

Michael Dewar

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EDUCATION

Ph.D Student, Mathematics, University of Illinois at Urbana-Champaign. expected May 2010

Advisor: Scott Ahlgren

Dissertation: Ramanujan congruences in modular forms.

B. Math, Carleton University, Canada. 2000-2004

Advisor: Daniel Panario

Honours Project: A survey concerning the number and size of components of combinatorial structures.

RESEARCH INTERESTS

Number Theory: modular forms, Jacobi forms, harmonic weak Maass forms.

PUBLICATIONS

1. Michael Dewar. Non-existence of Ramanujan congruences in modular forms of level four. Submitted. 2009.
2. Michael Dewar. Non-existence of simple congruences in quotients of Eisenstein series. Submitted. 2009.
3. Michael Dewar and Olav Richter. Ramanujan congruences for Siegel modular forms. *Int. J. Number Theory*, to appear.
4. Michael Dewar. The nonholomorphic parts of certain weak Maass forms. *J. Number Theory*, to appear.
5. Michael Dewar, Lucia Moura, Daniel Panario, Brett Stevens, and Qiang Wang. Division of trinomials by pentanomials and orthogonal arrays. *Des. Codes Cryptogr.*, 45(1):1-17, 2007.
6. Stephen D. Cohen, Michael Dewar, John B. Friedlander, Daniel Panario, and Igor E. Shparlinski. Polynomial Gauss sums. *Proc. Amer. Math. Soc.*, 133(8):2225-2231 (electronic), 2005.
7. Michael Dewar, Daniel Panario, and Igor E. Shparlinski. Distribution of exponential functions with k -full exponent modulo a prime. *Indag. Math. (N.S.)*, 15(4):497-503, 2004.
8. Michael Dewar and Daniel Panario. Mutual irreducibility of certain polynomials. In *Finite fields and applications*, volume 2948 of Lecture Notes in Comput. Sci., pages 59-68. Springer, Berlin, 2004.
9. Michael Dewar and Daniel Panario. Linear transformation shift registers. *IEEE Trans. Inform. Theory*, 49(8):2047-2052, 2003.

FELLOWSHIPS & SCHOLARSHIPS

University Fellowship, University of Illinois at Urbana-Champaign.	Spring 2010
Mathematics Department Fellowship, University of Illinois at Urbana-Champaign.	Spring 2009, Spring 2008
NSERC Julie Payette Postgraduate Scholarship.	2004-2006
Entrance Scholarship, Carleton University.	2000-2004
NSERC Undergraduate Research Award.	Summer 2003, Summer 2002

AWARDS

Department of Mathematics Teaching Assistant Instructional Award, University of Illinois at Urbana-Champaign.	Spring 2009
Department of Mathematics Teaching Assistant Instructional Award, Honourable Mention, University of Illinois at Urbana-Champaign.	Spring 2008
University Medal of Mathematics, Carleton University, Canada.	2004
Dean's List, Carleton University, Canada.	2000-2004
Governor General's Academic Bronze Medal.	2000
Valedictorian, Notre Dame High School, Ottawa, Canada.	2000

TALKS

Joint Mathematics Meetings , San Francisco, California. Contributed Paper.	January 16, 2010
Sixth Annual Midwest Number Theory Conference for Graduate Students , University of Wisconsin-Madison.	November 7-8, 2009
University of Wisconsin-Madison: Number Theory Seminar.	September 29, 2009
Palmetto Number Theory Series X , Savannah, Georgia. <i>Invited Plenary Speaker. 45 minutes.</i>	September 19-20, 2009
23rd Annual Workshop on Automorphic Forms and Related Topics , Bucknell University, Lewisburg, Pennsylvania.	March 10-13, 2009
Fifth Annual Midwest Number Theory Conference for Graduate Students , University of Wisconsin-Madison.	November 3-4, 2007
Workshop on Polynomials over Finite Fields and Applications , Banff International Research Station, Canada.	November 18-23, 2006
Graduate Student Seminar , Carleton University, Canada.	February 6, 2004
Fq7: Seventh International Conference on Finite Fields and Applications , Toulouse, France.	May 5-9, 2003

University of Illinois at Urbana-Champaign

Number Theory Seminar.	September 22, 2009
Number Theory Seminar.	March 3, 2009
Number Theory Seminar.	April 10, 2008

CONFERENCES AND WORKSHOPS

2010

Joint Mathematics Meetings, San Francisco, California. January 13-16

2009

Sixth Annual Midwest Number Theory Conference for Graduate Students,
University of Wisconsin-Madison. November 7-8

Palmetto Number Theory Series X, Armstrong Atlantic State University,
Savannah, Georgia. September 19-20

Mock theta functions and applications in combinatorics, algebraic geometry,
and mathematical physics, Max Planck Institute for Mathematics, Bonn, Germany. May 25-29

23rd Annual Workshop on Automorphic Forms and Related Topics
Bucknell University Lewisburg, Pennsylvania. March 10-13

2008

CMI/MSRI Workshop: Modular Forms and Arithmetic
Mathematical Sciences Research Institute, Berkeley, CA. June 28-July 2

The Hawaii workshop on the arithmetic of modular forms
University of Hawaii at Manoa. May, 21-24

Conference on Partitions, q -series, and Modular Forms
University of Florida, Gainesville, FL. March 8-16

2003-2007

Fifth Annual Midwest Number Theory Conference for Graduate Students,
University of Wisconsin-Madison. November 3-4, 2007

Polynomials over Finite Fields and Applications,
Banff International Research Station, Canada. November 18-23, 2006

Tenth Seminar on Analysis of Algorithms,
Mathematical Sciences Research Institute, Berkeley, CA. June 14-18, 2004

Fq7: Seventh International Conference on Finite Fields and Applications,
Toulouse, France. May 5-9, 2003

15th Applied Algebra, Algebraic Algorithms, and Error Correcting Codes
Symposium, Toulouse, France. May 12-16, 2003

TEACHING

University of Illinois at Urbana-Champaign

2004-present

Instructor: Responsible for all aspects of teaching and grading.

Calculus II Active Learning, one section.

Finite Mathematics, two sections.

Introductory Matrix Algebra, three sections.

Actuarial Problem Solving, five sections.

Laboratory: Led future elementary school teachers through extended assignments.

Theory of Arithmetic, four sections.

Recitation: Lectured on examples and homework problems, gave quizzes, graded student work.

Calculus I, one section.

Carleton University

2003-2004

Discussion: Lectured on examples and homework problems, graded student work.

Discrete Structures and Applications, one section.

Real Analysis, one section.

SERVICE

Co-organizer of the Job Applicant Workgroup at UIUC Mathematics Department, Fall 2009.

Department of Mathematics Teaching Assistant Mentor, Fall 2008.

Department of Mathematics Graduate Student Open House Organizing Committee, 2006-2008.

Student host for Mathematics Graduate Student Open House, March 2006 and March 2007.

Illinois Council of Teachers of Mathematics High School Mathematics Contest, Spring 2005.

Carleton University Student Association Councilor, 2002-2003.

Carleton University Debating Society Secretary-Treasurer, 2001-2002.

REFERENCES

Scott Ahlgren

Associate Professor
Department of Mathematics
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Bruce C. Berndt

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Ken Ono

Solle P. and Margaret Manasse Professor of
Letters and Science
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Christopher J. Leininger (Teaching)

Assistant Professor
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