# Mihai Mihăilescu

#### Contact information

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#### Education

Aug. 4 - Nov. **Postdoctoral Fellow** at the University of Sydney, Australia.

26, 2012

Jul. 24, 2012 Habilitation in Mathematics at IMAR, Romania.

Oct. 29, 2010 Ph.D. in Applied Mathematics at Central European University, Budapest, Hungary.

Jan. 15, 2007 Ph.D. in Mathematics at the University of Craiova, Romania.

Jul. 2003 M.Sc. Dynamic Systems and Evolution Equations, at the University of Craiova.

Jun. 2001 B.Sc. in Mathematics at the University of Craiova.

1996-1997 Freshman at L'Institut National Des Sciences Appliquées (INSA) of Lyon, France.

Jun. 1996 **High School Graduate** at *Nicolae Bălcescu High School* (at present, *Carol I National College*) of Craiova, Romania.

#### Activity

- 01.03.2015 present *Professor* at the Department of Mathematics of the University of Craiova.
- 01.10.2012 28.02.2015 *Associate Professor* at the Department of Mathematics of the University of Craiova.
- 01.03.2007 30.09.2012 *Assistant Professor* at the Department of Mathematics of the University of Craiova.
- 01.10.2003 28.02.2007 *Junior Assistant Professor* at the Department of Mathematics of the University of Craiova.

## Scientific grants

- Member of the research project: New approaches in functional inequalities and evolution equations (CNCS-UEFISCDI, project number PN-III-P1-1.1-TE-2016-2233), 10 October 2018-9 October 2020 (project director: Cristian Cazacu; host institution: University of Bucharest).
- Director of the research project: Typical and Nontypical Eigenvalue Problems for Some Classes of Differential Operators (CNCS-UEFISCDI, project number PN-III-P4-ID-PCE-2016-0035), 12 July 2017-31 December 2019 (host institution: IMAR).
- *Member* of the research project: *Analysis of Schrodinger Equations* (CNCS-UEFISCDI, project number PN-II-RU-TE- 2014-4-0007), 1 October 2015-1 October 2017 (project director: loan-Liviu

Ignat; host institution: IMAR; I became a member of the team of this project starting with 21 of October 2016).

- *UBB Advanced Fellowship-Intern* financially supported by *Star-UBB Institute* from *Babeş-Bolyai University*, no. CNFIS-FDI-2016-0056, 15 November 2016-15 December 2016 (host institution: Babeş-Bolyai University).
- Director of the research project: Variable Exponent Analysis: Partial Differential Equations and Calculus of Variations (CNCS-UEFISCDI, project number PN-II-ID-PCE-2012-4-0021), 02 September 2013-30 September 2016 (host institution: IMAR).
- *Director* **G**o8 European Fellowship (a fellowship financially supported by Go8 Australian Universities) at the *School of Mathematics and Statistics* from the *University of Sydney* (Australia).
- Director of the research project: Probleme neliniare modelate de operatori diferentiali neomogeni (CNCSIS-UEFISCSU, project number PN II-RU PD-117/2010), 28 July 2010-28 July 2012 (host institution: University of Craiova).
- Member of the research project: Analysis, Control and Numerical Approximations of Partial Differential Equations (CNCSIS-UEFISCSU, project number PN-II-ID-PCE-2011-3-0075), 1 October 2011-1 October 2014 (project director: loan-Liviu Ignat; host institution: IMAR).
- Member of the research project: Proprietati calitative ale ecuatilor cu derivate partiale si ale aproximarilor lor numerice (CNCSIS PNII TE-4/2010), 28 July 2010-28 July 2013 (project director: loan-Liviu Ignat; host institution: IMAR).
- *Member* of the research project: *Procese Neliniare Degenerate si Singulare* (CNCSIS PNII 78/2007), 1 October 2007-30 September 2010 (project director: Vicențiu Rădulescu; host institution: University of Craiova).

#### Awards

• "Simion Stoilow" Prize of the Romanian Academy for 2010.

