

Andrew M. Baxter

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Education

B.A. Mathematics, Millersville University, 2005.

Minor: Geography.

Honors: *Magna Cum Laude, Departmental Honors (Math)*

Teaching and Research Fields

Discrete Mathematics, Enumerative Combinatorics

Academic Experience

Millersville University, Department of Mathematics

Mathematics Tutor, Math Assistance Center. Spring 2002–Spring 2005.

Math Assistance Center Assistant-Coordinator. Spring 2002 – Spring 2005..

Teaching Assistant, Mathematics for Non-Science Majors. Spring 2002 – Spring 2005.

Millersville University, Department of Earth Sciences

Research Assistant, Jason Price, Summer 2004.

Rutgers, The State University of New Jersey

Grader, *Math 300: Introduction to Proof*, Fall 2005 – Spring 2006.

Teaching Assistant, *Various Courses*. See “*Teaching*” below, Fall 2006 – Present.

Publications

Papers

Baxter, Andrew and Ron Umble. “Periodic orbits of billiards on an equilateral triangle.” *American Math Monthly*. Vol. 115, no. 6 2008. 479–491.

Baxter, Andrew. “Applying the cluster method to count occurrences of generalized permutation attens.” *Journal of Difference Equations and Applications*.

Instructional Websites

Background Information Pages for Maple Assignments in Math 251. (Original versions by Stephen Greenfield)

<http://www.math.rutgers.edu/courses/251/>

Information for Instructors for Maple Assignments in Math 251. (Original versions by Stephen Greenfield)

http://www.math.rutgers.edu/courses/251/251_for_instructors/maple_start.html

Books

Baxter, Andrew, Amanda Mills, and Hisa Tsutsui. "Mathematical Ideas for Non-Science Majors." Pearson Books. January 2005.

Talks*Conference Presentations*

"Using enumeration schemes to q-enumerate avoidance sets Permutation Patterns 2009.

"Generalized Permutation Patterns over Words" Graduate Student Combinatorics Conference. March 2009.

"A Translation Method for Finding Combinatorial Bijections " Graduate Student Combinatorics Conference. April 2008.

"Partitioning an Integer into k Parts Congruent modulo m " Graduate Student Combinatorics Conference. April 2007.

"Periodic Orbits in Triangular Air Hockey" MathFest. August 2003.

University Seminars

"Strategies for Dealing with Difficult Students" Teaching Assistant Project Workshop. September 2009.

"Active Learning" Introduction to College Teaching II. September 2009.

"Overcoming Teaching Anxiety" Rutgers Teaching Assistant Orientation. August 2009.

"An Introduction to Generating Functions, Part 2" Rutgers Graduate Combinatorics Seminar. February 2009.

"Active Learning in Large Classes" TA Project Workshop. Rutgers Teaching Assistant Project Workshop. February 2009.

"Teaching a Class for the First Time" Rutgers Teaching Assistant Project Workshop. November 2008.

"Active Learning/Group Work/Problem Solving" Introduction to College Teaching II. October 2008.

"Generalized Permutation Patterns and Mahonian Statistics" Rutgers Graduate Combinatorics Seminar. September 2008.

- “Sperner’s Lemma and Fair Division” Rutgers Graduate Pizza Seminar. September 2008.
- “Modular Diagrams in Partition Theory” Rutgers Graduate Combinatorics Seminar. March 2008.
- “What I Learned in Math 103” Rutgers Graduate Pizza Seminar. September 2007.
- “Periodic Billiards on an Equilateral Triangle.” Rutgers Experimental Math Seminar. February 2007.
- “Partition Bijections” Rutgers Graduate Pizza Seminar. April 2007.
- “Euler, the Master of Us All” Rutgers Graduate Pizza Seminar. September 2006.
- “Triangular Billiards” Rutgers Graduate Pizza Seminar. November 2005.
- “Periodic Orbits in Triangular Air Hockey” Millersville University Math Awareness Month Talk. April 2005.
- “Periodic Orbits in Triangular Air Hockey” Millersville University Undergraduate Research Conference. April 2005.

Teaching

Undergraduate Courses

- Math 151: Calculus I for Mathematical and Physical Sciences. Lecturer and Workshop Instructor. Fall 2009.
- Math 152: Calculus II for Mathematical and Physical Sciences. Workshop Instructor. Spring 2009.
- Math 151: Calculus I for Mathematical and Physical Sciences. Workshop Instructor. Fall 2008.
- Math 251: Multivariable Calculus. Recitation Instructor. Spring 2007, Fall 2007, Spring 2008.
- Math 112: Precalculus II. Recitation Instructor. Fall 2007.
- Math 103: Topics in Mathematics for Liberal Arts Majors. Lecturer. Summer 2007, Summer 2008.

Instructional Support

- Head Teaching Assistant for Calculus Workshops. Fall 2008 and Spring 2009.
- Instructional Control Assistant. Summer 2008 and Summer 2009.
- Head Teaching Assistant for Maple Instruction, Fall 2007 and Spring 2008.

Professional Activities

Service

- Co-organizer for Rutgers Experimental Math Seminar. Fall 2007 – Present.
- Co-organizer for Rutgers Graduate Pizza Seminar. Fall 2006 – Spring 2007.
- Assistant Coordinator for Math Assistance Center (Millersville University). Spring 2002 – Spring 2005.

Professional Memberships

Mathematics Association of America, 2008–Present.

American Mathematical Society, 2006 – 2008.

Conferences Attended

Permutation Patterns 2009 University of Firenze, Italy, July 13–17, 2009.

Graduate Student Combinatorics Conference, University of Kentucky, March 28–29, 2009.

Graduate Student Combinatorics Conference, University of California, Davis, April 12–13, 2008.

Graduate Student Combinatorics Conference, University of Washington, April 21–22, 2007.

MathFest 2003, University of Colorado at Boulder, July 31 – August 2, 2003.

Honors & Awards

Fellowships

Carnegie Academy for the Scholarship of Teaching and Learning. Fall 2008 – Present.

Awards

TA Excellence Award. Fall 2007.

2005 EPADEL Prize: Best Undergraduate Paper. “Combinatorial properties of billiards on an equilateral triangle.”

MathFest 2003. Outstanding Undergraduate Presentation (joint with Stephen Weaver). “Periodic Orbits in Triangular Air Hockey.”

Miscellaneous

Computer Skills

Maple, Mathematica, HTML, \LaTeX .

References

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