Mihai Mihăilescu

Contact information

Affiliation 1	University of Craiova (UCv), Department of Mathematics, 13 A. I. Cuza, 200585 Craiova, Romania.
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Education

Aug. 4 - Nov. 26, 2012	**Postdoctoral Fellow** at the University of Sydney, Australia.
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.

Employment

• 03.01.2022 - present *Scientific Researcher I* (1/2 part time) at "Gheorghe Mihoc - Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics (ISMMA)
• 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: Ioan-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 *Babeș-Bolyai University*, no. CNFIS-FDI-2016-0056, 15 November 2016-15 December 2016 (host institution: Babeș-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: Ioan-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: Ioan-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 nonhomogeneous 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. Rovenţa: 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 Numarical 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: Γ-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 Eqnuations* **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 Δ_∞ 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: Γ-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 ∞-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. Mihăilescu and J. D. Rossi: Monotonicity with respect to p of the First Nontrivial Eigenvalue of the p-Laplacian with Homogeneous Neumann Boundary Conditions, *Communications on Pure and Applied Analysis* **19** (2020), 4363-4371.
• M. Bocea and M. Mihăilescu: On the Monotonicity of the Principal Frequency of the p-Laplacian, *Advances in Calculus of Variations* **14** (2021), 147-152.
• M. Fărcășeanu, A. Grecu, M. Mihăilescu, and D. Stancu-Dumitru: Perturbed eigenvalue problems: an overview, *Studia Univ. Babeș-Bolyai Math.* **66** (2021), 55-73.
• C. Enache and M. Mihăilescu: A Monotonicity Property of the p-Torsional Rigidity, *Nonlinear Analysis* **208** (2021), Article 112326.
• M. Mihăilescu: The Spectrum of the Mean Curvature Operator, *Proceedings of the Royal Society of Edinburgh Section A: Mathematics* **151** (2021), 451-463.
• A. Grecu and M. Mihăilescu: Principal frequency of Δ_∞ as limit of Rayleigh quotients in Orlicz spaces, *Applicable Analysis* **100** (2021), 1590-1601.
• M. Mihăilescu and D. Stancu-Dumitru: Torsional creep problems involving Grushin-type operators, *Applied Mathematics Letters* **121** (2021), Article 107423.
• A. Grecu and M. Mihăilescu: Monotonicity of the Principal Eigenvalue of the p-Laplacian on an Annulus, *Math. Reports* **23** (2021), 149-155.
• Ș. Bărbuleanu, M. Mihăilescu, and D. Stancu-Dumitru: Estimates for the ratio of the first two eigenvalues of the Dirichlet Laplace operator with a drift, *Contributions to Mathematics* **4** (2021), 23-27.
• M. Fărcășeanu, A. Grecu, M. Mihăilescu, and D. Stancu-Dumitru: An overview on torsional creep problems, *Rev. Roumaine Math. Pures Appl.* **66** (2021), 695-708.
• M. Fărcășeanu and M. Mihăilescu: On the Monotonicity of the Best Constant of Morrey's Inequality in Convex Domains, *Proceedings of the American Mathematical Society* **150** (2022), 651-660.
• M. Fărcășeanu, M. Mihăilescu and D. Stancu-Dumitru: On a family of torsional creep problems in Finsler metrics, *Canadian Journal of Mathematics* **74** (2022), 24-41.
• A. Grecu and M. Mihăilescu: 4-Harmonic Functions and Beyond, *Le Matematiche* **77** (2022), 107-118.
• M. Mihăilescu: Monotonicity Properties for the Variational Dirichlet Eigenvalues of the p-Laplace Operator, *Journal of Differential Equations* **335** (2022), 103-119.
• C. Enache, M. Mihăilescu, and D. Stancu-Dumitru: The Monotonicity of the p-Torsional Rigidity in Convex Domains, *Mathematische Zeitschrift* **302** (2022), 419-431.
• M. Bocea, M. Mihăilescu, and D. Stancu-Dumitru: The Monotonicity of the Principal Frequency of the Anisotropic p-Laplacian, *Comptes Rendus Mathématique* **360** (2022), 993-1000.
• M. Mihăilescu and D. Stancu-Dumitru: Monotonicity with respect to p of the best constants associated with Sobolev immersions of type $W_0^{1,p}(\Omega) \hookrightarrow L^q(\Omega)$ when $q \in \{1, p, \infty\}$, *Studia Univ. Babeș-Bolyai Math.* **68** (2023), 109-123.
• M. Fărcășeanu, M. Mihăilescu, and D. Stancu-Dumitru: A minimization problem related to the principal frequency of the p-Bilaplacian with coupled Dirichlet-Neumann boundary conditions, *Electronic Journal of Qualitative Theory of Differential Equations* **51** (2023), 1-9.
• A. Grecu and M. Mihăilescu: The torsion problem of the p-Bilaplacian, *Nonlinear Analysis: Real World Applications* **79** (2024), Article 104117.
• M. Mihăilescu, D. Stancu-Dumitru, and A. Teca: On the infimum of a Rayleigh-type quotient involving a variable exponent which depends on test functions, to appear in *Archiv der Mathematik*

