

DOREL FETCU

CURRICULUM VITAE

PERSONAL

Born 20 May 1976, Bucharest, Romania
Citizenship Romanian
Marital status Married, one child

Position Associate Professor
Affiliation Department of Mathematics and Informatics
Gheorghe Asachi Technical University of Iași

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E-mail addresses dfetcu@math.tuiasi.ro; dorelfetcu@yahoo.com

EDUCATION

- **Ph.D. in Mathematics** – January 2005
Alexandru Ioan Cuza University of Iași
- **M.Sc. in Mathematics** – July 2000
Alexandru Ioan Cuza University of Iași
- **B.Sc. in Mathematics** – June 1998
Alexandru Ioan Cuza University of Iași

EMPLOYMENT

- **Gheorghe Asachi Technical University of Iași**
Department of Mathematics and Informatics
– **Associate Professor** – 1 October 2012 – present
– **Lecturer** – 1 March 2007 – 30 September 2012
– **Assistant Professor** – 1 March 2003 – 28 February 2007
– **Teaching Assistant** – 1 March 2001 – 28 February 2003
- **Alexandru Ioan Cuza University of Iași**
Faculty of Mathematics
– **Researcher** – 1 February 2012 – 30 September 2014

POSTDOCTORAL & VISITING POSITIONS

- **Federal University of Bahia, Salvador, Brazil**
– **Researcher (CNPq Fellow)** – 1 July 2013 – 30 April 2015
– **Visiting Professor** – 1 November 2012 – 30 June 2013
- **Instituto Nacional de Matemática Pura e Aplicada
Rio de Janeiro, Brazil**
– **Postdoctoral Fellow** – 1 March 2010 – 29 February 2012

RESEARCH GRANTS

- **Romanian National Authority for Scientific Research
Grant for Young Research Teams (PI, €125,000.00)**
Constant Mean Curvature and Biharmonic Submanifolds
1 October 2015 – 30 September 2017
- **Bolsa Atração de Jovens Talentos (BJT–Nível A)
Ciência sem fronteiras, CNPq, Brazil**
1 July 2013 – 30 April 2015
- **Pós–Doutorado Sênior (PDS), FAPERJ, Brazil**
1 March 2011 – 29 February 2012
- **Pós–Doutorado Júnior (PDJ), CNPq, Brazil**
1 March 2010 – 28 February 2011

TEACHING

- **Courses**

- **Linear Algebra, Analytic Geometry, and Differential Geometry I & II**
- **Elementary Mathematics**

Faculty of Civil Engineering and Building Services

Gheorghe Asachi Technical University of Iași, Romania

- **Biharmonic Submanifolds in Riemannian Manifolds** (minicourse, 6 hours)

Postgraduate Summer Program, Institute of Mathematics (January 2013)

Federal University of Bahia, Salvador, Brazil

- **Problem classes**

- **Linear Algebra, Analytic Geometry, and Differential Geometry I & II**
- **Mathematical Analysis I & II**

Faculty of Civil Engineering and Building Services (since 2002)

Faculty of Automatic Control and Computer Science (1998 – 2003)

Gheorghe Asachi Technical University of Iași

RESEARCH

- **Fields of interest**

- **Differential Geometry and Geometric Analysis**

- Submanifolds with constant mean curvature
- Biharmonic submanifolds
- Harmonic maps and morphisms

- **Research papers**

- **Preprints**

1. **Constant mean curvature surfaces in $\mathbb{M}^2(c) \times \mathbb{R}$ and finite total curvature** (with M. Batista and M. P. Cavalcante)

- **Papers in print**

1. **On biconservative surfaces in 3-dimensional space forms** (with S. Nistor and C. Oniciuc)
 - *Comm. Anal. Geom.*, to appear.

- **Published papers**

1. **Biharmonic surfaces with parallel mean curvature in complex space forms** (with A. L. Pinheiro)
 - *Kyoto J. Math.* 55(4), 2015, 837–855.
2. **A classification result for helix surfaces with parallel mean curvature in product spaces**
 - *Ark. Mat.* 53(2), 2015, 249–258.
3. **Surfaces with parallel mean curvature in Sasakian space forms** (with H. Rosenberg)
 - *Math. Ann.* 362(1-2), 2015, 501–528.

