Curriculum vitae

Nume: MICU

Prenume: SORIN DANIEL

STUDII:

- Licenta: Matematica, Universitatea din Craiova, 20 Iulie 1992
- Doctorat: Matematica Aplicata, Universidad Complutense de Madrid, 6 Februarie 1996
  Titlul tezei de doctorat: *Análisis de un sistema bidimensional fluido-estructura*;
  Profesor indrumator: Enrique Zuazua Iriondo (Universidad Complutense de Madrid);
  Atestat de echivalare in Romania: 1999
- Conducere de doctorat din 2009.

ACTIVITATEA PROFESIONALA:

Universitatea din Craiova, Facultatea de Stiinte

Pozitia actuala: Profesor, de la data de 1 October 2005

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Alte incadrari: Cercetator I la Institutul de Statistică Matematică şi Matematică Aplicată „Gheorghe Mihoc- Caius Iacob" al Academiei Române, de la data de 18 December 2013

POZITII ANTERIOARE:

- Profesor asociat Universidad Carlos III de Madrid (Spain) 1/10/1994-30/09/1996
- Profesor asociat Universidad Complutense de Madrid (Spain) 1/10/1996-30/09/2001
- Profesor la Universitatea din Craiova de la 1/10/1992

PROFESOR INVITAT:

- Universidad de Chile, CMM, Santiago de Chile (Chile), 9/09-7/10/2002, 10/01-7/02/2009
- Universidad Autónoma de Madrid (Spain), 15/01-10/02/2005, 7/01-5/02/2004, 10/06-08/07/2004, 8/01-6/02/2003, 12/06-10/07/2003, 1/10/2006-28/02/2007
- Université Henri Poincaré, Nancy I (France), 04/06-04/07/2005
- Université Franche-Compté, Besançon (France), 1/09-31/10/2007
- Basque Center for Applied Mathematics, Bilbao (Spain), 25/10-23/11/2009

- Universidade Federal Rio de Janeiro (Brazil), 10/01-13/02/2010, 15/01-10/02/2011, 12/01-13/02/2013, 16/01/2015-14/02/2015, 12/01/2016-10/02/2016, 10/01-31/01/2020, 10/01/2024-1/02/2024;
- Université Paris 7 (France), 13/10/2010-13/11/2010
- Université Henri Poincaré, Nancy I (France), CNRS Poste Rouge 11/09-10/12/2011
- Université Paris 6 (France), 15/09/2014-15/10/2014
- Univerité de Loraine, Nancy (France), 13/01/2017-11/02/2017
- Chair of Computational Mathematics, DeustoTech, Universidad Deusto, Bilbao (Spain), 11/01/2018-11/02/2018.

LISTA PUBLICATIILOR COTATE ISI:

1. S. Micu, A. F. Pazoto, M. D. Soto Vieira: Controllability for a Boussinesq system of BBM-BBM type with moving control, Nonlinearity, 39(1) (2026), Article number 39 015010, DOI 10.1088/1361-6544/ae341d
2. C. Castro, S. Micu: A mixed finite elements approximation of inverse source problems for the wave equation with variable coefficients using observability, Numerische Mathematik, 157(5) (2025), 1847-1895, DOI: 10.1007/s00211-025-01489-0
3. S. Micu, A.F. Pazoto, M.D.S. Vieira: Boundary controllability of a higher-order Boussinesq system, Communications in Contemporary Mathematics, 27 (6), Article Number 2450040, 2025, DOI: 10.1142/S0219199724500408
4. N. Cîndea, S. Micu, I. Roventa, M. Tudor: An approximation method for exact controls of vibrating systems with numerical viscosity, ESAIM-Control Optimisation and Calculus of Variations, 30, Article Number 33, 2024, DOI: 10.1051/cocv/2024025
5. S. Micu, C. Nita: Cost evaluation of finite dimensional and approximate null-controllability for the one dimensional half-heat equation, Mathematical Control and Related Fields, 14 (1) (2024), 1-15, DOI: 10.3934/mcrf.2022054
6. S. Micu, I. Roventa, M. Tucsnak: Time optimal controls and bang-bang property for systems describing plate vibrations, Systems & Control Letters, 182, Article Number 105670, 2023, DOI: 10.1016/ j.sysconle.2023.105670
7. S. Micu, C. Niţă: On a Fractional Diffusion Equation with Moving Control, SIAM Journal on Control and Optimization, Vol. 60, Iss. 2 (2022), 871-889, DOI: 10.1137/20M1385056
8. G. Leugering, S, Micu, I. Roventa, Y. Wang: Controllability properties of a hyperbolic system with dynamic boundary conditions, Journal of Evolution Equations, 22, Art. 65(2022), DOI: 10.1007/s00028-022-00823-5
9. G.J. Bautista, S. Micu, A.F. Pazoto: On the controllability of a model system for long waves in nonlinear dispersive media , NONLINEARITY 34 (2) (2021), 989-1013.

