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Curriculum Vitae

Kerry Ojakian

Personal Information

- Born: February 13, 1973, Oakland, CA
Citizenship: USA
Speak proficient Portuguese

Education

- 8/2004 • Ph.D. Mathematics
Carnegie Mellon University (Pittsburgh, PA)
- 12/1995 • B.S. Mathematics and Computer Science
University of Michigan (Ann Arbor, Michigan)

Teaching

- 1/2011 - present • Assistant Professor at St. Joseph's College (Patchogue, NY)
Courses: Precalculus, Calculus II, Discrete Math, Topology
- 8/2010 - 12/2010 • Adjunct Assistant Professor at Queens College, CUNY (Queens, NY)
Courses: Discrete Math
- 8/2009 - 5/2010 • Substitute Assistant Professor at Queens College, CUNY (Queens, NY)
Courses: Calculus I, Precalculus, Discrete Math, Differential Equations
- 6/2008 - 7/2008 • Adjunct Assistant Professor at City College, CUNY (New York, NY)
Taught linear algebra to middle school and high school teachers
- 5/2001 - 6/2001 • Instructor at Carnegie Mellon University (Pittsburgh, PA)
Taught 6 week Discrete Math summer course
- 5/1999 - 6/1999 • Instructor at Carnegie Mellon University (Pittsburgh, PA)
Taught 6 week Calculus summer course
- 8/1997 - 5/2003 • Teaching Assistant at Carnegie Mellon University (Pittsburgh, PA)
Assisted lecturer by running weekly recitations, holding office hours, and grading work
Courses (during 6 years): Calculus (all levels), Concepts of Math, Discrete Math

Research

Research Interests

- Logic, Real Computation, Bounded Arithmetic, Combinatorics

Research (continued)

Papers

- *Cops and Robber on the Hypercube*. In progress (with David Offner).
- *A characterization of computable analysis on unbounded domains using differential equations*. Information and Computation, 209 (8) 1135-1159, 2011 (with M. L. Campagnolo).
- *Characterizing computable analysis with differential equations*. In: V. Brattka, R. Dillhage, T. Grubba and A. Klutsch, editors, Proceedings of the Fifth International Conference on Computability and Complexity in Analysis, Electronic Notes in Theoretical Computer Science, 221:23–35, 2008 (with M. L. Campagnolo).
- *The elementary computable functions over the real numbers: applying two new techniques*. Archive for Mathematical Logic, 46(7-8):593–627, 2008 (with M. L. Campagnolo).
- *Using approximation to relate computational classes over the reals* In: J. Durand-Lose and M. Margenstern, editors, MCU 2007, Lecture Notes in Computer Science, 4664:39–61, 2007 (with M. L. Campagnolo).
- *The methods of approximation and lifting in real computation*. In: D. Cenzer, R. Dillhage, T. Grubba, and K. Weihrauch, editors, Proceedings of the Third International Conference on Computability and Complexity in Analysis, Electronic Notes in Theoretical Computer Science, 167:387–423, 2007 (with M. L. Campagnolo).
- *Upper and lower Ramsey bounds in bounded arithmetic*. Annals of Pure and Applied Logic, 135(1-3):135–150, 2005.
- *Combinatorics in Bounded Arithmetic*. PhD thesis, Carnegie Mellon University, supervised by J. Avigad, 2004.

Research Experience

- | | |
|------------------|---|
| 9/2011 - present | <ul style="list-style-type: none">• CUNY Graduate Center (New York, NY)
Co-organizer of the New York Combinatorics Seminar |
| 7/2011 | <ul style="list-style-type: none">• St. Joseph's College (Patchogue, NY)
Received a small grant (\$150) for a research trip |
| 5/2005 - 8/2009 | <ul style="list-style-type: none">• Instituto Superior Técnico (Lisbon, Portugal)
Post-doc (with grant from Fundação para a Ciência e a Tecnologia)
Full-time researcher in the mathematics department
Member of the Security and Quantum Information Group |
| 7/2004 - 12/2004 | <ul style="list-style-type: none">• Charles University (Prague, Czech Republic)
Post-doc. Full-time researcher at the Mathematical Institute of the Academy of Sciences of the Czech Republic |
| 5/1996 - 12/1996 | <ul style="list-style-type: none">• University of Michigan Computer Science Department (Ann Arbor, MI)
Research on Gurevich Abstract State Machines with Yuri Gurevich |

Research (continued)

- 1/1996 - 4/1996 • University of Michigan Mathematics Department (Ann Arbor, MI)
Research on least fixed point logic with Andreas Blass
- 5/1994 - 6/1994 • University of Michigan Mathematics Department (Ann Arbor, MI)
R.E.U. (Research Experience for Undergraduates)
Research on the QR algorithm using MATLAB

Recent Talks

- 10/2011 • The York Tensor Scholars Program, York College, CUNY (Queens, NY)
Cops and Robber on the Hypercube
- 9/2011 • New York Combinatorics Seminar, CUNY Graduate Center (New York, NY)
Cops and Robber on the Hypercube
- 1/2011 • Joint Meetings (New Orleans, LA)
Characterizing computable analysis with differential equations
- 3/2010 • Kolchin Seminar in Differential Algebra, CUNY Graduate Center (New York, NY)
An Introduction to Computation over the Reals: Computable Analysis, Analog Computation, and Computing with Polynomial Differential Equations
- 3/2010 • Queens College Mathematics Colloquium, Queens College, CUNY (Queens, New York)
Computing with the real numbers
- 12/2009 • M.I.T. Logic Seminar (Boston, MA)
Continuous-time versus discrete-time computation over the reals
- 11/2009 • Logic Seminar, CUNY Graduate Center (New York, NY)
Continuous-time versus discrete-time computation over the reals
- 8/2009 • Effective Mathematics of the Uncountable 2009, CUNY Graduate Center (New York, NY)
Computable analysis tutorial
- 3/2009 • Set Theory Seminar, CUNY Graduate Center (New York, NY)
Characterizing computable analysis with differential equations
- 2/2009 • Logic Seminar (Lisbon, Portugal)
The model-theoretic proof of the witnessing theorem of bounded arithmetic (an exposition)
- 11/2008 • Logic and Computation Seminar (Lisbon, Portugal)
Characterizing computable analysis with differential equations
- 8/2008 • Computability and Complexity in Analysis 2008 (Hagen, Germany)
Characterizing Computable Analysis with Differential Equations
- 3/2008 • Logic Seminar (Lisbon, Portugal)
Proving the Church-Turing Thesis?

Work Experience

Work Experience (continued)

- Periodically
- Reviewer for papers in Computable Analysis
- 9/2003 - 5/2004
- Boys and Girls Club of America (Pittsburgh, PA)
Volunteer tutor for elementary through high school
- 5/1998 - 7/1998
- Department of Applied Statistics KMITNB (Bangkok, Thailand)
I.A.E.S.T.E. international exchange program
Taught Calculus classes and organized course material for statistics courses
- 2/1997 - 8/1997
- Cybernet Systems Corporation (Ann Arbor, MI)
C++ programming as part of a team effort
- 5/1995 - 8/1995
- Ecole de Mines (Douai, France)
I.A.E.S.T.E. international exchange program
C++ programming for graph theory applications and PVM (Parallel Virtual Machine)