

Vitae

Ken Ono

Citizenship: USA

Date of Birth: March 20, 1968

Place of Birth: Philadelphia, Pennsylvania

Education:

- Ph.D., Pure Mathematics, University of California at Los Angeles, March 1993
Thesis Title: *Congruences on the Fourier coefficients of modular forms on $\Gamma_0(N)$ with number theoretic applications*
- M.A., Pure Mathematics, University of California at Los Angeles, March 1990
- B.A., Pure Mathematics, University of Chicago, June 1989

Research Interests:

- Automorphic and Modular Forms
- Algebraic Number Theory
- Theory of Partitions with applications to Representation Theory
- Elliptic curves
- Combinatorics

Publications:

1. *Shimura sums related to quadratic imaginary fields*
Proceedings of the Japan Academy of Sciences, **70** (A), No. 5, 1994, pages 146-151.
2. *Congruences on the Fourier coefficients of modular forms on $\Gamma_0(N)$,*
Contemporary Mathematics **166**, 1994, pages 93-105., The Rademacher Legacy to Mathematics.
3. *On the positivity of the number of partitions that are t -cores,*
Acta Arithmetica **66**, No. 3, 1994, pages 221-228.

4. *Superlacunary cusp forms*, (Co-author: Sinai Robins),
Proceedings of the American Mathematical Society **123**, No. 4, 1995, pages 1021-1029.
5. *Parity of the partition function*,
Electronic Research Announcements of the American Mathematical Society, **1**, No. 1, 1995, pages 35-42
6. *On the representation of integers as sums of triangular numbers*
Aequationes Mathematica (Co-authors: Sinai Robins and Patrick Wahl) **50**, 1995, pages 73-94.
7. *A note on the number of t -core partitions*
The Rocky Mountain Journal of Mathematics **25**, 3, 1995, pages 1165-1169.
8. *A note on the Shimura correspondence and the Ramanujan $\tau(n)$ -function*,
Utilitas Mathematica **47**, 1995, pages 153-160.
9. *Congruences for Frobenius partitions*.
Journal of Number Theory, **57**, 1, 1996 pages 170-180.
10. *Defect zero p -blocks for finite simple groups*, (Co-author: Andrew Granville)
Transactions of the American Mathematical Society, **348**, 1, 1996, pages 331-347.
11. *On the parity of the partition function in arithmetic progressions*.
Journal für die Reine und angewandte Mathematik, **472**, 1996, pages 1-15.
12. *Congruences for the Fourier coefficients of half-integral weight modular forms and special values of L -functions*, (Co-authors: Antal Balog and Henri Darmon).
Proceedings for a Conference in Honor of Heini Halberstam, **1**, 1996, pages 105-128.
13. *Congruences for partition functions*, (Co-author: Dennis Eichhorn),
Proceedings for a Conference in Honor of Heini Halberstam, **1**, 1996, pages 309-321.
14. *Rank zero quadratic twists of modular elliptic curves*,
Compositio Mathematica, **104**, 1996, pages 293-304.
15. *Quadratic forms and elliptic curves, III*, (Co-author: Takashi Ono),
Proceedings of the Japan Academy of Sciences, Ser. A, **72**, 1996, pages 204-205.