10. S. Micu, C. Niţă, L.E. Temereancă: Null-controllability properties of the heat equation with memory, Proocedings of the Romanian Academy, Series A 22 (1) (2022), 11-18.
11. N. Cîndea, A. Matei, S. Micu, C. Nita: Boundary optimal control for antiplane contact problems with power-law friction, Applied Mathematics and Computation, 386 (2020), 125448. DOI: 10.1016/j.amc.2020.125448
12. S. Micu, I. Roventa, L. Temereanca: Approximation of the controls for the wave equation with a potential, Numerische Mathematik 144(4) (2020), 835-887. DOI: 10.1007/s00211-020-01106-2.
13. U. Biccari, S. Micu: Null-controllability properties of the wave equation with a second order memory term, Journal of Differential Equations, 267(2) (2019), 1376-1422. DOI: https://doi.org/10.1016/j.jde.2019.02.009
14. S. Micu, A. Pazoto: Stabilization of a Boussinesq system with localized damping, Journal d'Analyse Mathématique, 137(1) (2019), 291–337. DOI 10.1007/s11854-018-0074-3
15. A. Matei, S. Micu: Boundary Optimal Control for a Frictional Contact Problem with Normal Compliance, Applied Math. Optim., 78(2) (2018), 379-401. DOI: https://doi.org/10.1007/s00245-017-9410-8
16. A. Matei, S. Micu, C. Nita: Optimal control for antiplane frictional contact problems involving nonlinearly elastic materials of Hencky type, Mathematics and mechanics of Solids, 23(3) (2018), 308-328. DOI: https://doi.org/10.1177/1081286517718605
17. S. Micu, T. Takahashi: Local controllability to stationary trajectories of a Burgers equation with nonlocal viscosity, J. Diff. Eq., 264(5) (2018), 3664-3703. DOI: https://doi.org/10.1016/j.jde.2017.11.029
18. S. Micu, L. Temereanca: Estimates for the controls of the wave equation with a potential, ESAIM: COCV, 24(1) (2018), 289 - 309, DOI: https://doi.org/10.1051/cocv/2017009.
19. N. Cindea Nicolae, S. Micu, I. Roventa: Boundary controllability for finite-differences semi-discretizations of a clamped beam equation, SIAM Journal on Control and Optimization 55 (2) (2017), 785-817. DOI: https://doi.org/10.1137/16M1076976
20. S. Micu, A. Pazoto: Stabilization of a Boussinesq system with generalized damping, Systems and Control Letters, 105 (2017), 62-69. DOI: https://doi.org/10.1016/j.sysconle.2017.04.012
21. S. Micu, I. Roventa, L. Temereanca: Approximation of the controls for the linear beam equation, Mathematics of Control, Signals, and Systems, 28 (2) (2016), 1-53. DOI: 10.1007/s00498-016-0161-x
22. N. Cîndea, S. Micu, I. Rovenţa, M. Tucsnak: Particle supported control of a uid-particle system, Journal de Mathmatiques Pures et Appliques 104 (2) (2015), 311-353. DOI 10.1016/j.matpur.2015.02.009

