

Curriculum Vitae

Robert Thijs Kozma

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Education

PhD student, Mathematics, Stony Brook University

September 2011 – Present

Full tuition support, TA scholarship

Focus on Dynamical Systems

Bachelor of Arts in Mathematics (summa cum laude), Boston University

Major: Mathematics, Concentration: Pure and Applied Mathematics
With Distinction (September, 2010)

Major GPA: 3.87, Combined Undergraduate GPA: 3.86

Awards and Distinctions

2012

Richard V. Andree Award

Best undergraduate student paper 2011, Pi Mu Epsilon Journal
For “Julia Sets of Perturbed Quadratic Maps Converging to the Filled
Basilica,” Pi Mu Epsilon Journal, Issue 13:5, pp. 281-288 (2011)

2010

Robert E. Bruce Memorial Prize for Excellence in Mathematics

Boston University

2009-2010 College Scholar, College of Arts & Sciences, Boston University

Recognition of distinguished record of academic achievement. The
awardee is among the top 5% of students in terms of academic
accomplishments.

2009

Undergraduate Research Opportunities Project (UROP) Award

To support research in 2009, Advisor: Prof. Emma Previato. The only
award received by a Mathematics major student for this period.

Fall 2009 – Spring 2010 Dean’s List

College of Arts & Sciences, Boston University

Fall 2008 – Spring 2009 Dean’s List

College of Arts & Sciences, Boston University

Work Experience and Skills

- 2012** **Research Assistant, Institute for Mathematical Sciences, Stony Brook, NY**
- 2011** **Visiting Scholar, Missouri University of Science and Technology**
Worked on hardware implementations of Fuzzy Logic and Adaptive Resonance Theory (ART)
- 2010-2011** **Website Administrator, Educational Bridge Project, Boston MA**
<http://www.educationalbridgeproject.org>
- 2009-2010** **Work for Distinction Project, Department of Mathematics**
Boston University, Topic: Complex nonlinear dynamical systems.
Faculty Advisor: Prof. Robert Devaney
- 2008 - 2011** **Laboratory Assistant, Dept. Cognitive & Neural Systems**
Boston University
DARPA SyNAPSE Program with Hewlett-Packard (May 2009-Mar 2011)
CELEST Project Work (Aug 2008 - May 2009)

Computer Skills

Programming languages: Mathematica, Matlab, C, C++, LaTeX
<http://demonstrations.wolfram.com/HorospherePackingsOfThe336CoxeterHoneycombInThreeDimensional/>

Publications

Peer Reviewed Journal Papers

Kozma, R. T., Devaney, R. L. "Julia Sets Converging to Filled Quadratic Julia Sets," *Journal of Ergodic Theory and Dynamical Systems* (2012)
DOI: 10.1017/etds.2012.115

Kozma, R. T., Szirmai J. "Optimally Dense Packings for Fully Asymptotic Coxeter Tilings by Horoballs of Different Types" *Monatshefte für Mathematik, Volume 168, Issue 1, pp. 27-47, (2012)*
DOI: 10.1007/s00605-012-0393-x

Kozma, R. T., "Julia Sets of Perturbed Quadratic Maps Converging to the Filled Basilica," *Pi Mu Epsilon Journal, Issue 13:5, pp. 281-288 (2011)*

Book Chapters

M. Versace, R.T. Kozma, D. Wunsch, "Adaptive Resonance Theory design in mixed memristive-fuzzy hardware" *Advances in Neuromorphic Memristor Science and Applications, Springer-Verlag (2012)*

Conference Talks & Proceedings

I. Hayashi, S. Tsuruse, J. Suzuki and R.T. Kozma, "A Proposal for Applying pdi-Boosting to Brain-Computer Interfaces,"
World Congress on Computational Intelligence (WCCI) / FUZZ-IEEE
2012, Brisbane, Australia (2012).

Kozma, R.T., J. Szirmai, "The Densest Packings for Totally Asymptotic Coxeter Tilings by Different Types of Horoballs,"
Janos Bolyai Memorial Conference, Hungarian Academy of Sciences,
September 2010.

Kozma, R.T., "Julia Sets Converging to the Filled Basilica,"
Young Mathematicians Conference 2010, Ohio State University, August
2010. One of 55 papers selected from 185 submissions, 30% acceptance.

Kozma, R. T., Previato, E., "Mathematical Principles of Coding Theory: On Automorphisms and Self-Duality of Codes Based on Elliptic Curves,"
12th Annual Undergraduate Research Symposium, Boston University,
October 16, 2009, pp. 106.

Seminar Talks

- 2012 "Julia sets of perturbed quadratic maps converging to filled Julia sets, I"**
Dynamical Systems Seminar, Chebyshev Laboratory, St. Petersburg State
University, St. Petersburg, Russia
- 2012 "Julia sets of perturbed quadratic maps converging to filled Julia sets, II"**
Steklov Institute for Mathematics, Pt. Petersburg, Russia
- 2012 "Julia Sets Converging to Filled Quadratic Julia Sets"**
Mini Course / Dynamics Learning Seminar, Stony Brook University
- 2012 "Limiting Behavior of Julia Sets for Perturbed Quadratic Maps"**
Graduate Student Seminar, Stony Brook University

Teaching Experience

Teaching assistant, Stony Brook University

Spring 2013	MAT 125 Calculus A
Fall 2012	MAT 141 Honors Calculus 1
Spring 2012	MAT 132 Calculus II
Fall 2011	MAT 132 Calculus II

Academic Society Memberships

American Mathematical Society (AMS)
Mathematical Association of America (MAA)
Society for Industrial and Applied Mathematics (SIAM)

Extracurricular Activities

Secretary, Student Chapter, Mathematical Association of America (MAA)

- Boston University, for Academic year 2009-2010.

Founding member, Innworks, Boston University Chapter

- Organized summer science camps for underprivileged middle school students.

Tutoring Summer 2009: Introduction to abstract algebra and finite fields.

Language Skills

Fluency in English, Hungarian and Japanese.

Japanese Language Proficiency

- Represented Boston University at the Boston area Japanese speech competition.
- Japanese Language Proficiency Test (JLPT) level 1 certification (highest level). Certified ability to fluently use ~2000 Kanji characters, and ~10000 words.
- National Japanese Language and Culture Contest 1st place, Budapest, Hungary, 2006. Prize: 1 week trip to Japan.