#### Scientific publications

- M. Mihăilescu and V. Rădulescu: Ground state solutions of non-linear singular Schrödinger equations with lack of compactness, *Mathematical Methods in the Applied Sciences* **26** (2003), 897-906.
- M. Mihăilescu: Nonlinear eigenvalue problems for some degenerate elliptic operators on  $\mathbb{R}^N$ , *Bull. Belg. Math. Soc.* **12** (2005), 435-448.
- M. Mihăilescu: Degenerate Elliptic Problems on Bounded Domains with Robin Boundary Conditions, *PanAmerican Mathematical Journal* **15** (2005), 69-78.
- M. Mihăilescu: Existence and multiplicity of weak solutions for a class of degenerate nonlinear elliptic equations, *Boundary Value Problems* 2006, Art. ID 41295, 17 pp.
- M. Mihăilescu: Existence and multiplicity of solutions for an elliptic equation with p(x)-growth conditions, *Glasgow Mathematical Journal* **48** (2006), 411-418.
- M. Mihăilescu: Elliptic problems in variable exponent spaces, *Bull. Austral. Math. Soc.* **74** (2006), 197-206.
- M. Mihăilescu and V. Rădulescu: A multiplicity result for a nonlinear degenerate problem arising in the theory of electrorheological fluids, *Proc. Roy. Soc. London Ser. A* **462** (2006), 2625-2641.
- M. Mihăilescu and V. Rădulescu: CORRECTION: A multiplicity result for a nonlinear degenerate problem arising in the theory of electrorheological fluids, *Proc. Roy. Soc. London Ser. A* **467** (2011), 3033-3034.
- M. Mihăilescu: Existence and multiplicity of solutions for a Neumann problem involving the

- p(x)-Laplace operator, Nonlinear Anal. **67** (2007), 1419-1425.
- M. Mihăilescu and V. Rădulescu: Existence and multiplicity of solutions for quasilinear non-homogeneous problems: an Orlicz-Sobolev space setting, *Journal of Mathematical Analysis and Applications* **330** (2007), 416-432.
- M. Mihăilescu and V. Rădulescu: Nonhomogeneous boundary value problems in Orlicz-Sobolev spaces, *C. R. Acad. Sci. Paris Ser. I Math.* **344** (2007), 15-20.
- M. Mihăilescu and V. Rădulescu: On a nonhomogeneous quasilinear eigenvalue problem in Sobolev spaces with variable exponent, *Proceedings of the American Mathematical Society* **135** (2007), 2929-2937.
- M. Mihăilescu and C. P. Niculescu: An extension of the Hermite-Hadamard inequality through subharmonic functions, *Glasgow Mathematical Journal* **49** (2007), 509-514.
- M. Mihăilescu and I. Rovența: Existence and multiplicity of radial solutions for an elliptic boundary value problem on an annulus, *Bull. Math. Soc. Sci. Math. Roumanie*, Tome 50(98) No. 4, 2007, 331-341.
- M. Mihăilescu, P. Pucci and V. Rădulescu: Nonhomogeneous boundary value problems in anisotropic Sobolev spaces, *C. R. Acad. Sci. Paris Ser. I Math.* **345** (2007), 561-566.
- M. Mihăilescu and V. Rădulescu: Eigenvalue problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces, *Analysis and Applications* **6** (2008), 1-16.
- M. Mihăilescu, P. Pucci, and V. Rădulescu: Eigenvalue problems for anisotropic quasilinear elliptic equations with variable exponent, *Journal of Mathematical Analysis and Applications* **340** (2008), 687-698.
- M. Mihăilescu and V. Rădulescu: Continuous spectrum for a class of nonhomogeneous differential operators, *Manuscripta Mathematica* **125** (2008), 157-167.
- M. Mihăilescu and V. Rădulescu: Nonhomogeneous Neumann problems in Orlicz-Sobolev spaces, C. R. Acad. Sci. Paris, Ser. I **346** (2008), 401-406.
- M. Mihăilescu: On a class of nonlinear problems involving a p(x)-Laplace type operator, *Czechoslovak Mathematical Journal* **58** (2008), 155-172.
- M.-M. Boureanu and M. Mihăilescu: Existence and multiplicity of solutions for a Neumann problem involving variable exponent growth conditions, *Glasgow Mathematical Journal* **50** (2008), 565-574.
- M. Mihăilescu: Eigenvalue problems for some nonlinear perturbations of the Laplace operator, Bull. Math. Soc. Sci. Math. Roumanie, Tome 51(99) No. 4, 2008, 1-13.
- M. Mihăilescu and V. Rădulescu: Neumann problems associated to nonhomogeneous differential operators in Orlicz-Sobolev spaces, *Annales de l'Institut Fourier* **58** (2008), 2087-2111.
- M. Mihăilescu and V. Rădulescu: Spectrum in an unbounded interval for a class of nonhomogeneous differential operators, *Bulletin of the London Mathematical Society* **40** (2008), 972-984.
- M. Mihăilescu and G. Moroșanu: Quasilinear elliptic equations involving variable exponents, in vol. Numerical Analysis and Applied Mathematics. International Conference on Numerical Analysis and Applied Mathematics (ICNAAM) 2008, Psalidi, Kos, Greece, 16-20 September 2008, (T.E. Simos et al., Editors), American Institute of Physics, Melville-New York, 2008, pp. 384-387.
- M. Mihăilescu and V. Rădulescu: A continuous spectrum for nonhomogeneous differential operators in Orlicz-Sobolev spaces, *Mathematica Scandinavica* **104** (2009), 132-146.
- A. Kristály, M. Mihăilescu, and V. Rădulescu: Two nontrivial solutions for a non-homogeneous Neumann problem: an Orlicz-Sobolev setting, *Proceedings of the Royal Society of Edinburgh: Section A (Mathematics)* **139A** (2009), 367-379.
- M. Mihăilescu, G. Moroșanu, and V. Rădulescu: Eigenvalue problems in anisotropic Orlicz-Sobolev