23. F. Bugariu, S. Micu, I. Roventa: Approximation of the controls for the beam equation with vanishing viscosity, Mathematics of Computation, 85 (301) (2016), 2257-2303. DOI 10.1090/mcom/3064
24. S. Micu, A. Pazoto: Almost periodic solutions for a weakly dissipated hybrid system, Math. Control Relat. Fields 4 (1) (2014), 101-113. DOI: 10.3934/mcrf.2014.4.101.
25. F. Bugariu, S. Micu: A numerical method for the controls of the heat equation, Mathematical Modelling of Natural Phenomena, 9 (4) (2014), 65-87.
26. F. Bugariu, S. Micu: A singular controllability problem with vanishing viscosity, ESAIM Control Optim. Calc. Var. 20 (2014), 116-140. DOI: 10.1051/cocv/2013057.
27. N. Cindea, S. Micu, J. Morais Pereira: Approximation of periodic solutions for a dissipative hyperbolic equation, Numer. Math., 124 (2013), 559-601.
28. S. Micu, I. Roventa, M. Tucsnak: Time optimal boundary controls for the heat equation, J. Funct. Anal. 263 (1)(2012), 25–49.
29. N. Cîndea, S. Micu, A. F. Pazoto: Periodic solutions for a weakly dissipated hybrid system, J. Math. Anal. Appl. 385 (1)(2012), 399–413.
30. S. Micu, I. Rovenţa: Uniform controllability of the linear one dimensional Schrödinger equation with vanishing viscosity, ESAIM Control Optim. Calc. Var. 18 (1)(2012), 277–293.
31. S. Micu, J. Ortega, A. F. Pazoto: Null-controllability of a hyperbolic equation as singular limit of parabolic ones, J. Fourier Anal. Appl. 17 (2011), no. 5, 991–1007.
32. S. Micu, Sorin, E. Zuazua: Regularity issues for the null-controllability of the linear 1-d heat equation, Systems Control Lett. 60 (2011), no. 6, 406–413.
33. S. Micu, E. Zuazua: On the regularity of null-controls of the linear 1-d heat equation, C. R. Math. Acad. Sci. Paris 349 (2011), no. 11-12, 673–677.
34. N. Cîndea, S. Micu, M. Tucsnak: An approximation method for exact controls of vibrating systems, SIAM J. Control Optim. 49 (2011), no. 3, 1283–1305.
35. N. Cindea, S. Micu, I. Roventa, M. Tucsnak: Controllability of a nonlinear hybrid system, Annals of the University of Craiova - Mathematics and Computer Science Series, 38 (2011) 35-48.
36. A. Matei, S. Micu: Boundary optimal control for nonlinear antiplane problems, Nonlinear Analysis-Theory Methods & Applications 74 (2011), 1641-1652
37. F. Ammar-Khodja, S. Micu, A. Munch: Controllability of a string submitted to unilateral constraint, Annales de l'Institut Henri Poincaré-Analyse Non Lineaire 27(2010), 1097-1119.
38. S. Micu, L. de Teresa: A spectral study of the boundary controllability of the linear 2-D wave equation in a rectangle, Asymptotic Analysis 66 (2010), 139-160.

39. S. Micu, J. Ortega, L. Rosier: Control and stabilization of a family of Boussinesq systems, Discrete and Continuous Dynamical Systems-A 24(2009), 273-313
40. S. Micu, J. Ortega, A. Pazoto: On the controllability of a coupled system of two Korteweg-de Vries equations, Communications in Contemporary Mathematics 11 (2009), 799-827.
41. C. Castro, S. Micu, A. Munch: Numerical approximation of the boundary control of the 2-D wave equation with mixed finite element, IMA Journal of Numerical Analysis 28 (2008), 186−214.
42. S. Micu: Uniform boundary controllability of a semidiscrete 1-D wave equation with vanishing viscosity, Siam Journal on Control and Optimization 47(2008), 2857-2885.
43. S. Micu, E. Zuazua: On the controllability of a fractional order parabolic equation, SIAM J. Control Optim., 44/6 (2006), 1950-1972.
44. C. Castro, S. Micu: Boundary controllability of a linear semi-discrete 1-D wave equation derived from a mixed finite element method, Numer. Math. 102/3 (2006), 413-462.
45. S. Micu, E. Zuazua: An introduction to the controllability of partial differential equations**,** capitol în "Quelques questions de théorie du contrôle", Ed. Tewfik Sari, Collection Travaux en Cours, Editions Hermann 64 (2005), 69-157.
46. S. Micu, M. Tucsnak, Approximate controllability of a semi-discrete 1-D wave equation, Proceedings of 7-Colloque franco-roumain, Annals of the Univ. of Craiova 1 (2005), 48-58.
47. S. Micu, E. Zuazua: Null-controllability of the heat equation in unbounded domains, capitol în Unsolved Problems in Mathematical Systems and Control Theory, University Press, Princeton 2004, 163-168.
48. S. Micu, J. Ortega, L. de Teresa: ε-insensitizing controls for pointwise observation of the heat equation, Systems & Control Letters, 51(2004), 407-415.
49. S. Micu, J. Ortega, L. de Teresa: An example of ε-insensitizing controls for the heat equation with no intersecting observation and control regions, Appl. Math. Letters, 17/8 (2004), 927-932.
50. S. Micu: Uniform boundary controllability of a semi-discrete 1-D wave equation, Numerische Mathematik, 91(2002), 723-768.
51. S. Micu, E. Zuazua: On the lack of null-controllability of the heat equation on the half-space, Portugaliae Math., 58 (2001), 1-24.
52. S. Jaffard, S. Micu: Estimates of the constants in generalized Ingham's inequalityand applications to the control of the wave equation, Asymptotic Analysis, 28 (2001), 181-214.
53. S. Micu: On the controllability of the linearized Benjamin-Bona-Mahony equation, SIAM J. Cont. Optim, 39 (2001), 1677-1696.
54. S. Micu, E. Zuazua: On the lack of null-controllability of the heat equation on the half-line, Trans. AMS 353 (2000), 1635-1659.

