

Brian K. Miceli

Curriculum Vitae

bmiceli@trinity.edu
<http://trinity.edu/bmiceli>
(210)999-7461

One Trinity Place
Mathematics Department
San Antonio, TX 78212

Education

- University of California, San Diego, 2006, Doctorate of Philosophy in Mathematics
- University of California, San Diego, 2003, Master of Science in Applied Mathematics
- California Polytechnic State University, San Luis Obispo, 2001, Bachelor of Science in Mathematics

Current Research Interests

- Algebraic and enumerative combinatorics: rook theory, generating functions, Stirling numbers, set partitions, pattern avoidance in permutations and words, recurrence relations
- AMS subject classifications: 05A15, 05A18, 11B73

Appointments

- Associate Professor, Trinity University, 2012-present
- Assistant Professor, Trinity University, 2006-2012
- Senior Teaching Assistant, University of California, San Diego 2005-2006
- Adjunct Professor, Miramar College, 2004-2005
- Teaching Assistant, University of California, San Diego, 2001-2005
- Workshop Facilitator, California Polytechnic State University, San Luis Obispo, 1999-2001

Publications (co-authors listed)

- Thesis
 1. A Rook Theory Model for Product Formulas & Poly-Stirling Numbers, University of California, San Diego, 2006
- Refereed Journal Articles
 1. Minimal Overlapping Embeddings & Exact Matches in Words, J. Remmel, Submitted, 10/2011
 2. Two Q -Analogues of Poly-Stirling Numbers, *Journal of Integer Sequences*, **14** (2011), 11.9.6
 3. m -Partition Boards & Poly-Stirling Numbers, *Journal of Integer Sequences* **13** (2010), 10.3.3
 4. Augmented Rook Boards & General Product Formulas, J. Remmel, *Electronic Journal of Combinatorics* **15** (2008), R85
- Articles in Preparation

1. Generalized Interval Embeddings, J. Liese & J. Remmel
 2. Connection Coefficients Between Rising & Falling Factorial Bases, J. Liese & J. Remmel
- Other Articles
 1. What I Learned from Being on Search Committees: Tips on Applying to *Teaching Schools*, MAA Focus, page 23, (2010), 30.4
 - Undergraduate Publications
 1. Wind In Their Wings: The California Condor Restoration Project, Thomas D. O'Neil, et al, *UMAP Journal: 22(2)*, 2001, 111-128
 2. Soaring Again: The California Condor Restoration Project, Thomas D. O'Neil, et al, *UMAP Journal: 21(4)*, 2000, 443-456
 3. Clutching For Survival: The California Condor Restoration Project, Thomas D. O'Neil, et al, *UMAP Journal: 20(4)*, 1999, 387-398

Conference Presentations

- *Poly-Rook & Stirling Numbers*, AMS Sectional Meeting, October 2012, Tulane University, Invited Talk
- *Generalized Interval Embeddings*, Permutation Patterns, June 2012, University of Strathclyde, Contributed Talk
- *Minimal Overlapping Embeddings & Exact Matches in Words*, CombinaTX, April 2012, Southwestern University, Contributed Talk
- *Minimal Overlapping Embeddings & Exact Matches in Words*, Permutation Patterns, June 2011, Cal Poly, SLO, Contributed Talk
- *Some Combinatorial Properties of Poly-Stirling Numbers*, CombinaTX, April 2008, UTEP, Contributed Talk
- *x^m -Stirling Numbers*, HMC Enumerative Combinatorics Conference, October 2006, Claremont, CA, Poster Presentation
- *General Rook Model for Product Formulas*, FPSAC 2006, San Diego, CA, Poster Presentation

Colloquia and Seminars

- *The Combinatorics of Pascal's Triangle*, Majors' Seminar, March 2012, Trinity University
- *On Rook & Stirling Numbers*, Discrete Math Seminar, April 2010, TX State, San Marcos
- *How Is Mathematical Research Done?*, Majors' Seminar, February 2010, Trinity University
- *Problems in Rook Theory*, Majors' Seminar, October 2008, Trinity University
- *Rook Boards & Stirling Numbers*, Majors' Seminar, October 2006, Trinity University
- *General Rook Boards & Poly-Stirling Numbers*, March 2005, UC, San Diego

Grants & Awards

- Mathematics Department Instructor of the Year, 2011-2012

- Trinity University Summer Stipend, Summer 2011
- QEP Grant, Trinity University, Fall 2010
- Mathematics Department Instructor of the Year, 2009-2010
- Curriculum and Pedagogical Innovations Grant, Trinity University, June 2010
- Academy of Inquiry Based Learning Mini-Grant, Spring 2010
- Trinity University Summer Stipend, Summer 2009
- Trinity University Summer Stipend, Summer 2007
- Senior Teaching Assistant at the University of California, San Diego, 2005-2006
- Outstanding TA of the Year, University of California, San Diego, 2005-2006
- Teaching Assistantship with Fee Scholarship at the University of California, San Diego, 2001-2006
- Outstanding Mathematics Senior at California Polytechnic State University, San Luis Obispo, 2001

