

CURRICULUM VITAE

Daniel Zaharopol

1601 Hillcrest St.
Urbana, IL
Phone: 217-649-1100
E-mail: danz_remove@alum.andme.mit.edu
Webpage: <http://www.math.uiuc.edu/~dzaharo2/>

Education

M.S. Mathematics, University of Illinois at Urbana-Champaign, January 2009.

M.S. Teaching Mathematics, University of Illinois at Urbana-Champaign, January 2008. Coursework included several graduate courses on research and policy in math education. My focus was on two topics: teachers' content knowledge and issues of standardized testing.

S.B. in Mathematics, MIT, May 2004.

Grants and Fellowships

Research Assistantship, UIUC, spring 2008.

Department fellowship, UIUC, 2005-2006, spring 2007.

VIGRE fellowship, UIUC, fall 2004.

Honors and Awards

Brahana TA Instructional Award, awarded April 2008 for exemplary teaching.

Top-rated instructor at Canada/USA Mathcamp, Summers 2005-2008.

Todd Anderson Teaching Award, awarded June 2004 for recitation sections of 6.001 taught at MIT Experimental Study Group.

COMAP Mathematical Contest in Modelling, 2002. Team ranking of "Meritorious."

Putnam 2001: score of 40, rank of 164 nationally.

Putnam 2002: score of 38, rank of 264 nationally.

USA Computing Olympiad, 1999. One of fourteen national finalists.

UIUC seminar presentations

Graduate Student Topology and Geometry seminar, October 5, 2006. "More on Equivariant Cohomology."

K-Theory Student Seminar, September 27 and October 4, 2006. "Introduction to Equivariant K-Theory."

Graduate Student Combinatorial Commutative Algebra seminar, April 11, 2006. "Buchberger Graphs and Planar Diagrams."

Graduate Student Topology and Geometry seminar, March 2, 2006. "An Introduction to Equivariant Cohomology."

Graduate Student String Topology seminar, February 15, 2006. "The Loop Product." (Based on a paper by Chas and Sullivan.)

Computational Topology seminar, October 19, 2005. "Cup Products in Computational Topology."

Teaching

Math 181: A Mathematical World, UIUC, fall 2007 and fall 2008. Course for non-technical majors to satisfy quantitative reasoning requirement. Standalone course. Designed a curriculum for students different from the usual material, with a focus on conceptual understanding and logical thought process. Created all handouts, homework, quizzes, and exams.

Cardinality and Infinity, online class given at artofproblemsolving.com, Spring 2007.

Math 220: Calculus I, UIUC, fall 2006.

Math 234: Calculus with Applications, UIUC, spring 2005.

6.001: Structure and Interpretation of Computer Programs, MIT Experimental Studies Group, spring 2003 and spring 2004.

12.409: Hands-On Astronomy: Observing Stars and Planets, MIT, spring 2004.

cSplash program at the Courant Institute at NYU, 2006 and 2007: enrichment classes for high school students.

Boston Math Circle, spring 2004: weekly enrichment classes for high school students.

Canada/USA Mathcamp, summers 2001-2008: designed curricula for and taught courses in advanced mathematics to high school students. Topics included theoretical computer science, quantum computation, hyperbolic geometry, low-dimensional topology, others. Also created and encouraged new formats for classes.

MIT Educational Studies Program, fall 2000-fall 2008: volunteer and paid teaching and curriculum design. Classes varied from 3 to 120 students, enrichment classes (mathematics, computer science, physics, theater) to SAT preparation courses.

Writing

Numerous class handouts, including expository material on calculus, graph theory, statistics, category theory, theoretical computer science, and more. Available by request.

Several plays, two of which have been performed. Some of these are online at <http://www.math.uiuc.edu/~dzaharo2/plays/>.

Leadership Positions

Principal Organizer, Graduate Student Topology Conference 2008. Wrote a successful \$20,000 grant to the National Science Foundation. Managed all conference logistics.

Director of Operations, Canada/USA Mathcamp, 2004-present. Led hiring committees, dealt with numerous aspects of camp logistics, evaluated student applications for admissions, supervised staff of 25 and led staff meetings, acted as liaison with host college, worked with Executive Director on major camp policy decisions.

UIUC Math Department Teaching Awards Committee, spring 2007.

Organizing committee, UIUC Math Department Graduate Preview Day 2007.

**Leadership
Positions
(cont'd)**

Founder and Director, Splash Math Program 2006. Created and organized a day-long program for high school students to explore advanced mathematics with a focused curriculum, including five hours of classes and a three-hour problem session. Recruited teachers and handled other administrative aspects, including maintaining a web page.

Founder and Co-director, "Splash on Wheels," February 2006. Organized MIT students to teach classes at Hudson High School (a public high school in Massachusetts). Oversaw program administration, including logistics, transportation, class catalog creation, and day-of running.

Co-founder and Director, Splash Theater Program 2005. Organized a 36-hour program in which students wrote a short play, then performed it; organized classes to prepare students for the writing, acting, and technical work.

Canada/USA Mathcamp administrator, 2004-2007. Tasks included general decision-making, brochure design and printing, web page maintenance, application grading, more.

Canada/USA Mathcamp Organizational Committee, 2003-2004.

Chairman, MIT Educational Studies Program, fall 2001–spring 2003. Oversaw operations of student group; primary organizer for high school programs involving thousands of students. See <http://esp.mit.edu>.

Officer, MIT Undergraduate Math Association, Spring 2003–fall 2003.

**Undergraduate
Research**

Research Experiences in Algebraic Combinatorics at Harvard (REACH), advised by Jim Propp, fall 2002.

Undergraduate Research Opportunities Program with Anne Schilling at MIT, summer 2001.

Synthetic Characters group at MIT Media Lab, winter 2001.

**Professional
Organizations**

Member AMS and MAA.

**Community
Service
Positions**

MIT Community Service Fund Board of Trustees, 2002-2003, 2003-2004.