55. S. Micu: Periodic solutions for a bidimensional hybrid system arising in the control of noise, Advances in Differential Equations 4 (1999), 529-560.
56. B. Allibert, S. Micu: Controllability of analytic functions for a wave equation coupled with a beam, Revista Matematica Iberoamericana, 15 (1999), 547-592.
57. S. Micu, E. Zuazua: Boundary controllability of a linear hybrid system arising in the control of noise, SIAM J. Con. Optim. 35 (1997), 1614-1637.
58. S. Micu, E. Zuazua: Asymptotics for the spectrum of a fluid/structure hybrid system arising in the control of noise, SIAM J. Math. Anal. 29 (1998), 967-1001.
59. S. Micu, E. Zuazua, E. Casas: Stabilization and periodic solutions of a hybrid system arising in the control of noise, Control of Partial Differential Equations and Applications Volume: 174, 1996, 219-230.
60. S. Micu, E. Zuazua: Qualitative properties of a 2dimensional hybrid system arising in the control of noise, Comptes Rendus De L'Academie Des Sciences Serie I-Mathematique 319 (1994), 1263-1268.

PREZENTĂRI INVITATE LA CONFERINȚE INTERNAȚIONALE SAU LA UNIVERSITĂȚI STRĂINE:

- *Inverse source problems approximation with mixed finite elements*, Workshop Control of PDEs and related topics, Toulouse, Franta, 30 Iunie-4 Iulie 2025, https://indico.math.cnrs.fr/event/12315/
- *Approximation of the boundary controls for the 2D wave equation in a rectangle*, Workshop Control of Partial Differential Equations in Hauts-de-France (2nd edition), Calais, Franta 15-17 Septembrie 2025, https://indico.math.cnrs.fr/event/14558/
- *Controllability properties of a fractional diffusion equation*, IX Partial differential equations, optimal design and numerics, Special session on "Control, inverse problems and beyond", 21.08.2022-02.09.2022, Benasque (Spania), https://benasque.org/2022pde/cgi-bin/talks/allprint.pl
- *Time optimal controls and bang-bang property for systems describing plate vibrations*, International Conference on Elliptic and Parabolic Problems: GAETA 2024, 20.05.2024 - 24.05.2024 Gaeta (Italia), https://www.ljll.fr/gaeta2024/
- *Controllability properties of a fractional diffusion equation*, IX Partial differential equations, optimal design and numeric, August 31, 2022, Benasque, Spain
- *Asupra aproximarii controalelor ecuatiei undelor 2-D*, Workshop "Automatica teoretica si teoria controlului" organized by Comisia de automatica teoretica si teoria controlului optimal and Institutul de Matematică "Octav Mayer" al Academiei Române, May 20, 2021 Iaşi, Romania - online.