- spaces, C. R. Acad. Sci. Paris, Ser., I 347 (2009), 521-526.
- N. Costea and M. Mihăilescu: Nonlinear, degenerate and singular eigenvalue problems on  $\mathbb{R}^N$ , Nonlinear Analysis **71** (2009), 1153-1159.
- N. Costea and M. Mihăilescu: On an eigenvalue problem involving variable exponent growth conditions, *Nonlinear Analysis* **71** (2009), 4271-4278.
- M. Mihăilescu, V. Rădulescu, and S. Tersian: Eigenvalue Problems for Anisotropic Discrete Boundary Value Problems, *Journal of Difference Equations and Applications* **15** (2009), 557-567.
- M. Mihăilescu and D. Stancu-Dumitru: On an eigenvalue problem involving the p(x)-Laplace operator plus a non-local term, *Differential Equations & Applications* 1 (2009), 367-378.
- M. Mihăilescu, V. Rădulescu, and D. Repovš: 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.
- M. Mihăilescu and G. Moroșanu: Existence and multiplicity of solutions for an anisotropic elliptic problem involving variable exponent growth conditions, *Applicable Analysis* **89** (2010), 257-271.
- M. Bocea and M. Mihăilescu:  $\Gamma$ -convergence of power-law functionals with variable exponents, *Nonlinear Analysis* **73** (2010), 110-121.
- M. Mihăilescu and V. Rădulescu: Eigenvalue problems with weight and variable exponent for the Laplace operator, *Analysis and Applications* **8** (2010), 235-246.
- M. Mihăilescu and G. Moroșanu: On an eigenvalue problem for an anisotropic elliptic equation involving variable exponents, *Glasgow Mathematical Journal* **52** (2010), 517-527.
- M. Mihăilescu, G. Moroșanu, and V. Rădulescu: Eigenvalue problems for anisotropic elliptic equations: an Orlicz-Sobolev space setting, *Nonlinear Analysis* **73** (2010), 3239-3252.
- M. Bocea, M. Mihăilescu, and C. Popovici: On the asymptotic behavior of variable exponent power-law functionals and applications, *Ricerche di Matematica* **59** (2010), 207-238.
- M. Mihăilescu and D. Stancu-Dumitru: On a degenerate and singular elliptic equation with critical exponent and non-standard growth conditions, *Studia Universitatis Babeș-Bolyai Mathematica* **LV**, No. 4 (2010), 91-98.
- M. Mihăilescu and V. Rădulescu: Concentration phenomena in nonlinear eigenvalue problems with variable exponents and sign-changing potential, *Journal d'Analyse Mathématique* **111** (2010), 267-287.
- A. Kristály, M. Mihăilescu, V. Rădulescu, and S. Tersian: Spectral estimates for a nonhomogeneous difference problem, *Communications in Contemporary Mathematics* **12** (2010), 1015-1029.
- M. Mihăilescu: An eigenvalue problem possessing a continuous family of eigenvalues plus an isolated eigenvalue, *Communications on Pure and Applied Analysis* **10** (2011), 701-708.
- M. Mihăilescu and D. Repovš: Multiple solutions for a nonlinear and non-homogeneous problem in Orlicz-Sobolev spaces, *Applied Mathematics and Computation* **217** (2011), 6624-6632.
- M. Mihăilescu and V. Rădulescu: Sublinear eigenvalue problems associated to the Laplace operator revisited, *Israel Journal of Mathematics* **181** (2011), 317-326.
- M. Mihăilescu, G. Moroșanu, and D. Stancu-Dumitru: Equations involving a variable exponent Grushin-type operator, *Nonlinearity* **24** (2011), 2663-2680.
- M. Mihăilescu, V. Rădulescu, and D. Stancu-Dumitru: On a Caffarelli-Kohn-Nirenberg type inequality in bounded domains involving variable exponent growth conditions and applications to PDE's, *Complex Variables-Elliptic Equations* **56** (2011), 659-669.
- M. Mihăilescu, G. Moroșanu, and D. Stancu-Dumitru: An existence result for a PDE involving a Grushin type operator and variable exponents, in vol. Numerical Analysis and Applied Mathematics. International Conference on Numarical Analysis and Applied Mathematics (ICNAAM) 2011, Halkidiki,

