

CURRICULUM VITAE

Last name: Rădulescu

First name: Vicențiu

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

Studies:

- B. Sc. and Master: 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:

- Full Professor at the Department of Mathematics, University of Craiova, Romania
- Senior Researcher at the Institute of Mathematics "Simion Stoilow" of the Romanian Academy, Bucharest, Romania

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Degrees:

• 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.

• 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 comission was composed by the following Professors: Haim Brezis, Fabrice Bethuel, Thierry Cazenave, Doina Cioranescu, Alain Haraux, Frédéric Hélein and L.A. Peletier. For this thesis I received the best mention: *très honorable avec félicitations*.

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

Scientific awards: Simion Stoilow Prize of the Romanian Academy, 1999

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– : Full Professor, Department of Mathematics, University of Craiova, Romania
- 2007–: Senior Researcher at the Institute of Mathematics “Simion Stoilow” of the Romanian Academy, Bucharest, Romania

Editorial activities:

- Associate Editor of the *Journal of Mathematical Analysis and Applications* (Elsevier, 2006 ISI Impact Factor: 0.758)

- Editor of *Advances in Pure and Applied Mathematics* (Heldermann Verlag)

- Member of the Editorial Board of *Complex Variables and Elliptic Equations* (Taylor & Francis)
- Managing Editor at 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*

- Associate Editor of *Arhimedea*

Fields of interest:

- nonlinear partial differential equations of elliptic type (singular solutions of nonlinear PDE's, Ginzburg-Landau equations, Lane-Emden-Fowler equations, etc.)

- topological and variational methods in nonlinear partial differential equations and unilateral problems

- non-smooth critical point theory and applications to problems in Nonsmooth Mechanics

- degree theory and applications to differential equations

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
 - Distinguished Invited Professor, University of Ljubljana (July–September 2008)
 - University of Cagliari (two weeks in October 2008)

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 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, Pitești, 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)
- 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

I am reviewer for *Mathematical Reviews* (since 1993), *Zentralblatt für Mathematik* (since 1995) and *Applied Mechanics Review* (since 1999). 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 the organizer of the Nonlinear Analysis Seminar at the Institute of Mathematics “Simion Stoilow” of the Romanian Academy.

SCIENTIFIC WORKS

THESES

1. *Analyse de quelques problèmes aux limites elliptiques non linéaires*, Habilitation à diriger des recherches, Université Pierre et Marie Curie (Paris VI), 25 February 2003.
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. *Applications de la théorie des opérateurs à l'analyse non linéaire*, Ph.D. thesis, University of Craiova, 17 December 1993.

BOOKS

- 1) (with T. Andreeescu and T.-L. Rădulescu) *Problem Solving in Mathematical Analysis*, Springer-Verlag, New York, to appear (2009).
- 2) (with M. Ghergu) *Singular Elliptic Problems: Bifurcation and Asymptotic Analysis*, Oxford Lecture Series in Mathematics and its Applications, vol. 37, Oxford University Press, New York, 320 pp., 2008.
- 3) *Qualitative Analysis of Nonlinear Elliptic Partial Differential Equations*, Contemporary Mathematics and Its Applications, vol. 6, Hindawi Publ. Corp., 210 pp., 2008.
- 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) (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)
- 6) *Partial Differential Equations*, Craiova University Press, 1999.
- 7) *Treatment Methods of the Elliptic Problems*, Craiova University Press, 1998.

EDITOR OF SPECIAL ISSUES

- 1) Guest Editor of the Special Issue *Degenerate and Singular Partial Differential Equations and Phenomena*, to be published in the *Journal of Mathematical Analysis and Applications* (2006 ISI Impact Factor: 0.758), 2008.
- 2) 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* (2006 ISI Impact Factor: 0.857) dedicated to the 70th anniversary of Professor Philippe G. Giarlet, 2008.
- 3) 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).
- 4) 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).

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 zur Funktionalanalyse*, 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 mem-

ory 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 (Gilbert, 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*, Timișoara, December 12-13 2000, Timișoara 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 Fís. 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", *Boundary 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) "Eigenvalue problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces", *Analysis and Applications* **6** (2008), 83-98 (with M. Mihăilescu).
- 110) "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).
- 111) "Eigenvalue problems for anisotropic quasilinear elliptic equations with variable exponent", *J. Math. Anal. Appl.* **340** (2008), 687-698 (with M. Mihăilescu and P. Pucci).
- 112) "Continuous spectrum for a class of nonhomogeneous differential operators", *Manuscripta Mathematica* **125** (2008), 157-167 (with M. Mihăilescu).
- 113) "Nonhomogeneous Neumann problems in Orlicz-Sobolev spaces", *C. R. Acad. Sci. Paris, Ser. I* **346** (2008), 401-406 (with M. Mihăilescu).
- 114) "A singular Gierer-Meinhardt system with different source terms", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)*, in press (with M. Ghergu).
- 115) "Continuous spectrum for a class of nonhomogeneous differential operators", *Mathematica Scandinavica*, in press (with M. Mihăilescu).
- 116) "Neumann problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces", *Ann. Inst. Fourier*, in press (with M. Mihăilescu).
- 117) "Combined effects of singular nonlinearities and potentials in elliptic equations", *Bull. St. Univ. Pitesti*, in press.
- 118) "The influence of the distance function in some singular elliptic problems", in *International Books Series of Mathematical Texts*, (D. Bakry, L. Beznea, N. Boboc, M. Röckner, Eds.), A publication of the Theta Foundation, Amer. Math. Soc., in press (with M. Ghergu).
- 119) "Two nontrivial solutions for a non-homogeneous Neumann problem: an Orlicz-Sobolev setting", *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)*, in press (with A. Kristály and M. Mihăilescu).
- 120) "Combined effects in nonlinear singular elliptic problems with convection", *Revue Roumaine de Mathématiques Pures et Appliquées* (5) **53** (2008), in press.
- 121) "Spectrum consisting in an unbounded interval for a class of nonhomogeneous differential operators", *Bull. London Math. Soc.*, in press (with M. Mihăilescu).
- 122) "Multiplicity of solutions for Emden-Fowler problems on Riemann manifolds without boundary", submitted (with A. Kristály).
- 123) "Sublinear eigenvalue problems on compact Riemannian manifolds with applications in Emden-Fowler equations", submitted (with A. Kristály).

PROPOSED PROBLEMS

- 1) Problem No. 11024, *The American Mathematical Monthly*, **6/110** (2003).
- 2) Problem No. 11073, *The American Mathematical Monthly*, **3/111** (2004).

- 3) Problem No. 11104, *The American Mathematical Monthly*, **8/111** (2004).
- 4) Problem No. 11137, *The American Mathematical Monthly*, **2/112** (2005).
- 5) Problem No. 2005-1, *Electronic Journal of Differential Equations, Problem Section*.
- 6) 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) Proposed problem, *Elemente der Mathematik*, in press.
- 11) Problem No. 11304, *The American Mathematical Monthly*, **6/114** (2007).
- 12) Problem No. 869, *College Mathematics Journal*, **1/39** (2008).

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