Gabriel Baditoiu **Curriculum Vitae**

CONTACT INFORMATION

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EDUCATION

- 2001-2007: Ph.D. in Mathematics, awarded on May 20, 2007 from Boston University, Department of Mathematics and Statistics, Thesis title: Integrable systems and Feynman diagrams.
- 1998-2003: Diplomă de Doctor in Matematică, în baza Ordinului MEC nr 3876/19.05.2004 si a sustinerii tezei "Contribuţii la studiul submersiilor Riemann" in data de 02.07.2003, Universitea din Bucureşti.
- 1997-1998: M.Sc. in Geometry, University of Bucharest, Department of Mathematics (Diplomă de Master in Geometrie)
- 1992-1997: B.Sc. in Mathematics, University of Bucharest, Department of Mathematics (Diplomă de Licenţă in Matematică)

EMPLOYMENT

Institute of Mathematics "Simion Stoilow" of the Romanian Academy (IMAR), Bucharest, Romania

- 2001-present Researcher
- 1998-2001 Research Assistant
- 1997-1998 Junior Research Assistant

VISITING POSITIONS

Abdus Salam International Centre for Theoretical Physics, Trieste, Italy
- February 1, 2010 – March 31, 2010: Research Fellow

Max Planck Institute for Mathematics, Bonn, Germany
- September 1, 2008 – August 31, 2009: Visiting Guest (Postdoctoral Fellow)

University of Arizona, Department of Mathematics, Tucson, USA
- August 13, 2007 - May 18, 2008: Visiting Assistant Professor

Boston University, Department of Mathematics, Boston, USA
- September 1, 2002 – May 20, 2007 (nine month employment for each academic year): Teaching Assistant

Boston University, Department of Mathematics, Boston, USA
- September 2001 – May 2002: Graduate Student

FELLOWSHIPS, AWARDS, GRANTS

- Since January 2012, I am a team member in a research grant of the Romanian National Authority for Scientific Research, CNCS - UEFISCDI, project number PN-II-ID-PCE-2011-3-0362 (Project leader: Liana David).

- Research paper award within CNCSIS program PN-II-RU-PRECISI-2010-4, Romanian Ministry of Education, Research, and Youth
- Presidential University Graduate Fellowship, Boston University, 2001–2005
- European Union TEMPUS fellowship, Technische Universität München, Germany, March – May 1998
- Merit Fellowship, University of Bucharest, Romania, 1992–1998
- Prize of the Romanian Society of Mathematical Sciences in 1988 in the national competition in mathematics

Research Interests

Riemannian Geometry, Integrable Systems

Publications

1. Gabriel Bădiţoiu, *Classification of Pseudo-Riemannian submersions with totally geodesic fibres from pseudo-hyperbolic spaces*, `arXiv:1001.4490`, accepted for publication on February 8, 2012 in Proceedings of the London Mathematical Society.
2. Gabriel Bădiţoiu, Stere Ianuş, Anna Maria Pastore, *Spectral geometry of Riemannian Legendre foliations*, arxiv.org:1009.3194, accepted for publication in Bull. Math. Soc. Sci. Math. Roumanie.
3. Gabriel Bădiţoiu and Steven Rosenberg, *Lax pair equations and Connes-Kreimer Renormalization*, Communications in Mathematical Physics **296** (2010), no. 3, 655–680, DOI: 10.1007/s00220-010-1034-7, MR2628819 (2011h:81146).
4. Gabriel Bădiţoiu, *Integrable systems and Feynman diagrams*, Ph.D. thesis 2007, Boston University, 122 pp. ISBN: 978-1109-97582-6, ProQuest LLC, official PDF scan available at http://gradworks.umi.com/32/59/3259803.html.
5. Gabriel Bădiţoiu, Richard H. Escobales Jr. and Stere Ianus, *A Cohomology* $(p+1)$ *Form Canonically Associated with Certain Codimension-q Foliations on a Riemannian Manifold,* Tokyo Journal of Mathematics **29** (2006), no. 1, 247–270. DOI: 10.3836/tjm/1166661878, MR2258283 (2007k:53020), `arXiv:math.DG/0508164`.
6. Gabriel Bădiţoiu, *Semi-Riemannian submersions with totally geodesic fibres,* Tohoku Mathematical Journal **56** (2004), no. 2, 176–204, DOI: 10.2748/tmj/1113246550, MR2053318 (2005a:53115), `arXiv:math/0005254`.
7. Gabriel Bădiţoiu, *Semi-Riemannian submersions with totally umbilic fibres and warped products*, Mathematical Reports (Bucureşti) **6**(**56**) (2004), no. 1, 1–7, MR2068392(2005d:53110).
8. Gabriel Bădiţoiu and Stere Ianuş, *Semi-Riemannian submersions from real and complex pseudo-hyperbolic spaces*, Differential Geometry and its Applications **16** (2002), 79–94. DOI: 10.1016/S0926-2245(01)00070-5, MR1877586 (2003h:53095), `arXiv:math/0005228`.
9. Gabriel Bădiţoiu and Stere Ianuş, *Semi-Riemannian submersions with totally umbilic fibres*, Rendiconti del Circolo Matematico di Palermo **51** (2002), 249–276. DOI: 10.1007/BF02871654, MR1916929 (2003f:53124), `arXiv:math/0206014`.
10. Gabriel Bădiţoiu, *Riemannian submersions with weak-harmonic distributions*, (in Romanian) Math. Rep. (Bucureşti) **1(51)**(1999), no. 1, 3–8.