- Greece, 19-25 September 2011, (T.E. Simos et al., Editors), American Institute of Physics, Melville-New York, 2011, pp. 889-892.
- A. Kristály, M. Mihăilescu, and V. Rădulescu: Discrete boundary value problems involving oscillatory nonlinearities: small and large solutions, *Journal of Difference Equations and Applications* **17** (2011), 1431-1440.
- M. Mihăilescu and G. Moroșanu: Eigenvalues of the Laplace operator with nonlinear boundary conditions, *Taiwanese Journal of Mathematics* **15** (2011), 1115-1128.
- M. Mihăilescu and C. Varga: Multiplicity results for some elliptic problems with nonlinear boundary conditions involving variable exponents, *Computers & Mathematics with Applications* **62** (2011), 3464-3471.
- M. Mihăilescu and D. Repovš: An eigenvalue problem involving a degenerate and singular elliptic operator, *Bull. Belg. Math. Soc.*, **18** (2011), 839-847.
- M. Mihăilescu, V. Rădulescu, and S. Tersian: Homoclinic solutions of difference equations with variable exponents, *Topological Methods in Nonlinear Analysis* **38** (2011), 277-289.
- M. Mihăilescu and D. Repovš: On a PDE involving the  $A_{p(\cdot)}$ -Laplace operator, *Nonlinear Analysis* **75** (2012), 975-981.
- M. Bocea, M. Mihăilescu, M. Pérez-Llanos, and J. D. Rossi: Models for growth of heterogeneous sandpiles via Mosco convergence, *Asymptotic Analysis* **78** (2012), 11-36.
- M. Bocea and M. Mihăilescu: A Caffarelli-Kohn-Nirenberg inequality in Orlicz-Sobolev spaces and applications, *Applicable Analysis* **91** (2012), 1649-1659.
- M. Mihăilescu and D. Stancu-Dumitru: Anisotropic quasilinear elliptic equations with variable exponent, *J. Korean Math. Soc.* **49** (2012), 1123-1138.
- M. Mihăilescu and G. Moroșanu: An existence result for a nonhomogeneous problem in  $\mathbb{R}^2$  related to nonlinear Hencky-type materials, *Nonlinear Analysis: Real World Applications* **14** (2013), 1466-1476.
- M. Bocea and M. Mihăilescu: Eigenvalue problems in Orlicz-Sobolev spaces for rapidly growing operators in divergence form, *J. Differential Equuations* **256** (2014), 640-657.
- M. Bocea and M. Mihăilescu: On the continuity of the Luxemburg norm of the gradient in  $L^{p(\cdot)}$  with respect to  $p(\cdot)$ , *Proc. Amer. Math. Soc.* **142** (2014), 507-517.
- M. Bocea and M. Mihăilescu: The principal frequency of  $\Delta_{\infty}$  as a limit of Rayleigh quotients involving Luxemburg norms, *Bulletin des Sciences Mathématiques* **138** (2014), 236-252.
- F. Abdullayev, M. Bocea, and M. Mihăilescu: A variational characterization of the effective yield set for ionic polycrystals, *Applied Mathematics & Optimization* **69** (2014), 487-503.
- M. Bocea, M. Mihăilescu, and D. Stancu-Dumitru: The limiting behavior of solutions to inhomogeneous eigenvalue problems in Orlicz-Sobolev spaces, *Advanced Nonlinear Studies* **14** (2014), 977-990.
- M. Fărcășeanu, M. Mihăilescu, and D. Stancu-Dumitru: On the set of eigenvalues of some PDEs with homogeneous Neumann boundary condition, *Nonlinear Analysis* **116** (2015), 19-25.
- M. Mihăilescu: Classification of isolated singularities for nonhomogeneous operators in divergence form, *Journal of Functional Analysis* **268** (2015), 2336-2355.
- M. Bocea and M. Mihăilescu:  $\Gamma$ -convergence of inhomogeneous functionals in Orlicz-Sobolev spaces, *Proceedings of the Edinburgh Mathematical Society* **58** (2015), 287-303.
- M. Mihăilescu, D. Stancu-Dumitru, and C. Varga: On the spectrum of a Baouendi-Grushin type operator: an Orlicz-Sobolev space setting approach, *Nonlinear Differential Equations and Applications (NoDEA)* **22** (2015), 1067-1087.
- M. Bocea and M. Mihăilescu: Existence of nonnegative viscosity solutions for a class of problems

involving the  $\infty$ -Laplacian, Nonlinear Differential Equations and Applications (NoDEA) 23 (2016), 1-21.