16. *Euler's concordant forms*
Acta Arithmetica, **65**, 1996, pages 101-123.
17. *Some recurrences for arithmetical functions*, (Co-authors: Neville Robbins and Brad Wilson)
Journal of the Indian Mathematical Society, **62**, 1996, pages 29-50.
18. *Divisibility properties of certain partition functions by powers of primes*, (Co-author: Basil Gordon),
The Ramanujan Journal, **1**, 1997, pages 25-35.
19. *Parity of the Fourier coefficients of modular forms*, (Co-author: Brad Wilson).
Illinois Journal of Mathematics, **41**, 1997, pages 142-150.
20. *Odd values of the partition function*.
Discrete Mathematics, **169**, 1997, pages 263-268.
21. *4-core partitions and class numbers*, (Co-author: Lawrence Sze),
Acta Arithmetica, **65**, 1997, pages 249-272.
22. *Twists of elliptic curves*,
Compositio Mathematica, **106**, 1997, pages 349-360.
23. *Ramanujan, taxicabs, birthdates, zipcodes and twists*.
American Mathematical Monthly, **104**, No. 10, 1997, pages 912-917.
24. *Tate-Shafarevich groups of the congruent number elliptic curves*,
Acta Arithmetica, **81**, 1997, pages 247-252.
25. *Ramanujan's ternary quadratic form*, (Co-author: Soundararajan Kannan),
Inventiones Mathematicae, **130**, 3, 1997, pages 415-454.
26. *Eta-quotients and elliptic curves*, (Co-author: Yves Martin),
Proceedings of the American Mathematical Society, **125**, 1997, pages 3169-3176.
27. *Values of Gaussian hypergeometric series*
Transactions of the American Mathematical Society, **350**, 3, 1998, pages 1205-1223.

28. *A binomial coefficient identity related to a conjecture of F. Beukers*,
(Co-authors: Scott Ahlgren, Shalosh Ekhad, Doron Zeilberger),
Electronic Journal of Combinatorics, Volume 5 (1), 1998, R10.
29. *Fourier coefficients of half integral weight modular forms modulo ℓ* (Co-author: Chris Skinner),
Annals of Mathematics, **147**, No. 2, 1998, pages 453-470.
30. *Gordon's ϵ -conjecture on the lacunarity of modular forms*,
Comptes Rendues Math. Rep. of Acad. Sci. Canada, **20**, (4), 1998, pages 103-107.
31. *Partitions into distinct parts and elliptic curves*,
Journal of Combinatorial Theory, Series A, **82**, 1998, pages 193-201.
32. *A note on a question of J. Nekovář and the Birch and Swinnerton-Dyer Conjecture*,
Proceedings of the American Mathematical Society, **126**, 1998, pages 2849-2853.
33. *The residue of $p(n)$ modulo small primes*,
The Ramanujan Journal, Erdős Memorial Issue, **2**, 1998, pages 47-54.
34. *The partition function in arithmetic progressions*.
Mathematische Annalen, **312**, 1998, pages 251-260.
35. *Rook theory and t -cores*, (Co-authors: Jim Haglund and Lawrence Sze).
Journal of Combinatorial Theory, Series A, **84**, 1998, pages 9-37.
36. *Corrigendum: Fourier coefficients of half-integral weight modular forms modulo ℓ* ,
(Co-author: Christopher Skinner),
Annals of Mathematics, **148**, 1998, page 361,
A typesetting error is corrected in paper 29.
37. *Non-vanishing of quadratic twists of modular L -functions*, (Co-author: Chris Skinner),
Inventiones Mathematicae, **134**, 1998, pages 651-660.
38. *Integers represented by ternary quadratic forms*, (Co-author: Soundararajan Kannan),
Proceedings of the 5th Meeting of the Canadian Number Theory Association, CRM Proceedings and Lecture Notes, **19**, 1998, pages 281-290.