4. **CMC biconservative surfaces in $S^n \times \mathbb{R}$ and $\mathbb{H}^n \times \mathbb{R}$ (with C. Oniciuc and A. L. Pinheiro)**
– J. Math. Anal. Appl. 425(1), 2015, 588–609.
5. **Surfaces with parallel mean curvature in $CP^n \times \mathbb{R}$ and $CH^n \times \mathbb{R}$ (with H. Rosenberg)**
– Trans. Amer. Math. Soc. 366(1), 2014, 75–94.
6. **On complete submanifolds with parallel mean curvature in product spaces (with H. Rosenberg)**
– Rev. Mat. Iberoam. 29(4), 2013, 1283–1306.
7. **Biharmonic submanifolds with parallel mean curvature in $S^n \times \mathbb{R}$ (with C. Oniciuc and H. Rosenberg)**
– J. Geom. Anal. 23(4), 2013, 2158–2176.
8. **Surfaces with parallel mean curvature in $S^3 \times \mathbb{R}$ and $\mathbb{H}^3 \times \mathbb{R}$ (with H. Rosenberg)**
– Michigan Math. J. 61(4), 2012, 715–729.
9. **Surfaces with parallel mean curvature vector in complex space forms**
– J. Differential Geom. 91(2), 2012, 215–232.
10. **Biharmonic integral C -parallel submanifolds in 7-dimensional Sasakian space forms (with C. Oniciuc)**
– Tohoku Math. J. 64(2), 2012, 195–222.
11. **A note on surfaces with parallel mean curvature (with H. Rosenberg)**
– C. R. Math. Acad. Sci. Paris 349(21–22), 2011, 1195–1197.
12. **A note on integral C -parallel submanifolds in $S^7(c)$ (with C. Oniciuc)**
– Rev. Un. Mat. Argentina 52(1), 2011, 33–45.
13. **Biharmonic submanifolds of CP^n (with S. Montaldo, E. Loubeau, and C. Oniciuc)**
– Math. Z. 266(3), 2010, 505–531.
14. **A note on biharmonic curves in Sasakian space forms**
– Ann. Mat. Pura Appl. 189(4), 2010, 591–603.
15. **Biharmonic hypersurfaces in Sasakian space forms (with C. Oniciuc)**
– Differential Geom. Appl. 27(6), 2009, 713–722.
16. **Generalized harmonic maps on normal almost contact manifolds**
– Rocky Mountain J. Math. 39(5), 2009, 1497–1515.
17. **On the geometry of biharmonic submanifolds in Sasakian space forms (with C. Oniciuc)**
– J. Geom. Symmetry Phys. 14, 2009, 21–34.
18. **Explicit formulas for biharmonic submanifolds in Sasakian space forms (with C. Oniciuc)**
– Pacific J. Math. 240(1), 2009, 85–107.
19. **Biharmonic Legendre curves in Sasakian space forms**
– J. Korean Math. Soc. 45(2), 2008, 393–404.
20. **Explicit formulas for biharmonic submanifolds in non-Euclidean 3-spheres (with C. Oniciuc)**
– Abh. Math. Sem. Univ. Hamburg 77, 2007, 179–190.
21. **Biharmonic curves in Cartan-Vranceanu $(2n + 1)$ -dimensional spaces**
– Bul. Acad. Sti. Rep. Moldova. Mat. 53(1), 2007, 59–65.
22. **Harmonic maps between complex Sasakian manifolds**
– Rend. Sem. Mat. Univ. Polit. Torino 64(3), 2006, 319–329.
23. **A characterization of normal framed φ -manifolds**
– An. Ştiinţ. Univ. Al. I. Cuza Iaşi. Mat. (N.S.) 52(1), 2006, 207–216.