- M. Mihăilescu and D. Stancu-Dumitru: A perturbed eigenvalue problem on general domains, *Annals of Functional Analysis* **7** (2016), 529-542.
- M. Mihăilescu and G. Moroșanu: Eigenvalues of  $-\Delta_p \Delta_q$  under Neumann boundary condition, Canadian Mathematical Bulletin **59** (2016), 606-616.
- M. Fărcășeanu and M. Mihăilescu: Continuity of the first eigenvalue for a family of degenerate eigenvalue problems, *Archiv der Mathematik* **107** (2016), 659-667.
- M. Fărcășeanu, M. Mihăilescu, and D. Stancu-Dumitru: A maximum principle for a class of first order differential operators. New trends in differential equations, control theory and optimization, 93-103, World Sci. Publ., Hackensack, NJ, 2016.
- M. Bocea and M. Mihăilescu: On a family of inhomogeneous torsional creep problems, *Proceedings* of the American Mathematical Society **145** (2017), 4397-4409.
- M. Fărcășeanu, M. Mihăilescu, and D. Stancu-Dumitru: Perturbed fractional eigenvalue problems, *Discrete and Continuous Dynamical Systems Series A* **37** (2017), 6243-6255.
- M. Fărcășeanu, M. Mihăilescu, and D. Stancu-Dumitru: On the convergence of the sequence of solutions for a family of eigenvalue problems, *Mathematical Methods in the Applied Sciences* **40** (2017), 6919-6926.
- M. Mihăilescu, D. Stancu-Dumitru, and C. Varga: The convergence of nonnegative solutions for the family of problems  $-\Delta_p u = \lambda e^u$  as  $p \to \infty$ , ESAIM: Control, Optimisation and Calculus of Variations 24 (2018), 569-578.
- M. Mihăilescu and M. Pérez-Llanos: Inhomogeneous torsional creep problems in anisotropic Orlicz Sobolev Spaces, *Journal of Mathematical Physics* **59** (2018), 071513, 18 pp.
- M. Mihăilescu and D. Stancu-Dumitru: On the spectrum of a nontypical eigenvalue problem, *Electronic Journal of Qualitative Theory of Differential Equations* **87** (2018), 1-10.
- M. Bocea and M. Mihăilescu: Minimization Problems for Inhomogeneous Rayleigh Quotients, *Communications in Contemporary Mathematics* **20** (2018), 1750074, 13 pp.
- M. Fărcășeanu and M. Mihăilescu: On a family of torsional creep problems involving rapidly growing operators in divergence form, *Proceedings of the Royal Society of Edinburgh Section A: Mathematics* **149** (2019), 495-510.
- M. Bocea and M. Mihăilescu: On the existence and uniqueness of exponentially harmonic maps and some related problems, *Israel Journal of Mathematics* **230** (2019), 795-812.
- M. Mihăilescu, J. D. Rossi, and D. Stancu-Dumitru: A limiting problem for a family of eigenvalue problems involving *p*-Laplacians, *Revista Matematica Complutense* **32** (2019), 631-653.
- M. Fărcășeanu and M. Mihăilescu: The asymptotic behaviour of the sequence of solutions for a family of equations involving  $p(\cdot)$ -Laplace operators, *Moscow Mathematical Journal* **20** (2020), 495-509.
- M. Bocea and M. Mihăilescu: On the Monotonicity of the Principal Frequency of the *p*-Laplacian, accepted for publication in *Advances in Calculus of Variations*. (DOI: 10.1515/acv-2018-0022)
- A. Grecu and M. Mihăilescu: Principal frequency of  $\Delta_{\infty}$  as limit of Rayleigh quotients in Orlicz spaces, accepted for publication in *Applicable Analysis*. (DOI: 10.1080/00036811.2019.1652737)
- M. Mihăilescu: The Spectrum of the Mean Curvature Operator, accepted for publication in *Proceedings of the Royal Society of Edinburgh Section A: Mathematics.* (DOI: 10.1017/prm.2020.25)
- ullet M. Mihăilescu and J. D. Rossi: Monotonicity with respect to p of the First Nontrivial Eigenvalue of the p-Laplacian with Homogeneous Neumann Boundary Conditions, accepted for publication in Communications on Pure and Applied Analysis.

• M. Fărcășeanu, A. Grecu, M. Mihăilescu, and D. Stancu-Dumitru: An overview on torsional creep problems, accepted for publication in *Rev. Roumaine Math. Pures Appl.*.

#### Editorial activities

- Member of the editorial board of *Mathematics*;
- Member of the editorial board of *International Journal of Applied Mathematics*;
- Former member of the editorial board of Abstract and Applied Analysis (2012-2019).

#### PhD Students

- Maria Fărcășeanu (2018), **URL:** https://sites.google.com/site/mariafarcaseanu/home;
- Andrei Grecu (in progress), **URL:** https://sites.google.com/view/andreigrecu-ucv/home.

