

CURRICULUM VITAE

Krzysztof Frączek

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EDUCATIONAL BACKGROUND

- Master of mathematics (master thesis: “Spectral properties of cocycles over rotations”), Nicolaus Copernicus University, 1995
- Doctor of mathematics (dissertation: “Spectral properties of dynamical systems”), Nicolaus Copernicus University, 1998
- Habilitation (dissertation: “Diffeomorphisms with polynomial growth of the derivative”), Nicolaus Copernicus University, 2005
- Title of professor, 2014

CURRENT EMPLOYMENT

Associate Professor, Nicolaus Copernicus University

EMPLOYMENT HISTORY

1995-1999: Assistant, Nicolaus Copernicus University

1999-2008: Assistant Professor (Adiunkt), Nicolaus Copernicus University

2006-2009: Assistant Professor (Adiunkt), Institute of Mathematics Polish Academy of Sciences - one-third time position

2009-2010: Docent, Institute of Mathematics Polish Academy of Sciences - one-third time position

2008- : Associate Professor, Nicolaus Copernicus University

RESEARCH INTEREST

Ergodic theory and dynamical systems:

(1) Spectral theory of dynamical systems:

- spectral multiplicity problem,
- problem of realization of maximal spectral type.

(2) Cohomology of cocycles:

- ergodic properties of group extensions of rotations,
- cocycles with values in the compact Lie groups,
- ergodicity problem of cocycles for infinite measure-preserving transformations.

(3) Smooth ergodic theory:

- special flows and smooth systems on low dimensional manifolds,
- problem of smooth realization,
- interval exchange transformations, translation flows on translation surfaces
- parabolic diffeomorphisms, diffeomorphisms with polynomial growth of the derivative.

HONORS AND AWARDS

- Prizes of Polish Mathematical Olympiad, 1989-1990
- Honorable Mention of XXXI International Mathematical Olympiad, 1990, Beijing, China
- Scholarships of the Minister of Science and High Education, 1993-95
- J. Marcinkiewicz Award of Polish Mathematical Society, 1995
- Scholarship of Polish Academy of Sciences, 1997/1998
- Scholarship of State Committee for Scientific Research, 1999
- Scholarship of Foundation for Polish Science, 1999
- Research Fellowship, Erwin Schrödinger International Institute for Mathematical Physics, 1999-2000, Vienna
- Research Fellowship, Polish Academy of Sciences, 2001-2002, Warsaw
- Awards of the Rector of Nicholas Copernicus University, 2001, 2005, 2009, 2010, 2015
- Stefan Banach Award of Polish Mathematical Society, 2015

SELECTED RESEARCH TALKS

- Conference “Ergodic Theory”, Churanov, Czech Republic, 1996
- Conference “Ergodic Theory”, Churanov, Czech Republic, 1997
- Dynamical Systems Seminar, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, 1999
- Conference “Ergodic Theory and Dynamical Systems”, Toruń, 2000
- Séminaire de Théorie Ergodique et Systèmes Dynamiques, Université Paris 13, 2001
- Conference “Ergodic Theory and Dynamical Systems”, Paris, 2001
- Dynamical Systems Seminar at the Institute of Mathematics, Warsaw University, 2002
- Seminar of the Faculty of Mathematics and Computer Science, Nicolaus Copernicus University, Toruń, 2002
- Conference “Ergodic Theory and Dynamical Systems” in honour of 60th birthday of Professor Jan Kwiatkowski, Toruń, 2002
- Conference “Holomorphic Iteration, Non-uniform Hyperbolicity”, Warsaw, 2002
- Colloque de Théorie Ergodique, Amiens, France, 2002
- Dynamical Systems Seminar at the Institute of Mathematics, Warsaw University, 2003
- Dynamics and Geometry Seminar, Penn State University, State College, USA, 2004
- Conference “2005 International Conference on Dynamical Systems”, Huangshan City, China, 2005
- “Workshop on Ergodic Theory and Dynamical Systems”, Szklarska Poręba, Poland, 2006
- Geometry and Dynamics Seminar, Tel Aviv University, 2006
- Horowitz Seminar “Probability, Ergodic Theory and Dynamical Systems”, Tel Aviv University, 2006
- AMS-PTM Meeting, Warsaw, 2007
- Workshop “Dynamical Systems: Geometric Structures and Rigidity”, Będlewo, Poland, 2008
- Workshop “Geometric Group Theory, Hyperbolic Dynamics and Symplectic Geometry”, Oberwolfach, 2008