24. **Quaternionic maps between a hyper-Kähler manifold and a 3-almost contact manifold**
– Novi Sad J. Math. 36(1), 2006, 21–34.
25. **Biharmonic curves in the generalized Heisenberg group**
– Beiträge Algebra Geom. 46(2), 2005, 513–521.
26. **Critical associated metrics on framed φ -manifolds**
– Libertas Math. 25, 2005, 123–130.
27. **Harmonic and φ -pluriharmonic maps between \mathcal{C} -manifolds**
– Italian J. Pure Appl. Math. 18, 2005, 235–250.
28. **Critical associated metrics on nearly \mathcal{S} -manifolds**
– Bul. Inst. Politeh. Iași. Mat. Mec. Teor. Fiz. 51(55)(1–2), 2005, 1–10.
29. **φ -Pseudo harmonic morphisms**
– An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 50(2), 2004, 327–346.
30. **Harmonic maps on framed φ -manifolds**
– An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.) 50(1), 2004, 199–217.
31. **Maps between almost Kähler manifolds and framed φ -manifolds**
– Balkan J. Geom. Appl. 9(2), 2004, 13–24.

– **Conference proceedings**

1. **Stability properties for biharmonic maps (with A. Balmuş and C. Oniciuc)**
– Geometry–Exploratory Workshop on Differential Geometry and its Applications, Cluj Univ. Press, Cluj–Napoca, 2011, 1–19.
2. **Biharmonic submanifolds in Sasakian space forms (with C. Oniciuc)**
– Proceedings of the Symposium on the Differential Geometry of Submanifolds, 2–7 July 2007, Valenciennes, France, L. Vrancken Ed., 2007, 85–88.
3. **Integral submanifolds in three-Sasakian manifolds whose mean curvature vector fields are eigenvectors of the Laplace operator**
– Geometry, Integrability and Quatization IX, Proceedings of The Ninth International Conference on Geometry, Integrability and Quantization, 8–13 June 2007, Varna, I. Mladenov Ed., 2008, 210–223.
4. **Some properties of nearly \mathcal{S} -manifolds**
– Sci. Ann. Univ. Agric. Sci. Vet. Med., Proceedings of the 5th Annual Symposium on Mathematics Applied in Biology and Biophysics, 16–17 June 2006, Iași, 49(2), 2006, 229–242.
5. **An adapted connection on a strict complex contact manifold**
– Proceedings of the 5th Conference of Balkan Society of Geometers, 29 August–2 September 2005, Mangalia, Romania, BSG Proceedings 13, 2006, Geometry Balkan Press, Bucharest, 54–61.
6. **A class of harmonic maps between 3-cosymplectic manifolds**
– Sci. Ann. Univ. Agric. Sci. Vet. Med., Proceedings of the 4th Annual Symposium on Mathematics Applied in Biology and Biophysics, 27–28 May 2005, Iași, 48(2), 2005, 303–316.
7. **Critical associated metrics on framed φ -manifolds**
– Proceedings of the 3rd International Colloquium "Mathematics in Engineering and Numerical Physics", 7–9 October 2004, Bucharest, BSG Proceedings 12, 2005, Geometry Balkan Press, Bucharest, 137–141.
8. **Some results on the hyper-framed manifolds**
– Sci. Ann. Univ. Agric. Sci. Vet. Med., Proceedings of the Annual Symposium on Mathematics Applied in Biology and Biophysics, 28–29 May 2004, Iași, 47(2), 2004, 151–163.
9. **Harmonic maps between framed φ -manifolds**
– Sci. Ann. Univ. Agric. Sci. Vet. Med., Proceedings of the Annual Symposium on Mathematics Applied in Biology and Biophysics, 30–31 May 2003, Iași, 46(2), 2003, 129–146.

- **Survey paper**

- **Harmonic and biharmonic maps at Iași** (with **A. Balmuş** and **C. Oniciuc**)
– An. Ştiinţ. Univ. Al. I. Cuza Iaşi. Mat. (N.S.) 56(1), 2010, 81–96.

- **Ph.D. Thesis**

- **Properties of Harmonic Mappings and Morphisms** (in Romanian)
– Differential Geometry – Dynamical Systems Monographs 5, Geometry Balkan Press, Bucharest, Romania, 2005, 97 pp.
<http://www.mathem.pub.ro/dgds/mono/dgdsmono.htm>

- **Textbooks**

- **Elements of Linear Algebra, Analytic Geometry, and Differential Geometry** (in Romanian)
– Demiurg Publishing House, Iaşi, Romania, 2009, 340 pp.
- **Biharmonic Submanifolds in Riemannian Manifolds** (with A. L. Pinheiro) (in Portuguese)
– EDUFBA, Salvador, Brazil, to appear.