#### Talks

- Workshop: **Resultats concernant le** *p*-**Laplacien avec** *p* **non-constant**, November 6, 2007, Institut of Mathematics Simion Stoilow of the Romanian Academy, Bucharest, Romania (title of the talk: *Spectral properties of some nonhomogeneous differential operators*).
- Workshop: **Some Topics in Applied Mathematics**, November 21, 2007, Central European University, Budapest, Hungary (title of the talk: *A continuous spectrum for non-homogeneous differential operators in variable exponent spaces*).
- Workshop: **Calculus of Variations and Optimization**, October 2, 2008, Central European University, Budapest, Hungary (title of the talk: *Eigenvalue problems for anisotropic elliptic equations*).
- Workshop on Partial Differential Equations, October 29-30, 2008, Institut of Mathematics Simion Stoilow of the Romanian Academy, Bucharest, Romania (title of the talk: *Eigenvalue problems involving variable exponents*).
- Workshop: **Nonlinear Difference and Differential Equations and Applications**, April 2-4, 2009, University of Rousse, Bulgaria (title of the talk: *Eigenvalue problems associated to the Laplace operator*).
- Romanian-German Symposium on Mathematics and Its Applications, Sibiu (Hermannstadt), Romania, May 14-17, 2009 (title of the talk: *Some eigenvalue problems associated to the Laplace operator*).
- Workshop: **Applied Analysis**, February 12 (Friday), 2010, Central European University, Budapest, Hungary (title of the talk: *Degenerate elliptic equations involving variable exponent growth conditions*).
- Workshop: **Nonlinear Difference and Differential Equations and Applications**, April 22-24, 2010, University of Rousse, Bulgaria (title of the talk:  $\Gamma$ -Convergence of functionals in Sobolev spaces with variable exponents).
- Variable Exponent Analysis, June 28 July 2, 2010, University of Oulu, Finland (title of the talk:  $\Gamma$ -convergence for some power-law functionals involving nonstandard growth conditions).
- Departamental Seminar of the Department of Mathematics and its Applications from the Central European University, Budapest, Hungary, September 28, 2010 (title the talk: An eigenvale problem for an elliptic differential operator with the Neumann boundary condition).
- Workshop on Partial Differential Equations, November 25-26, 2010, Institut of Mathematics Simion Stoilow of the Romanian Academy, Bucharest, Romania (title of the talk:  $\Gamma$ -convergence of functionals involving variable exponents).
- Workshop for Young Researchers in Mathematics, May 12-13, 2011, "Ovidius" University

- of Constanța, Constanța, Romania (title of the talk: *Mosco convergence for some power law functionals involving variable exponents*).
- Workshop on Applied Mathematics, May 26, 2011, Central European University, Budapest, Hungary (title of the talk: *Mosco convergence of functionals in Sobolev spaces with variable exponents*).
- The Seventh Congress of Romanian Mathematicians, June 29 July 5, 2011, "Transilvania" University of Brașov, Brașov, Romania (title of the talk: *Mosco convergence for some power law functionals involving variable exponents*).
- International Conference on Differential & Difference Equations and Applications, July 4-8, 2011, Azores University, Ponta Delgada, Portugal (title of the talk: *Mosco convergence for some power law functionals involving variable exponent growth conditions*).
- ICNAAM 2011, 9th International Conference of Numerical Analysis and Applied Mathematics, September 19-25, 2011, G-Hotels, Halkidiki, Greece (title of the talk: *An existence result for a PDE involving a Grushin type operator and variable exponents*).
- Analysis Seminar of the Department of Mathematics and Statistics from Loyola University Chicago, October 17, 2011, (title of the talk: On a maximum principle related with eigenvalue problems involving variable exponents).
- AMS Western Section Meeting, October 22-23, 2011, University of Utah, Salt Lake City, Utah, USA (title of the talk: A maximum principle connected with eigenvalue problems involving variable exponents).
- Seminar of the PDE's Research Group from Basque Center of Applied Mathematics, Bilbao, Spain, February 14, 2012, (title of the talk: Remarks on the first eigenvalue of the p(x)-Laplace operator).
- Workshop for Young Researchers in Mathematics, May 10-11, 2012, "Ovidius" University of Constanța, Constanța, Romania (title of the talk: *A maximum principle related with eigenvalue problems involving variable exponents*).
- PDE Seminar of the School of Mathematics and Statistics from the University of Sydney, September 3, 2012 (title of the talk: *PDE's involving variable exponents*).
- Australian Mathematical Society 56-th Annual Meeting, September 24 27, 2012, University of Ballarat, Ballarat, Australia (title of the talk: *Mosco convergence for some power law functionals involving variable exponent growth conditions*).
- PDE/Analysis seminar of the Mathematical Sciences Institute, College of Physical & Mathematical Sciences from the Australian National University, November 13, 2012, (title of the talk: Classification of isolated singularities for equations involving the Finsler-Laplace operator).
- Pure Maths Seminar of the School of Mathematics and Statistics from the University of New South Wales, November 20, 2012, (title of the talk: Classification of isolated singularities for equations involving the Finsler-Laplace operator).
- PDE Seminar of the School of Mathematics and Statistics from the University of Sydney, November 21, 2012, (title of the talk: Classification of isolated singularities for equations involving the Finsler-Laplace operator).
- Advances in Differential Equations: symmetrizations and related topics, March 14-15, 2013, Babeş-Bolyai University, Cluj-Napoca, Romania (title of the talk: *The asymptotic behavior of some power-law functionals in Sobolev spaces with variable exponents*).
- Joint International Meeting of the AMS and the Romanian Mathematical Society, June 27-30, 2013, 1 Decembrie 1918 University, Alba Iulia, Romania (title of the talk: *PDE's involving*