- Conference “Théorie Ergodique a Paris 13” on the occasion of the 60th birthday of François Parreau, Villetaneuse, 2008
- Seminar of the Institute for Applied Analysis, Ulm University, Germany, 2009
- Conference “Dynamical Systems, Jeseníky 2009”, Kouty nad Desnou, Czech Republic, 2009
- “One Day Ergodic Theory Meeting”, Queen Mary, University of London, 4 November 2009
- Ergodic Theory and Dynamical Systems Seminar, Bristol University, 2009
- Conference “Operator Theory and Applications: Perspectives and Challenges”, Polish Academy of Science, Jurata, Poland, 2010
- Conference “Dynamical Systems Meeting, Lower Silesia 2010”, Wroclaw University of Technology, Trzebiezowice, Poland, 2010
- Conference “Spectral Theory of Dynamical Systems”, Centrum Banacha, Warszawa, 2010
- Conference “Ergodic Theorems, Group Actions and Applications”, Ejlal, Izrael, 2011
- Workshop “Modern Dynamics and its Interaction with Analysis, Geometry and Number Theory”, Będlewo, 2011
- Conference “Israeli-Polish Mathematical Meeting”, Łódź, 2011
- Seminar „Géométrie Dynamique”, Laboratoire Paul Painlevé, Lille, France, 2011
- Conference “Ergodic Methods in Dynamics” on the occasion of the 60th birthday of Feliks Przytycki, IMPAN, Będlewo, 2012
- Conference “Infinite Ergodic Theory Workshop”, University of Surrey, UK, 2012
- „Séminaire de Probabilités et Théorie Ergodique”, Université François Rabelais w Tours, France, 2012
- „FRUMAM Séminaire”, Université d’Aix-Marseille, France, 2013
- „German-Polish Joint Conference on Probability and Mathematical Statistics”, Nicolaus Copernicus University Toruń, Poland, 2013
- „Visegrad Conference on Dynamical Systems” University of Warmia and Mazury in Olsztyn, Poland, 2013 Olsztyn, Poland
- „Frontiers in Operators Dynamics” CIRM Luminy, France, 2015

VISITING POSITIONS

- Erwin Schrödinger International Institute for Mathematical Physics, Vienna, Post-doctoral Fellow, 1999-2000
- Universités Pierre et Marie Curie Paris VI, March 2001
- Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Assistant Professor, 2001-2002
- Center for Dynamics and Geometry, Department of Mathematics, Pennsylvania State University, October 2004
- School of Mathematical Sciences, Tel Aviv University, November-December 2006
- Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Assistant Professor, 2006-2010
- Université de Rennes 1, May 2009
- Ulm University, May-June 2009
- Bristol University, October-November 2009
- Université de Rennes 1, February 2010
- Université Lille 1, February-March 2011
- Université de Rennes 1, January-February 2012

- University of Bristol, August 2012
- Universite de Tours, December 2012
- Université d'Aix-Marseille, May 2013
- University of Bristol, July 2013
- Max Planck Institute for Mathematics in Bonn, July 2014

PROFESSIONAL ACTIVITY

- Vice Dean of Research, Faculty of Mathematics and Computer Science, Nicolaus Copernicus University, 2012-2016
- Head of Department of Ergodic Theory and Dynamical Systems, 2006-2012
- Member of Scientific Council of Juliusz Schauder Centre for Nonlinear Studies
- Coordinator of the scientific network SUDiTE (Sieć Układów Dynamicznych i Teorii Ergodycznej)
- Member of Organizing Committee, Conference "Ergodic Theory and Dynamical Systems" in honour of 60th birthday of Professor Jan Kwiatkowski, 17-22 January 2002, Toruń
- Organizer of the spring school „Wiosenna Szkoła Układów Dynamicznych”, 28.04-01.05.2006, Będlewo, Poland
- Organizer of the spring school „Wiosenna Szkoła Układów Dynamicznych”, 19.04-22.04.2007, Będlewo, Poland
- Organizer of the spring school „Wiosenna Szkoła Układów Dynamicznych”, 30.04-05.05.2008, Będlewo, Poland
- Member of Organizing Committee, "Dynamical Systems: Geometric Structures and Rigidity", July 7 - July 26 2008, Będlewo, Poland
- Member of Organizing Committee, "International Conference on Dynamical Systems" on the occasion of the 60th birthday of Michał Misiurewicz, June 30 - July 5, 2008, Będlewo, Poland
- Organizer of "Ergodic Theory Day", 23.04.2009, N. Copernicus University, Toruń, Poland
- Organizer of the spring school „Wiosenna Szkoła Układów Dynamicznych”, 30.04-03.05.2009, Będlewo, Poland
- Organizer of the spring school „Wiosenna Szkoła Układów Dynamicznych”, 30.04-03.05.2010, Będlewo, Poland
- Member of Organizing Committee, Workshop „Spectral Theory of Dynamical Systems”, 3-8.10.2010, Centrum Banacha, IMPAN, Warszawa
- Member of Organizing Committee, Mini-semester „Modern Dynamics and its Interaction with Analysis, Geometry and Number Theory”, 27.06-24.07.2011, Będlewo
- Member of Organizing Committee, Conference „Ergodic Theory and Dynamical Systems”, 12-16.05.2014, Toruń
- Member of Organizing and Scientific Committees Simons Semester Workshops: „Ergodic Theory of Dynamical Systems” and „Translation Surfaces and Dynamics” 22-27.11.2015, Będlewo

Former PhD students: Jacek Brzykcy (2012)

Current PhD students: Przemysław Berk