- *On the controllability of the wave equation with a second order memory term*, Thematic session on "Nonlocal PDE and control", VIII Partial differential equations, optimal design and numeric, August 21, 2019, Benasque, Spain.
- *Controllability of the wave equation with memory term*, Minisymposium Control of Partial Differential Equations, May 23, 2019, International Conference on Elliptic and Parabolic Problems, 20.05.2019-24.05.2019, Gaeta, Italy.
- VII Partial differential equations, optimal design and numeric, August 20 - September 1, 2017, Benasque, Spain.
- *Exact controllability and approximation*, Session dedicated to the 150th anniversary of the Romanian Academy, April 5, 2016, Romanian Academy, Bucharest.
- *Approximation of the controls for the beam equation*, Plenary lecture. 24th Conference on Applied and Industrial Mathematics - CAIM 2016, Craiova, Romania, Septembrie 15-18, 2016.
- *Approximation of the exact control for the beam equation",* Invited talk InternationalWorkshop "From Open to Closed Loop Control" Mariatrost Graz Austria, June 22-26, 2015.
- *Stabilization of a system of dispersive equations modelling water waves,* Invited talk 6-th Workshop Partial differential equations, optimal design and numerics, Benasque, Spania, August 23 – September 5, 2015.
- *Time optimal boundary controls for the heat equation,* Invited talk at Workshop New trends in modeling, control and inverse problems, Institut de Mathematiques de Toulouse, June 16 - 19, 2014.
- *Approximation of periodic solutions for a dissipative hyperbolic equation",* Invited talk at Conference Control of PDEs at CNAM, Paris, France, March 31 – April 4, 2014.
- *Approximation of the controls for the beam equation,5-th Workshop Partial differential equations, optimal design and numerics, Benasque, Spain, August 25-September 5, 2013.*
- *Time optimal boundary controls for the heat equation,* 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando USA, July 1-5, 2012. Special Session Nonlinear PDEs and Control Theory.
- *Uniform boundary controllability of the 1-d Schrödinger equation with vanishing viscosity,* invited talk at Universidade Federal Rio de Janeiro (Brazil), February, 2011.
- *On the controllability of the Schrödinger equation with vanishing viscosity*, Workshop “Controle d’equations dispersives", Intitut Henri Poincaré, Paris, November 2010.
- *Null-controllability of a string with a boundary obstacle*, invited talk at IMPA, Rio de Janeiro (Brazil), January 2010.

- *Controllability of a wave equation with a boundary obstacle,* invited talk at Basque Center for Applied Mathematics, Bilbao (Spain), October 2009.
- *Numerical Approximation of the Boundary Control of the Wave Equation,* Workshop on Partial Differential Equations, Rio de Janeiro (Brazil), September 2008.
- *Uniform Boundary Controllability of the Semi-discrete 1-D Wave Equation with a Vanishing Viscous Term*, invited talk at Université Franche-Comté, Besancon (France), September 2007.
- *On the Approximation of the Boundary Control of the Wave Equation with Numerical Viscosity*, European Control Conference 2007, Kos (Grece), July 2007.
- *On the controllability of some dispersive equations*, International Workshop on Numerical Analysis and Control of Fluid-Structure Interactions ANCIF, Chillian (Chile), December 2005.
- *On the controllability of the semi-discrete 1-D wave equation with numerical viscosity,* invited talk at Universidad Complutense de Madrid, February 2004.
- *Uniform boundary controllability of a semi-discrete wave equation*, First EMS-SMAI-SMF Joint Conference - Applied. Mathematics and Applications of Mathematics, Nice (France), February 2003.
- *Aplicaciones de la teoria Fourier en control*, XVII Congreso de Ecuaciones Diferenciales y Aplicaciones, Salamanca (Spain), September 2001.

MEMBRU ÎN COMITETELE ŞTIINŢIFICE ALE PUBLICAŢIILOR:

- Acta Applicandae Mathematicae, ISSN: 0167-8019,
  Factor Relativ de Impact 2025: 0.588; Associate Editor
- Mathematical Control and Related Fields (MCRF), ISSN 2156-8472,
  Factor Relativ de Impact 2025: 0.818; Membru în Editorial Board

COORDONATOR DE PROIECTE DE CERCETARE

1. Director al proiectului PN-II-ID-PCE-2011-3-0257, "Controlabilitate, comportament asymptotic si analiza numerica pentru procese de evolutie", contract 136/05-10-2011, finantat de UEFISCDI cu suma de 1334000 Lei pe perioada 5 octombrie 2011-4 octombrie 2016.