- a variable exponent Grushin-type operator).
- PDE Seminar of the School of Mathematics and Statistics from the University of Sydney, September 26, 2013, (title of the talk: *The asymptotic behavior of some power-law functionals in Sobolev spaces with variable exponents*).
- Australian Mathematical Society 57-th Annual Meeting, September 30 October 03, 2013, University of Sydney, Sydney, Australia (title of the talk: *Eigenvalue problems in Orlicz-Sobolev spaces for rapidly growing operators in divergence form*).
- Research Seminar on Nonlinear Operators and Differential Equations, March 13, 2014, "Babeş-Bolyai" University, Cluj-Napoca, Romania (title of the talk: *An eigenvalue problem involving a nonhomogeneous operator in divergence form*).
- Workshop for Young Researchers in Mathematics, May 22-23, 2014, "Ovidius" University of Constanța, Constanța, Romania (title of the talk: *Eigenvalue problems in Orlicz-Sobolev spaces for rapidly growing operators in divergence form*).
- The Eighth Congress of Romanian Mathematicians, June 26 July 1, 2015, "A. I. Cuza" University of Iași, Iași, Romania (title of the talk: *On the asymptotic behavior of some classes of nonlinear eigenvalue problems involving the p-Laplacian*).
- AMS Central Fall Sectional Meeting Special Session on Nonlinear PDEs and Calculus of Variations, October 2 4, 2015, Loyola University Chicago, Chicago, IL, USA (title of the talk: Classification of isolated singularities for inhomogeneous operators in divergence form).
- Workshop for Young Researchers in Mathematics, May 19-22, 2016, "Ovidius" University of Constanța, Constanța, Romania (title of the talk: Classification of isolated singularities for inhomogeneous operators in divergence form).
- The 6th Workshop Series on Mathematics, June 3-4, 2016, Univeristy of Pitești, Pitești, Romania (title of the talk: On the asymptotic behavior of some classes of nonlinear eigenvalue problems involving the p-Laplacian).
- Le 13eme Colloque Franco-Roumain en Mathematiques Appliquees Special Session on Analyse et Controle des EDP, August 25-29, 2016, Universitatea A. I. Cuza din Iași, Iași, Romania (title of the talk: *Classification of isolated singularities for inhomogeneous operators in divergence form*).
- Seminarul Științific al Departamentului de Matamatică de la Universitatea "Ovidius" din Constanța, October 21, 2016 (title of the talk: *Inhomogeneous torsional creep problems*).
- Seminar on Nonlinear Operators and Differential Equations, November 24, 2016, Universitatea Babeș-Bolyai, Cluj Napoca, Romania (title of the talk: *Inhomogeneous torsional creep problems*).
- Seminar of the Department of Mathematics and Statistics, March 14, 2017, The College of Arts and Sciences, American University of Sharjah, United Arab Emirates (title of the talk: Inhomogeneous torsional creep problems).
- Workshop on Nonlinear Analysis on the Occasion of the 65th Birthday of Patrizia Pucci, May 25-27, 2017, Babeș-Bolyai University, Cluj-Napoca, Romania (title of the talk: *Typical and nontypical eigenvalue problems for some classes of differential operators*).
- 6th International Conference on Mathematics and Informatics, September 7-9, 2017 Târgu Mureș/Marosvásárhely, Romania (title of the talk: Classification of isolated singularities for inhomogeneous operators in divergence form)
- Nonlinear Difference and Differential Equations and their Applications NODDEA'2017, October 26-28, 2017, University of Ruse, Bulgaria (title of the talk: *Minimization Problems for Inhomogeneous Rayleigh Quotients*).

