Pucci).

310) "Positive solutions for nonvariational Robin problems", Asymptotic Analysis **108** (2018), 243-255 (with N. Papageorgiou and D. Repovš).

311) "Asymmetric Robin problems with indefinite potential and concave terms", Advanced Nonlinear Studies, in press (with N. Papageorgiou and D. Repovš).

312) "(p, 2)-equations symmetric at both zero and infinity", Advances in Nonlinear Analysis 7 (2018) (with N. Papageorgiou and D. Repovš).

313) "Nonlinear elliptic inclusions with unilateral constraint and dependence on the gradient", *Applied Mathematics and Optimization* **78** (2018), 1-23 (with N. Papageorgiou and D. Repovš).

314) "Bound state solutions of sublinear Schrödinger equations with lack of compactness", *RAC-SAM*, in press (with A. Bahrouni and H. Ounaies).

315) "Nonlinear Dirichlet problems with unilateral growth on the reaction", *Differential and Integral Equations*, in press (with N. Papageorgiou).

316) "Combined effects for fractional Schrödinger-Kirchhoff systems with critical nonlinearities", *ESAIM-COCV*, in press (with X. Mingqi and B. Zhang).

317) "Existence results for Kirchhoff-type superlinear problems involving the fractional Laplacian", *Proc. Roy. Soc. Edinburgh Sect. A*, in press (with L. Wang and B. Zhang).

318) "Further on set-valued equilibrium problems in the pseudo-monotone case and applications to Browder variational inclusions", *Optimization Letters*, in press (with B. Alleche).

319) "Nonlinear nonhomogeneous boundary value problems with competition phenomena", Applied Mathematics and Optimization, in press (with N. Papageorgiou and D. Repovš).

320) "Double phase problems with variable growth", *Nonlinear Analysis*, in press (with M. Cencelj and D. Repovš).

321) "Multiple solutions of double phase variational problems with variable exponent", Advances in Calculus of Variations, in press (with D. Repovš, X. Shi and Q. Zhang)).

322) "Quasilinear parabolic problem with variable exponent: qualitative analysis and stabilization", *Communications in Contemporary Mathematics*, in press (with J. Giacomoni and G. Warnault).

323) "A critical fractional Choquard-Kirchhoff problem with magnetic field", *Communications in Contemporary Mathematics*, in press (with X. Mingqi and B. Zhang).

324) "Nodal solutions for nonlinear nonhomogeneous Robin problems", *Rendiconti Lincei Matematica e Applicazioni*, in press (with N. Papageorgiou and D. Repovš).

325) "Blow-up solutions for fully nonlinear equations: existence, asymptotic estimates and uniqueness", Advances in Nonlinear Analysis, in press (with A. Mohammed and A. Vitolo). 326) "Perturbations of nonlinear eigenvalue problems", *Communications on Pure and Applied Anal*ysis, in press (with N. Papageorgiou and D. Repovš).

327) "Double phase problems with reaction of arbitrary growth", Zeitschrift fuer angewandte Mathematik und Physik (ZAMP), in press (with N. Papageorgiou and D. Repovš).

328) "Positive solutions for nonlinear parametric singular Dirichlet problems", Bulletin of Mathematical Sciences, in press (with N. Papageorgiou and D. Repovš).

329) "Double phase anisotropic variational problems and combined effects of reaction and absorption terms", J. Math. Pures Appl. (Journal de Liouville), in press (with Q. Zhang).

PROPOSED PROBLEMS

1) A Limit Problem, Problem No. 11024, The American Mathematical Monthly, 6/110 (2003).

2) An Example with Periodic Orbits, Problem No. 11073, The American Mathematical Monthly, **3/111** (2004).

3) Periodic Solution of a Differential Equation, Problem No. 11104, The American Mathematical Monthly, 8/111 (2004).

4) Exponential Growth of a Solution, Problem No. 11137, The American Mathematical Monthly, 2/112 (2005).

5) Problem No. 2005-1, Electronic Journal of Differential Equations, Problem Section.

6) Ginzburg-Landau Energy, Problem No. 11167, The American Mathematical Monthly, 7/112 (2005).

7) Problem No. 1224, Elemente der Mathematik, 4/60 (2005).

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

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

10) Signed Series Terms, Problem No. 11304, The American Mathematical Monthly, 6/114 (2007).

11) Problem No. 1270, Elemente der Mathematik, 4/63 (2008).

12) A Cauchy-Schwarz Puzzle, Problem No. 11458, The American Mathematical Monthly, 8/116 (2009).

13) Problem No. 2010-1, Electronic Journal of Differential Equations, Problem Section.

14) A Prime Multiple of the Identity Matrix, Problem No. 11532, The American Mathematical Monthly, 9/117 (2010).

15) Gamma and Beta Inequalities, Problem No. 11542, The American Mathematical Monthly, **10/117** (2010).

16) Problem No. 2011-1, Electronic Journal of Differential Equations, Problem Section.

17) Problem No. 2011-3, Electronic Journal of Differential Equations, Problem Section.

18) Problem No. 11799, The American Mathematical Monthly, 8/121 (2014).

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