

# Mihai Mihăilescu

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## Contact information

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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 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 Go8 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 ecuatiilor 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 (selection)

- 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. (correction: *Proc. Roy. Soc. London Ser. A* **467** (2011), 3033-3034.)
- 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, 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: An eigenvalue problem possessing a continuous family of eigenvalues plus an isolated eigenvalue, *Communications on Pure and Applied Analysis* **10** (2011), 701-708.
- M. Bocea and M. Mihăilescu: Eigenvalue problems in Orlicz-Sobolev spaces for rapidly growing operators in divergence form, *J. Differential Equations* **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. Mihăilescu: Classification of isolated singularities for nonhomogeneous operators in divergence form, *Journal of Functional Analysis* **268** (2015), 2336-2355.
- 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 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. Mihăilescu: The Spectrum of the Mean Curvature Operator, *Proceedings of the Royal Society of Edinburgh Section A: Mathematics* **151** (2021), 451-463.
- M. Fărcașeanu 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. 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. Mihăilescu, D. Stancu-Dumitru, and A. Teca: On a Rayleigh-type quotient involving a variable exponent which depends on test functions, *Archiv der Mathematik* **124** (2025), 557-570.
- M. Bocea, M. Mihăilescu, and D. Stancu-Dumitru: Minimization Problems Interpolating between the  $p$ -Torsion Problem and the Principal Frequency of the  $p$ -Laplacian, to appear in *Analysis and Applications* (DOI: <https://doi.org/10.1142/S0219530526500326>).
- M. Mihăilescu and D. Stancu-Dumitru: Comparing the first eigenvalues of the  $p$ -Laplace operator on distinct bounded and convex domains, to appear in *Tohoku Mathematical Journal*.
- M. Fărcașeanu, M. Mihăilescu, and A. Teca: A comparative assessment of the best constants of Morrey's inequality on distinct bounded and convex domains, to appear in *Journal of Convex Analysis*.

## PhD Students

- Maria Fărcașeanu (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>.

## Service

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

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**Mihai Mihăilescu**