

Brandt Kronholm

CURRICULUM VITAE

St. Mary's College of Maryland
 Department of Mathematics
 Schaefer Hall
 St. Mary's City, MD 20686
 Telephone: (240)-895-4353

21644 Spyglass Way Apt. 603D
 Lexington Park, MD, 20653
 Telephone: (518) 330-6486
 Email: bkronholm@smcm.edu
 WWW: <http://faculty.smcm.edu/bkronholm/>

EDUCATION

- Ph.D. 2010, Mathematics: University at Albany, SUNY, Albany, NY
 Dissertation: *On Congruence Properties of $p(n, m)$*
 Ph.D. Advisor: Professor George Andrews, The Pennsylvania State University, State College, Penn.
 Ph.D. Co-Advisor: Professor Antun Milas, University at Albany, SUNY, Albany, NY
- M.A. 2004, Mathematics: The Pennsylvania State University, State College, Penn.
- B.A. 2001, Mathematics: Westfield State College, Westfield, Mass.
- M.A. 2001, Literature: Westfield State College, Westfield, Mass.
- B.A. 1996, Literature: University of Massachusetts, Amherst, Mass.

EMPLOYMENT and TEACHING

- 2010-2011 **Visiting Assistant Professor**, St. Mary's College of Maryland, St. Mary's City, MD
- Courses taught: (Fall) Math for Teachers I, Multi-Variable Calculus, Linear Algebra (Spring) Math for Teachers II, Introduction to Statistics, Topics: Integer Partitions.
 - Senior Research Project Advisor for Dana Savage:
Piecewise Polynomials for the Restricted Partition Function $p(n, m)$.
- 2004-2010 **Teaching Assistant**, University at Albany, SUNY, Albany, NY
- Courses taught: Statistics, Calculus I, Calculus II, Multi-Variable Calculus, Pre-Calculus, Business Calculus
 - Tutored undergraduates in the department's math tutoring center.
- 2001-2004 **Teaching/Research Assistant**, Pennsylvania State University
- Courses taught: Calculus I, Calculus II, Pre-Calculus, College Algebra, Business Calculus
- 1997-1998 **Secondary English Teacher**, Springfield Public Schools, Springfield, MA

RESEARCH INTERESTS

Partition Theory, q -Series, Additive Number Theory, Combinatorics

AWARDS

- **Vollmer-Kleckner Fellowship**, 2003-2004, The Pennsylvania State University
 This award is to "provide recognition and financial assistance to outstanding students enrolled or planning to enroll in the Eberly College of Science." The eligibility of this award states "students who have achieved superior academic records or who manifest promise of outstanding academic success."
- **VIGRE/NSF Fellowship**, 2001-2003, The Pennsylvania State University

MEDIA

- **The Academic Minute**

WAMC 90.3 Northeast Public Radio, Albany, New York

Euler and Ramanujan - Surprises in Addition (To be aired in the Fall of 2010)

“The Academic Minute features professors from top institutions around the country...keeping listeners abreast of whats new and exciting in the academy.”

PUBLICATIONS

- *On Congruence Properties of $p(n,m)$.*
Proceedings of the American Mathematical Society **133** (2005), 2891–2895.
- *On Congruence Properties of Consecutive Values of $p(n,m)$.*
INTEGERS, **7**, (2007), #A16
- *Generalized Congruence Properties of the Restricted Partition Function $p(n,m)$.*
Submitted

TALKS and PRESENTATIONS**Integer Partitions: $1 + 1 = 2$ and the Subtleties Therein**

- Mathematics Colloquium, Colgate University, Hamilton, NY, March 4, 2011 (*Now With Fractals!*)
- Mathematics Colloquium, SUNY Geneseo, Geneseo, NY, November 4, 2010
- Mathematics Colloquium, University of Potsdam Summer REU, The State University at Potsdam, Potsdam, NY, June, 2010

Generalized Congruence Properties of the Restricted Partition Function $p(n,m)$

- New York Number Theory Seminar, Combinatorial and Additive Number Theory May 26-29, 2010, CUNY Graduate Center, New York, NY
- MAA-SEAWAY Section Spring 2010 Meeting, SUNY Oswego, NY April 23-24, 2010
- 36th Annual New York State Regional, Graduate Mathematics Conference, Syracuse University, Syracuse, NY, April 9-10, 2010
- Program in Algebra, Number Theory and Combinatorics 2009-2010, Focused Week on Quadratic Forms and Theta Functions, University of Florida, Gainesville, FL, March, 2010
- AMS Special Session on Enumerative Combinatorics, I, Joint Mathematics Meetings, San Francisco, CA, January 13-16, 2010

Checkerboard Numbers!

- Loudonville Elementary, Mrs. Coffey’s First Grade Class, Loudonville, NY, November 5, 2010.