39. *A Note on the Irreducibility of Hecke polynomials*, (Co-author: Kevin James).
Journal of Number Theory, **73**, 1998, pages 527-532.
40. *Non-vanishing of values of modular L -functions and some applications*,
(Co-authors: Jan Hendrik Bruinier, Kevin James, Winfried Kohnen, Vinayak Vatsal,
Chris Skinner),
Proceedings of Topics in Number Theory, Kluwer Academic Publishers, 1999, pages
115-126.
41. *Theorems and conjectures involving rook polynomials with real roots*, (Co-authors:
Jim Haglund and David Wagner),
Proceedings of Topics in Number Theory, Kluwer Academic Publishers, 1999, pages
207-222.
42. *Indivisibility of class numbers of imaginary quadratic fields and orders of Tate-
Shafarevich groups of elliptic curves with complex multiplication*,
(Co-author: Winfried Kohnen).
Inventiones Mathematicae, **135**, 1999, pages 387-398.
43. *Selmer groups of quadratic twists of modular elliptic curves*,
(Co-author: Kevin James),
Mathematische Annalen, **314**, 1999, pages 1-17.
44. *Ramanujan's unpublished manuscript on the partition and tau functions with com-
mentary*,
(Co-author: Bruce Berndt), Seminaire Lotharingien de Combinatoire, **42**.
45. *On the circular summation of the eleventh powers of Ramanujan's theta function*,
Journal of Number Theory, **76**, 1999, pages 62-65.
46. *Indivisibility of class numbers of real quadratic fields*.
Compositio Mathematica, **119**, 1999, pages 1-11.
47. *The partition function and the arithmetic of certain modular L -functions*,
(Co-author: Li Guo),
International Mathematical Research Notes, 1999, No. 21, pages 1179-1197.
48. *Distribution of the partition function modulo m* ,
Annals of Mathematics, **151**, 2000, pages 293-307.

49. *A Gaussian hypergeometric series evaluation and Apéry number congruences*,
(Co-author: Scott Ahlgren),
Journal für die reine und angewandte Mathematik, **518**, 2000, pages 187-212.
50. *Modularity of a certain Calabi-Yau threefold*,
(Co-author: Scott Ahlgren),
Monatshefte für Mathematik, **129**, 2000, 177-190.
51. (accepted for publication) *On “good” half-integral weight modular forms*,
(Co-author: Jorge Jimenez Urroz).
Mathematics Research Letters.
52. (accepted for publication) *The 2-adic behavior of the number of partitions into distinct parts*,
(Co-author: David Penniston),
Journal of Combinatorial Theory, Series A.
53. (submitted) *Coefficients of modular forms in intervals*,
(Co-author: Antal Balog).
54. (submitted) *Baxter algebras and Hopf algebras*,
(Co-authors: George Andrews, Li Guo, and William Keigher).
55. (submitted) *Nonvanishing of quadratic twists of modular L-functions with applications for elliptic curves*.
56. (submitted) *Differential endomorphisms for modular forms on $\Gamma_0(4)$* .
57. (submitted) *Extension of Ramanujan’s congruences for the partition function modulo powers of 5*,
(Co-author: Jeremy Lovejoy).
58. (submitted) *Bizarre q-series identities and values of certain L-functions*,
(Co-author: George Andrews and Jorge Jimenez-Urroz).
59. (submitted) *Arithmetic of the partition function*,
Proceeding of the NATO Advanced Study Institute on Special Functions.
60. (submitted) *Zeta functions of an infinite family of K3 surfaces*,
(Co-authors: Scott Ahlgren and David Penniston).

61. (in preparation) *Prime power degree representations of the symmetric and alternating groups*,
(Co-authors: Antal Balog, Christine Bessenrodt and Jorn Olsson).
62. (in preparation) *A note on certain elliptic curves in number field extensions*,
(Co-author: Matthew Papanikolas).

Books edited:

1. *Proceedings of Topics in Number Theory*, Vol. 467 Mathematics and Its Applications,
(Co-editors: Scott Ahlgren and George Andrews), Kluwer Academic Publishers, 1999.