PARTICIPATION IN EVENTS

- Differential Geometry and Its Applications, 11–15 July 2016, Brno, Czechia. (talk)
- The Eighteenth International Conference on Geometry, Integrability and Quantization, 3–8 June 2016, Varna, Bulgaria. (plenary talk)
- The 1st Postgraduate Meeting in Mathematics, Federal University of Bahia, 21–23 October 2013, Salvador, Brazil. (talk)
- The Fourteenth International Conference on Geometry, Integrability and Quantization, 8–13 June 2012, Varna, Bulgaria. (talk)
- The 1st Workshop on Differential Geometry, 7–11 February 2011, Maceió, Brazil. (poster)
- The 16th School of Differential Geometry, 12–16 July 2010, São Paulo, Brazil. (poster)
- A Harmonic Map Fest in honour of Prof. John C. Wood on the occasion of his 60th birthday, 7–10 September 2009, Cagliari, Italy. (poster)
- The Tenth International Conference on Geometry, Integrability and Quantization, 6–11 June 2008, Varna, Bulgaria. (talk)
- National Conference "Pure and Applied Mathematics", 9–10 November 2007, Iaşi, Romania. (talk)
- Symposium on the Differential Geometry of Submanifolds, 2–7 July 2007, Valenciennes, France. (poster)
- The Ninth International Conference on Geometry, Integrability and Quantization, 8–13 June 2007, Varna, Bulgaria. (talk)
- International Workshop "Geometry of vector distributions, differential equations and variational problems", 13–15 December 2006, Trieste, Italy. (poster)
- The 14th Conference on Applied and Industrial Mathematics (Satellite Conference of ICM 2006), 17–19 August 2006, Chişinău, Republic of Moldova. (talk)
- The 5th Annual Symposium on Mathematics Applied in Biology and Biophysics, 16–17 June 2006, Iaşi, Romania. (talk)

- The 5th Conference of Balkan Society of Geometers, 29 August–2 September 2005, Mangalia, Romania. (poster)
- The 4th Annual Symposium on Mathematics Applied in Biology and Biophysics, 27–28 May 2005, Iași, Romania. (talk)
- The 3rd International Colloquium "Mathematics in Engineering and Numerical Physics", 7–9 October 2004, Bucharest, Romania. (poster)
- The Annual Symposium on Mathematics Applied in Biology and Biophysics, 28–29 May 2004, Iași, Romania. (talk)

SEMINAR PRESENTATIONS

- *Mathematics Seminar*, Institute of Mathematics, Federal University of Bahia, Salvador, Brazil, November 2012, December 2012, April 2015.
- *Geometry Seminar (SING)*, Alexandru Ioan Cuza University of Iași, Romania, March 2012.
- *Sextas Matematicas Seminar*, Federal University of Rio de Janeiro, Brazil, December 2011.
- *Geometry Seminar*, University of São Paulo, Brazil, June 2011.
- *Minimal and CMC Surfaces Seminar*, IMPA, Rio de Janeiro, Brazil, April 2010, October 2010.
- *Differential Geometry Seminar*, IMPA, Rio de Janeiro, Brazil, March 2010, December 2011.

OTHER

- **Supervisor** of postdoctoral researcher **Dr. Ana-Irina Nistor**
(Romanian National Authority for Scientific Research, CNCS-UEFISCDI)
Gheorghe Asachi Technical University of Iași (May 2013 – October 2015)
- **Reviewer** for the *Mathematical Reviews*, American Mathematical Society
- **Reviewer** for *Archiv der Mathematik*, *Analele Științifice ale Universității Al. I. Cuza Iași. Matematică (N.S.)*, *Differential Geometry and its Applications*, *Illinois Journal of Mathematics*, *Journal of Geometry*, *Journal of Geometric Mechanics*, *Journal of Mathematical Analysis and Applications*, *Journal of the Korean Mathematical Society*, *Mathematical Reports*, *Pacific Journal of Mathematics*, *Transactions of the American Mathematical Society*, *Turkish Journal of Mathematics*, and other mathematical journals

LANGUAGES

- **Romanian** Native
- **English** Fluent
- **Portuguese** Beginner

21/09/2016