2. Coordonator al proiectului nr. 206/2009 "Probleme de controlabilitate a ecuatiilor cu derivate partiale", finantat partial de ANCS (Romania), Proiect bilateral Romania-Franta de colaborare cu Universite Nancy I (Franta) pe perioada 2009-2010.

3. Coordonator al proiectului nr. 17 "Analiza ¸si controlul unor ecuat¸ii cu derivate part¸iale

de evolutie", Programul Brancusi, ın colaborare cu Universite Nancy I (Franta) pe perioada 2003-2004. Finantat ın colaborare de Ministerul Educatiei si Uniunea Europeana.

ALTE ELEMENTE DE RECUNOAŞTERE A ACTIVITĂŢII ŞTIINŢIFICE:

- Lector al Mini-Cursului (4 prelegeri): *Moment problems, biorthogonals and applications to control theory*, January 19-30, 2018 at the Chair of Computational Mathematics, University of Deusto, Bilbao, Spain. https://cmc.deusto.eus/moment-problems-biorthogonals-and-applications-to-control-theory/
- Lector invitat în programele de masterat și doctorat de la Universidad Carlos III de Madrid (1997), Universidad Complutense de Madrid (1999-2000), Universidad Nacional Autónoma Ciudad de Mexico (2006), Universitatea din Piteşti (2001-2002).

MEMBRU IN COMITETELE DE ORGANIZARE ALE UNOR CONFERINTE

1. Organizator al Mini-Symposium "Controllability and observability problems for partial di erential equations" in cadrul International Conference on Elliptic and Parabolic Problems: GAETA 2024, 22.05.2023, https://www.ljll.fr/gaeta2024/ms.html
2. Organizator al sectiunii Ordinary and Partial Differential Equations, Controlled Differential Systems (alaturi de Petru Jebelean, Cătălin Lefter, Gabriela Marinoschi, Sorin Micu, Radu Precup, Vicenţiu Rădulescu), The Tenth Congress of Romanian Mathematicians, June 30 - July 5, 2023, Piteşti, Romania, https://www.imar.ro/~congmatro10/
3. Organizator in colaborare cu Carlos Castro (Universidad Politécnica de Madrid, Spain) a sesiunii tematice "Control approximation" on August 29, in VII Partial differential equations, optimal design and numeric, August 20 - September 1, 2017, Benasque, Spain, https://benasque.org/2017pde/cgi-bin/talks/allprint.pl
4. Organizator al sesiunii speciale Analyse et controle des EDP (ımpreuna cu Camille Laurent (Paris), Liviu Ignat (Bucarest), Yannick Sire (Johns Hopkins Univ) ın cadrul XIII-eme Colloque Franco-Roumain de Mathematiques Appliquees, Iasi 25-29 August 2016, http://www.math.uaic.ro/cfr2016/
5. Membru ın comitetul organizator al sectiunii Ordinary and Partial Differential Equations, Variational Methods, Optimal Control (ımpreuna cu Petru Jebelean, Catalin Lefter, Radu Precup, Vicentiu Radulescu, Ioan I. Vrabie) ın cadrul 8-th Congress of Romanian Mathematicians, Iasi 26 Iunie- 1 Iulie 2016, http://www.math.uaic.ro/cmr2015/index.php?sections
6. Co-organizator principal (ımpreuna cu Marius Tucsnak (Universite de Nancy, Franta) al 8th Workshop on Control of Distributed Parameter Systems, Craiova 1-5 Iulie 2013,

http://www.math.ucv.ro/wcdps/

CUNOSTINTE INFORMATICE

- Sisteme operative: MS-DOS, Windows, Unix
- Procesoare de text: Latex
- Programare numerica: C++, Matlab, ANSYS

LIMBI STRAINE CUNOSCUTE

- ˆ Spaniola (vorbit, scris, citit)
- ˆ Engleza (scris, vorbit, citit)
- ˆ Franceza (citit, vorbit).

Craiova, 12 octombrie 2026

Sorin Daniel Micu