(DOI: 10.1007/s00013-024-02097-4).
• M. Mihăilescu and A. Teca: The limiting behavior of constrained minimizers in variable exponent spaces, to appear in *Asymptotic Analysis* (DOI: 10.1177/09217134251328868).

Citations

• According to the *Web of Science* database on 14 of March 2025 I have 1900 citations (without self-citations) in ISI journals and my h-index is equal to 23.

Editorial activities

• Member of the editorial board of *Mathematics*;
• Member of the editorial board of *International Journal of Applied Mathematics*;
• Member of the editorial board of *Contributions to Mathematics*;
• Member of the editorial board of *Electronic Journal of 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 (2021), **URL:** `https://sites.google.com/view/andreigrecu-ucv/home`;
• Anisia Teca (in progress), **URL:** `https://sites.google.com/view/tecaanisia/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: *Γ-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: Γ-*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: Γ-*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, Babeș-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, "Babeș-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*).
• **International conference on applied mathematics and numerical methods (third edition)**, October 29-31, 2020, University of Craiova, Craiova, Romania (title of the talk: *The Spectrum of the Relativistic Mean Curvature Operator*).
• **Monday's Nonstandard Seminar 2020/21**, March 1st, 2021, online seminar (title of the talk: *A Monotonicity Property for the Principal Eigenvalue of the p-Laplace Operator*).
• **Function Spaces/ Nonlinear Analysis and PDE'S Online Seminar**, April 8th, 2021, online seminar (title of the talk: *A Monotonicity Property of the p-Torsional Rigidity*).
• **International conference on applied mathematics and numerical methods (fourth edition)**, June 29 - July 2, 2022, University of Craiova, Craiova, Romania (title of the talk: *Monotonicity properties for the variational Dirichlet eigenvalues of the p-Laplace operator*).
• **UAE Math Day 2023**, March 4, 2023, Zayed University, Dubai, UAE (title of the talk: *On the Monotonicity of the Best Constant of Morrey's Inequality in Convex Domains*).
• **Fifth Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA)**, May 26-28, 2023, University of Craiova, Romania (title of the talk: *Monotonicity Properties of the p-Torsional Rigidity in Convex Domains*).
• **Workshop on PDE's - Research in Pairs in Bucharest**, June 26-27, 2023, IMAR & Politehnica University of Bucharest, Romania (title of the talk: *Monotonicity Properties of the p-Torsional Rigidity in Convex Domains*).
• **The Tenth Congress of Romanian Mathematicians**, June 30 - July 5, 2023, University of Pitești, Romania (title of the talk: *Monotonicity Properties of the p-Torsional Rigidity in Convex Domains*).
• **Scientific Seminar**, May 7, 2024, University of Craiova, Romania (title of the talk: *Exponentially harmonic maps and related problems*).
• **16th Franco-Romanian Colloquium**, August 26-30, 2024, National University of Science and Technology Politehnica Bucharest, Romania (title of the talk: *On a family of PDEs related to the principal frequency of the p-Laplacian and the p-torsion problem*).

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 (RISMAA)**, 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.
• **International conference on applied mathematics and numerical methods (third edition)**, October 29-31, 2020, University of Craiova, Craiova, Romania.
• **Third Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA)**, September 10-12, 2021, Alba Iulia, Romania.
• **Fourth Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA)**, May 19-21, 2022, Brașov, Romania.
• **The International Conference on Theoretical & Applicable Optimization and Control-2022 (TAOC-2022)**, June 23-25, 2022, Baku, Azerbaijan.
• **Fifth Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA)**, May 26-28, 2023, Craiova, Romania.
• **Sixth Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA)**, May 30-31, 2024, Babes-Bolyai University, Cluj-Napoca, Romania.

Service

• 2020 - present *Member of the Mathematics commission CNATDCU of the Ministry of Education*.

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Mihai Mihăilescu