11. Gabriel Bădiţoiu, Klaus Buchner and Stere Ianuş, *Some remarkable connections and semi-Riemannian submersions*, Bulletin Mathématique de la Société de Sciences Mathématiques de Roumanie **41** (1998), no. 3, 153–169. MR1880200 (2002k: 53035).

Conference Talks

- *Lax pair equations and Connes-Kreimer renormalization*, Analysis, Geometry and Quantum Field Theory, International scientific workshop in honour of Steven Rosenberg's 60th birthday, September 26-30, 2011.
- *Lax pair equations and Feynman diagrams*, at the Conference on Number Theory and Physics, ESI Vienna, March 19, 2009
- *Semi-Riemannian submersions from real and complex pseudo-hyperbolic spaces*, Conference on Foliations: Geometry and Dynamics, Warsaw, 2000

Seminar Talks

- *Lax pair equations and Connes-Kreimer renormalization*, Università degli Studi di Roma "La Sapienza" (Italy), July 27, 2010
- *Pseudo-Riemannian submersions and Osserman manifolds*, Università degli Studi di Bari (Italy), March 25, 2010
- *Classifications of Pseudo-Riemannian submersions with totally geodesic fibres from pseudo-hyperbolic spaces*, Università degli Studi di Bari (Italy), March 26, 2010
- *Pseudo-Riemannian submersions with totally geodesic fibres*, Università degli Studi di Roma "La Sapienza" (Italy), March 19, 2010
- *Lax pair equations and Connes-Kreimer renormalization*, the ICTP seminar, February 19, 2010
- *Lax pair equations and Feynman diagrams*, in the Oberseminar of the Max Planck Institute for Mathematics, October 16, 2008
- *Pseudo-Riemannian submersions with totally geodesic fibres*, The University of Arizona Geometry Seminar, September 11, 2007
- *Lax pair equations and Feynman diagrams*, The University of Arizona Geometry Seminar, September 4, 2007
- *Feynman diagrams and Lax pair equations*, Boston University Mathematical Physics Seminar, December 4, 2006
- Regular talks in Graduate Students Seminar at Boston University in period 2003-2007
- Regular talks in Differential Geometry Seminar at IMAR

Conferences and Workshops (selected list)

Received funding from the organizers to attend the following conferences and workshops:

- The Programme on Number Theory and Physics, ESI Vienna, March 10 – 31, 2009
- Conference on Motives, Quantum Field Theory, and Pseudodifferential Operators Boston University June 2 – 13, 2008
- Summer School on Invariants in Low-Dimensional Topology, Alfred Renyi Institute of Mathematics, Budapest (Hungary), June 16 – 21, 2003
- School on Topology of High-Dimensional Manifolds, ICTP Trieste (Italy), May 20 – June 9, 2001
- Conference on Foliations: Geometry and Dynamics, Warsaw (Poland), May 29 – June 9, 2000

- School on Vanishing Theorems and Effective Results in Algebraic Geometry, International Center for Theoretical Physics (ICTP) - Trieste (Italy), April 25 – May 12, 2000
- Global Theory of Minimal Surfaces in Flat Spaces, Martina Franca (Italy), July 7 – 15, 1999
- School on Differential Geometry, ICTP Trieste, April 12 – 30, 1999
- The 7th International Conference on Differential Geometry and applications, satellite conference of ICM98, August 10 – 14, 1998, Brno, Czech Republic

TEACHING EXPERIENCE

- Fall 2002 – Spring 2007: Teaching assistant for the Department of Mathematics of Boston University for the following courses: Elementary Statistics, Applied Mathematics for Social and Management Sciences, Calculus 2, Multivariate Calculus, Differential Equations.
- Stand-alone instructor for the following Boston University courses: Multivariate Calculus in the Summers of 2004 and 2005, Calculus 2 in Summer 2006, Statistics in Summer 2007.
- Fall 2007 - Spring 2008: Instructor for the Department of Mathematics of the University of Arizona for Calculus 1 and 2.

CITIZENSHIP Romanian

LANGUAGES Romanian (native), English