- Sextas Jornadas de Análisis Matemático en Alicante, January 24-26, 2018, University of Alicante, Spain (title of the talk: *Minimization Problems for Inhomogeneous Rayleigh Quotients* ).
- Workshop on Differential Equations, April 4-6, 2018, Central European University, Budapest, Hungary (title of the talk: *Problems involving rapidly growing operators in divergence form* ).
- Transitions de phase et équations non locales, April 25-27, 2018, Institute of Mathematics of the Romanian Academy, Bucharest, Romania (title of the talk: *Deux problèmes variationnels liés aux opérateurs en forme divergence avec symbole à croissance rapide* ).
- 14th Franco-Romanian Conference on Applied Mathematics, August 27-31, 2018, University of Bordeaux, France (title of the talk: *Minimization Problems for Inhomogeneous Rayleigh Quotients*).
- International Conference on Applied Mathematics and Numerical Methods (ICAMNM) second edition, October 19-20, 2018, University of Craiova, Romania (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplacian*).
- Workshop de analiză, ecuații diferențiale și mecanică, November 9, 2018, University of Bucharest, Romania (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplacian* ).
- Italian-Romanian Colloquium on Differential Equations and Applications, April 10-12, 2019, University of Udine, Italy (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator and Related Problems*).
- Second Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA), May 10-12, 2019, Ovidius University, Constanța, Romania (title of the talk: *The existence and uniqueness of exponentially harmonic maps revisited*).
- 2nd Workshop on Analysis, PDEs and Mechanics, May 30, 2019, "Gheorghe Mihoc Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania (title of the talk: Inhomogeneous torsional creep problems in anisotropic Orlicz-Sobolev spaces).
- **RomFin2019** and **FSDONA2019**, June 10-15, 2019, University of Turku, Finland (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator* ).
- The Ninth Congress of Romanian Mathematicians, June 28 July 3, 2019, University of Galați, Romania (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator* ).
- 7th International Conference on Mathematics and Informatics, September 2-4, 2019, Târgu Mureș/Marosvasarhely, Romania (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator* ).
- Seminar of the Department of Mathematics and Statistics, September 24, 2019, The College of Arts and Sciences, American University of Sharjah, United Arab Emirates (speaker: Mihai Mihailescu; title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator*).
- **Septimas Jornadas de Analisis Matematico**, January 15-17, 2020, University of Alicante, Spain (title of the talk: *The Monotonicity of the Principal Eigenvalue of the p-Laplace Operator*).

### Conferences organized

- Special Session on Applied Analysis at AMS Western Section Meeting, 22-23 Octombrie, 2011, University of Utah, Salt Lake City, Utah, USA (co-organized with Marian Bocea, Department of Mathematics and Statistics, Loyola University Chicago).
- Special Session on Calculus of Variations and Partial Differential Equations at Joint

International Meeting of the AMS and the Romanian Mathematical Society, June 27-30, 2013, 1 Decembrie 1918 University, Alba Iulia, Romania (co-organized with Marian Bocea - Loyola University Chicago; Liviu Ignat - Institute of Mathematics of the Romanian Academy; Daniel Onofrei - University of Houston).

- Special Session on Analysis at Le 12ème Colloque Franco-Roumain en Mathématiques Appliquées, August 25-30, 2014, University of Lyon, Lyon, France (co-organized with Daniel Beltiță Institute of Mathematics of the Romanian Academy; Emmanuel Russ Joseph Fourier University, Grenoble).
- Happy PDE's Days, December 8-9, 2016, "Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest, Romania (co-organized with Liviu Ignat "Simion Stoilow" Institute of Mathematics of the Romanian Academy).
- Workshop on Pure and Applied Analysis, October 21, 2017, University of Craiova, Craiova, Romania (co-organized with Cristian Vladimirescu University of Craiova).
- Atelier de Travail en Equations aux Dérivées Partielles, December 7-8, 2017, "Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest, Romania (co-organized with Liviu Ignat "Simion Stoilow" Institute of Mathematics of the Romanian Academy).
- Atelier de Travail en Equations aux Dérivées Partielles, December 13-14, 2018, "Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest, Romania (co-organized with Cristian Cazacu University of Bucharest; Andreea Grecu "Simion Stoilow" Institute of Mathematics of the Romanian Academy; Liviu Ignat "Simion Stoilow" Institute of Mathematics of the Romanian Academy).

#### Member in scientific committees of conferences

- First Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RIS-MAA), April 20-21, 2018, Babes-Bolyai University, Cluj-Napoca, Romania.
- International conference on applied mathematics and numerical methods (second edition), October 19-20, 2018, University of Craiova, Craiova, Romania.
- Second Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA), May 10-12, 2019, Ovidius University, Constanța, Romania.
- Third Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RIS-MAA), May 7-9, 2020, Alba Iulia, Romania.
- International conference on applied mathematics and numerical methods (third edition), October 29-31, 2020, University of Craiova, Craiova, Romania.
- The International Conference on Theoretical & Applicable Optimization and Control-2021 (TAOC-2021), June 23-25, 2021, Baku, Azerbaijan.

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Mihai Mihăilescu