Classes Taught (Common Curriculum courses denoted by *)

- Trinity University: Putnam Exam Seminar (1190), Calculus I* (1311), Calculus II* (1312), Introduction to Modern Mathematics* (1330), Majors' Seminar (2094), Linear Algebra (3323), Introduction to Abstract Mathematics (2326/3326), Junior Writing Workshop (3194), Junior Technology Workshop (3195), Differential Equations & Linear Algebra (3336), Number Theory I (3341), Combinatorics I (3343), Modern Algebra I (3362), Modern Algebra II (4363), Senior Project (4394)
- Miramar College: Intermediate Algebra, Introduction to Probability & Statistics, Calculus III

Classes Created

- Putnam Exam Seminar - MATH 1190
- Junior Technology Workshop - MATH 3195 - Created with Dr. Macura
- Combinatorics II - MATH 4344

Senior Projects

- Claire Baxter - Fall 2011 - *Ramsey's Theorem*
- Phillip Wolke - Spring 2011 - *Permutation Statistics*
- Bart Taylor - Spring 2010 - *Introduction to Combinatorial Proofs*
- Jennifer Emery - Fall 2008 - *Generating Trees & Classical Pattern Avoidance*
- Ryan Cook - Spring 2008 - *Wilf Equivalence*
- Travis Givens - Spring 2008 - *Designing Round Robin Tournaments*
- Anna Grossman - Fall 2007 - *High School Math Reform & Combinatorics*
- Kelly Petersen - Fall 2007 - *Combinatorial Games*
- Nick Purgason - Fall 2007 - *Mathematics & Gambling*

Secondary Advisor on Honors Thesis Projects

- Xin Ma (MATH) - Fall 2010-Spring 2011 - *Measure Theory, Probability, & Martingale*
- Matt Maly (CSCI) - Fall 2009-Spring 2010 - *On the State Hierarchy of Exploding Automata*

NSF-REU

- Summer 2008: Advised research for three undergraduate students - Jennifer Emery of Trinity University, Daniel Glasscock of Rice University, and Min Xu of UC, Berkeley - for 9 weeks; proving some open conjectures regarding the Wilf equivalence of words in the alphabet of positive integers with respect to the generalized factor order
- Summer 2007: Advised research for three undergraduate students - Alyssa Armstrong of Wittenberg University, Cordelia Csar of UC, Berkeley, and Linnea Haight of Washington State University - for 9 weeks; generalizing the idea of a q -hit polynomial to that of a q -file polynomial

Service

- University Service
 - Curricular Reform Committee, Summer 2012 - present
 - Outside Member of Faculty Senate's Merit and Equity Subcommittee - Spring 2012 - present
 - Curricular Models Ideas Lab Participant, Spring 2012
 - Faculty Senate, Spring 2009 - Spring 2012
 - 1. Faculty Representation & Elections Committee, Spring 2009 - Spring 2012
 - (a) Chair, Faculty Representation & Elections Committee, Spring 2010 - Spring 2012
 - Employee Benefits Committee, Fall 2009 - Spring 2010
 - Committee for The Student Evaluation of Courses & Faculty, Fall 2007 - Spring 2009
 - Lecturers and Visiting Scholars Committee, Fall 2007 - Spring 2008
- Departmental Service
 - Responsible for making the department's teaching schedule, Fall 2008 - Fall 2011
 - Streamlined departments in-person and phone interview sign-ups during the Assistant Professor search of 2010 by making a web entry sign-up sheet for applicants.
 - Responsible, along with Ryan Daileida, for managing the department's web page, Fall 2008 - Fall 2011
 - Served on an ad hoc committee to revise curriculum: added multiple new courses to the major; restructured many current courses; updated course catalog
 - Putnam Exam Advisor, Falls 2006-present
 - COMAP MCM Advisor, Spring 2007
 - The Math Modeling Group, Fall 2006
 - Trinity in Focus, 10/2006, 11/2009, 10/2010, 9/2011
 - Trinity 360, 4/2010, 3/2011
 - Majors Meals, 9/2010
 - Duke TIP Social, 6/2010

- Trinity Parent’s Weekend, 10/2008
- Trinity New Student Orientation Academic Fair, 8/2007, 8/2012
- Professional Service
 - Member of the Mathematical Association of America, 2006 - present
 - Member of the American Mathematical Society, 2000 - present
 - Member of KME, the Mathematical Honor Society, 2009 - present
 - Host of AMS Special Session on Enumerative Combinatorics at the Joint Mathematics Meetings in San Francisco, January 2010
 - Invited speaker to discuss the Trinity University Mathematics Department’s capstone experience at a Project NExT Special Session at the Joint Mathematics Meetings in San Francisco, January 2010
 - Judge for the undergraduate poster session of the Joint Mathematics Meetings in San Diego, January 2008
 - Referee for *Annals of Combinatorics*, *European Journal of Combinatorics*, *Journal of Integer Sequences*, *Open Journal of Discrete Mathematics*