New Congruence Relationships for the Restricted Partition Function $p(n,m)$

- q-Series 2011: An International Conference on q-Series, Partitions, and Special Functions Georgia Southern University, Statesboro, Georgia, March 14-16, 2011

Ramanujan Congruence Properties of the Restricted Partition Function $p(n,m)$

- The Number Theory of Partitions, Emory University, Atlanta, Georgia, January 21-23, 2011

- Joint Meetings, AMS Session for Contributed Papers, New Orleans, Louisiana, January 6, 2011
- Fall Southeastern Section Meeting, AMS Session for Contributed Papers, University of Richmond Richmond, VA, November 6-7, 2010
- Special Session on q-Series and Related Areas in Enumerative Combinatorics and Number Theory, II, AMS 2009 Fall Eastern Sectional Meeting, The Pennsylvania State University, State College, Penn., October, 2009

Immediate Undergraduate Research Projects in Number Theory

- Math Club, St. Mary's College of Maryland, September, 2010

The Mathematics of Integer Partitions

- University at Albany Math Club, University at Albany, April 22, 2010
- Mathematics Colloquium, Siena College, Loudonville, NY, April 2008

Palindromic Congruence Properties of $p(n, m)$

- Combinatory Analysis: Partitions, q-series, and Applications 2008, A Conference in Honor of George Andrews' 70th Birthday, The Pennsylvania State University, State College, Penn., December 2008
- Partitions Seminar, The Pennsylvania State University, State College, Penn., October 2008

Three Different Solutions for a Partition Problem of Diaconis

- Combinatorics/Partitions Seminar, The Pennsylvania State University, State College, PA, April 2008

Recent Results on Ramanujan Congruence Properties of the Partition Function $p(n, m)$

- Special Number Theory Seminar, University at Albany, SUNY, Albany, NY May 2007

On Congruence Properties of Consecutive Values of $p(n, m)$

- Combinatorics/Partitions Seminar, The Pennsylvania State University, State College, Penn., April 2007

Congruence Properties of $p(n, m)$

- Mathematics Colloquium, University of Potsdam Summer REU, The State University at Potsdam, Potsdam, NY, July, 2006

Introduction of Keynote Speaker, Ken Ono, for the HRUMC XIII

- Hudson River Undergraduate Math Conference, Westfield State College, Westfield, Mass., April 2006

PROFESSIONAL ACTIVITIES

- Member of AMS
- Referee for *Mathematical Communications*
- Panelist for Session on Graduate School in Mathematics and Statistics
Shenandoah Undergraduate Mathematics and Statistics (SUMS) Conference October 23, 2010

SERVICE

- 2010-2011 **Assistant Baseball Coach and Strength and Conditioning Coordinator,**
St. Mary's College of Maryland
- 2007-2009 **Assisted in Graduate Student Recruitment**
at Rutgers, The Pennsylvania State University, and SUNY Potsdam
- 2007-2008 **Graduate Committee Student Representative, Albany Math Department**
- 2002-2004 **Graduate Teaching Mentor, Pennsylvania State University**
- Mentored new graduate assistants throughout their first semesters of teaching at the University level
 - Helped Organize the 2002 and 2003 PSU GTA Training Seminars
 - Presented at the 2002 and 2003 PSU GTA Training Seminars
- 2002-2004 **Calculus Tutoring Mentor, Pennsylvania State University**
- Mentored undergraduate calculus tutors for the Penn State calculus program
 - Observed and created written reports detailing PSU calculus tutors' progress
- 2001-present **Member of the *American Mathematical Society***

REFERENCES

- George Andrews, Ph.D.
Evan Pugh Professor
Department of Mathematics
306 McAllister Building
The Pennsylvania State University
University Park, PA 16802
Telephone:(814) 865-6642
Facsimile: (814) 865-3735
E-mail: andrews@math.psu.edu
- Antun Milas, Ph.D.
Associate Professor
Department of Mathematics and Statistics
SUNY at Albany
Albany, NY 12222
Telephone: (518) 442-4608
Facsimile: (518) 442-4731
E-mail: amilas@albany.edu
- James Sellers, Ph.D.
Director, Undergraduate Mathematics and Associate Professor
Department of Mathematics
104 McAllister
The Pennsylvania State University
University Park, PA 16802
Telephone:(814) 865-7528
Facsimile: (814) 863-9667
E-mail: sellersj@math.psu.edu
- Steven Plotnick, Ph.D.
Associate Professor
Department of Mathematics and Statistics
SUNY at Albany, NY 12222
Telephone: (518) 442-4613
Facsimile: (518) 442-4731
E-mail: plotnick@albany.edu
- David Kung, Ph.D.
Associate Professor of Mathematics
St. Mary's College of Maryland
18952 E. Fisher Rd
St. Mary's City, MD 20686-3001
Telephone: (240) 895-4433
E-mail: dtkung@smcm.edu