

Anca Ruxandra Rădulescu

Curriculum Vitæ

Department of Mathematics
CUNY, Brooklyn College
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Education

Ph.D. in Mathematics, SUNY at Stony Brook - 2005
B.S. in Mathematics, University of Bucharest, Romania - 1998
Computer Programming degree, Computer Science High-School,
Romania - 1994

Current employment

Assistant Professor, Department of Mathematics
CUNY, Brooklyn College

Postdoctoral fellow, Adams laboratory,
Department of Neuroscience and Behavior, Stony Brook (pending)

Research experience

Clinical Neuroscience - *research director: Prof. Lilianne Mujica-Parodi,*
Biomedical Engineering, Stony Brook

Dynamical Systems - *thesis advisor: Prof. John Milnor,*
Institute of Mathematical Sciences, Stony Brook

Theoretical Neuroscience - *supervisor: Prof. Paul Adams,*
Department of Neuroscience, Stony Brook

Honors and awards

- Postdoctoral Fellowship, Laboratory for the Study of Emotion and Cognition, Biomedical Engineering, SUNY Stony Brook, 2005
- Summer Research Internship, Cold Spring Harbor Laboratory,

Summer 2004

- Research Assistantship, SUNY Stony Brook, Summer 2003 - present
- Teaching Assistantship, SUNY Stony Brook, Fall 1998 - Spring 2003
- National Scholarship for Exceptional Results, University of Bucharest, Romania 1994 - 1998
- Selected for the National Mathematics Team, 1990 - 1994
- First, second and third prizes at the National Mathematics Olympics, Romania, 1987 - 1990

Publications and preprints

Anca Rădulescu - *The Connected Isentropes Conjecture in a Space of Quartic Polynomials* (Ph.D. thesis, December 2004)

Anca Rădulescu - *On Complexity of Quartic Polynomials and the Connected Isentropes Conjecture* (submitted to *Discrete and Continuous Dynamical Systems*, May 2005)

Anca Rădulescu, Paul Adams, Kingsley Cox - *The neocortex as a Hebbian proofreader*(submitted to CNS 2006)

Work in progress

Anca Rădulescu, Paul Adams - *Hebbian unsupervised learning: a comparison with Eigen's model of genetic quasi-species*

Anca Rădulescu - *The computational challenge of calculating the entropy of polynomials*

The dynamics of a disease process: limbic dysregulation as a hypothesis for the cause of schizophrenia (with the Laboratory for the Study of Emotion and Cognition, Stony Brook)

Teaching experience

At Stony Brook:

- Teaching Assistant: Introduction to Calculus (Fall 2001, Fall 1998); Calculus A (Fall 1999); Multivariable Calculus with Applications (Spring 1999).
- Instructor: Multivariable calculus (Fall 2003); Calculus I (Fall 2002);

Calculus B (Fall 2004, Fall 2001, Spring 2000); Calculus A (Spring 2001);
Overview of Calculus (Spring 2004, Fall 2000).

- Course Coordinator: Calculus II (Summer 2003); Overview of Calculus (Spring 2000); Calculus I (Summer 2001).

At Brooklyn College:

- Course Coordinator: Precalculus (Fall 2005, Spring 2006); Calculus (Spring 2006)
- Mathematical Education Masters Program: Transformational Geometry (Fall 2005)

Conference lectures and seminar talks

Mathematical models in Neuroscience. Analytical and computational challenges - Mathematics/Computer Science workshop, Lehman College, 2006

The Mathematical Brain - Complex Analysis Seminar, CUNY Graduate Center, 2005

On Entropy of Polynomials - Complex Analysis Seminar, CUNY Graduate Center, 2005

Bones and Topological Entropy in a Parameter Space of Quartic Polynomials - Dynamics Seminar, Stony Brook, 2004

A Rigidity Theorem for Real Polynomials - 3 weeks lecture presentation, Stony Brook, 2004

The Dynamics of Learning - Graduate Student Seminar, Stony Brook, 2004

The Connected Isentrope Conjecture for a two-parameter family of polynomials - Mini Course/Dynamics Seminar, Stony Brook, 2003

On entropy of quartic polynomials - Stevens Institute of Technology, 2003

On the entropy and monotonicity of real polynomials - Mini Course/Dynamics Seminar, Stony Brook, 2003

Lyapunov stability for Oja's rule of unsupervised learning - Prodyn - Göttingen, 2001

Attended Conferences and Workshops

- *Mini-invasive procedures in medicine and surgery: mathematical and numerical challenges*, Centre de Recherches Mathématiques, May 2005
- *Conference in honor of John Mather*, Princeton, October 2002
- *International school on Biomathematics, Bioengineering and clinical aspects of blood flow*, MSRI, Berkeley, August 2002
- *Ahlfors - Bers Colloquium*, University of Connecticut, October 2001
- *School and workshop in Dynamical Systems*, Trieste, August 2001
- *Prodyn workshop*, Georg-August Universität, Göttingen, July 2001
- *Graphs and patterns in Mathematics and Theoretical Physics*, Stony Brook, June 2001
- *Around Dynamics*, Stony Brook, March 2001
- *Conference on Differential Equations and Dynamical Systems*, Instituto Superior Técnico, Lisbon 2000

Personal information

Born: July 21, 1975, in Alexandria, Romania

Citizenship: Romanian

Fluently spoken languages: Romanian, English, French

Programming skills: C, Pascal, Maple, MATLAB

Visa status: H1