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Marius Ionescu

Curriculum Vitae

Education

1999–2005 **Ph.D. in Mathematics**, *The University of Iowa*.

Thesis advisor Professor Paul S. Muhly

1997–1998 **M.S. in Probability and Statistics**, *The University of Transylvania*, Romania.

1992–1997 **B.S. in Mathematics and Computer Science**, *The University of Transylvania*, Romania.

Research Interests

Functional analysis, analysis on fractals, operator algebras, dynamical systems, harmonic analysis, wavelets. See the enclosed research statement for details.

Employment

2008 – present **Post Doctoral Fellow**, *University of Connecticut*.

2007 – 2008 **Visiting Assistant Professor**, *Cornell University*.

2005–2007 **John Wesley Young Research Instructor**, *Dartmouth College*.

1999–2005 **Teaching Assistant**, *University of Iowa*.

Honors

- The 2006 D.C. Priestestersbach Dissertation Prize for Mathematics, Physical Sciences, and Engineering, the University of Iowa
- Fulbright scholarships and grant, 1999 – 2004
- Catherine Wegner Outstanding TA Award, University of Iowa, Department of Mathematics, 2003

Publications and Preprints

“Complex powers of the Laplacian on Affine Nested Fractals as Calderón-Zygmund Operators”, (with Luke Rogers), submitted

“Hausdorff Measures and KMS States”, (with Alex Kumjian), submitted

“A Classic Morita Equivalence Result for Fell Bundle C^* -Algebras”, (with Dana P. Williams), Math Scand, accepted

“Remarks on the Ideal Structure of Fell Bundle C^* -Algebras”, (with Dana P. Williams), submitted

“Markov Operators and C^* -Algebras”, (with Paul S. Muhly and Victor Vega), accepted, Houston Journal of Mathematics.

“The Resolvent Kernel for PCF Self-Similar Fractals”, (with E.P.J. Pearse, L.G. Rogers, H. Ruan, R.S. Strichartz), Trans. Amer. Math. Soc. 362 (2010), 4451-4479.

“On the generalized Effros-Hahn conjecture for groupoids”, (with Dana P. Williams), Indiana Univ. Math. J., 58 No. 6 (2009), 2489–2508

“Irreducible representations of groupoid C^* -algebras”, (with Dana P. Williams), Proc. Amer. Math. Soc. 137 (2009), 1323-1332

“Groupoid Methods in Wavelet Analysis”, (with Paul Muhly), Group representations, ergodic theory, and mathematical physics: a tribute to George W. Mackey, 193–208, Contemp. Math., 449, Amer. Math. Soc., Providence, RI, 2008.

“ C^* -algebras associated with Mauldin-Williams graphs”, (with Y. Watatani), Can. Math. Bull, 51 (2008), no 4, 545–560

“Operator algebras and Mauldin-Williams graphs”, Rocky Mountain J. Math., 37 (2007), no. 3, 829 – 849.

“Mauldin-Williams graphs, Morita Equivalence and isomorphisms”, Proc. Amer. Math. Soc. 134 (2006), no. 4, 1087–1097.

Teaching Experience

University of Connecticut' *Multivariable Calculus; Applied Linear Algebra; Probability; Transition to Advanced Mathematics; Analysis; Honors Differential Equations*

Cornell University *Measure Theory and Lebesgue Integration (graduate course); Introduction to Analysis; Functional Analysis ; Honours Introduction to Analysis*

Dartmouth College *Topics in Analysis (graduate course); Calculus of Functions of one and Several Variables; Probability (Honor Section); Functional Analysis (graduate course); Probability; Introduction to Calculus*

University of Iowa *PhD Comprehensive Exams Preparation Seminar (Analysis); Introduction to Analysis II (graduate course); Introduction to Analysis I (graduate course); MS Comprehensive Exams Preparation Seminar (Algebra, Topology, and Analysis); Introduction to Abstract Algebra I; Introduction to Analysis I (graduate course); Calculus I; Calculus II; Algebra I; Algebra II; Calculus and Matrix Algebra for Business*

Grants, Awards, Memberships

- Research fellowship, University of Iowa, Summer 2003, 2002, 2001
- Grant from the Romanian Society for Academic Research, 1998 – 1999
- Undergraduate Research Awards, University of Transylvania, Romania, 1993, 1995, 1997
- Third prize at the “Traian Lalescu” national mathematics contest for colleges undergraduate students, Tg-Jiu, Romania, 1993
- Member of AMS, SIAM
- Member of the “Mathematical Recreations Society”, Romania

Selected Presentations

- The AMS 2009 Fall Western Section Meeting, UC Riverside, November 2009
- Wabash Modern Analysis Seminar, October 2009, Plenary Speaker
- Groupoidfest, UC Riverside, November 2008, Plenary Speaker
- The AMS 2008 Fall Western Section Meeting, University of British Columbia, October 2008
- The AMS 2008 Fall Eastern Section Meeting, Wesleyan University, October 2008
- The 3rd Conference on Analysis and Probability on Fractals, Cornell University, June 2008
- The Annual Great Plains Operator Theory Symposium, University of Cincinnati, June 2008
- BIRS program in C^* -Algebras Associated to Discrete and Dynamical Systems, January 2008
- Seminar at Cornell University, February 2008
- Groupoidfest, University of Iowa, November 2007, Plenary Speaker
- Seminar at Cornell University, September 2007
- The Annual Great Plains Operator Theory Symposium, University of Nebraska at Lincoln, May 2007
- Department of Mathematics Colloquium, Dartmouth College, April 2007
- Groupoidfest, Arizona State University, November 2006, Plenary Speaker
- Department of Mathematics Colloquium, The University of Central Florida, November 2006, Invited Speaker
- The AMS 2006 Fall Western Section Meeting, University of Utah, October 2006
- The Annual Great Plains Operator Theory Symposium, University of Iowa, May 2006
- Groupoidfest, Iowa State University, November 2005, Plenary Speaker

- The Fall AMS meeting, University of Nebraska at Lincoln, October 2005
- Groupoidfest, University of Nevada, November 2004
- The 24th Annual Great Plains Operator Theory Symposium, Texas A&M University, May 2004
- The 23th Annual Great Plains Operator Theory Symposium, University of Illinois, Urbana-Champaign, May 2003

Other Work Experience

Software Engineer, Silva-Soft Co, Romania, 1997 – 1999

Additional Activities and Skills

- Reviewer for Mathematical Reviews, Journal of Mathematical Analysis & Applications
- Research with undergraduate students as part of the REU program on “Analysis on Fractals”, Cornell University, Summer 2007 and Summer 2008
- Undergraduate research adviser, Dartmouth College
- Examination committee of Graduate Qualifying Exams, Dartmouth College
- Organizing committee of the Annual Mathematics High School Competition organized by Department of Mathematics, University of Iowa, 2001 – 2004

Computer skills

- Proficient in C, Matlab, Latex, HTML, Linux
- Good knowledge of Mathematica, Maple, C++, Pascal, Visual Basic, Windows
- The fundamental of Java and Mac OS X

References

Paul S. Muhly, Professor
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