Presentations:

- June 1992 *Congruences on the Fourier coefficients of modular forms*,
Pacific Northwest MAA meeting, Missoula, Montana.
- July 1992 *Fourier coefficients and their congruences*,
Rademacher Centenary Conference, State College, Pennsylvania.
- September 1992 *Infinitely many exceptional primes and weight one forms in the Swinnerton-Dyer Theory of congruences*,
UNESCO-CIMPA Summer School on Automorphic Forms, Nice, France.
- December 1992 *Modular forms with complex multiplication and dihedral extensions of \mathbb{Q}* ,
West Coast Number Theory Conference, Corvallis, Oregon.
- March 1993 *Representations of integers as sums of triangular numbers*,
Stanford Workshop on Automorphic Forms, Palo Alto, California.
- December 1993 *Shimura sums related to quadratic imaginary fields*,
West Coast Number Theory Conference, Asilomar, California
- December 1993 *On the number of t -core partitions*,
West Coast Number Theory Conference, Asilomar, California
- December 1993 *On the status of Fermat's Last Theorem*, (with Joe Buhler, Andrew Granville, and Jeff Lagarias),
West Coast Number Theory Conference, Asilomar, California
- April 1994 *On the parity of the partition function*,
Illinois Number Theory Conference, Urbana, Illinois.

- April 1994 *On the parity of the partition function*,
Southeastern Regional Meeting on Numbers, Charleston, South Carolina.
- August 1994 *On the parity of the partition function* (Short communication),
International Congress of Mathematicians, Zurich, Switzerland (NSF grant supported).
- August 1994 *On the parity of the partition function*,
AMS Special Session on q -series, Minneapolis, Minnesota (invited speaker).
- November 1994 *The classification of defect zero p -blocks for finite simple groups*,
Midwest Number Theory Day, Chicago, Illinois.
- December 1994 *Parity of Fourier coefficients of modular forms*,
West Coast Number Theory Conference, San Diego, California.
- January 1995 *On the classification of defect zero p -blocks for finite simple groups*,
(1 hour invited speaker)
International conference on representation theory and combinatorics, Oberwolfach, Germany.
- May 1995 *Congruences for special values of L -functions*, (invited speaker),
International Conference in Analytic Number Theory in Honor of Heini Halberstam,
Allerton Park, Illinois.
- August 1995 *Congruences for special values of L -functions*, (invited speaker)
AMS Special Session on Number related to Stark's conjectures, Burlington, Vermont.
- November 1995 *Divisibility of certain partition functions by powers of primes*, (invited speaker)
AMS Special Session in Number Theory, Greensboro, North Carolina.
- November 1995 *Rank zero prime twists of elliptic curves*, (invited speaker)
AMS Special Session in Number Theory, Greensboro, North Carolina.
- December 1995 *Twists of elliptic curves*,
West Coast Number Theory Conference, Asilomar, California.
- January 1996 *Rank zero quadratic twists of elliptic curves*, (invited speaker)
AMS Special Session on Diophantine Problems from different perspectives, Orlando, Florida.

- February 1996 *Ferrers boards and class numbers*,
Workshop on Combinatorial Number Theory, DIMACS.
- March 1996 *Modular forms and the prime 2*,
Workshop on automorphic forms, Stanford University, California.
- April 1996 *Partitions, representation theory and class numbers*, (invited speaker)
AMS Special Session in Analytic Number Theory, New York, New York.
- August 1996 *Ramanujan's ternary quadratic form*, (40 minute invited speaker),
The 5th Canadian Number Theory Conference, Ottawa, Canada.
- October 1996 *L -functions mod p* , (invited speaker),
AMS Special Session on Automorphic forms, Lawrenceville, New Jersey.
- December 1996 *Some theorems about modular L -functions*,
West Coast Number Theory Conference, Las Vegas, Nevada.
- March 1997 *Central critical values of modular L -functions*, (1 hour invited speaker),
Japanese-American Mathematical Institute Conference on Elliptic curves and Applications, Baltimore, Maryland.
- April 1997 *Central critical values of modular L -functions*, (1 hour invited speaker),
The Illinois Number Theory Conference, Urbana, Illinois.
- July 1997 *Critical values of modular L -functions*, (invited speaker),
Conference on number theory on the occasion of Andrzej Schinzel's 60th birthday,
Warsaw, Poland.
- September 1997 *Indivisibility of class numbers and L -values*, (invited speaker),
AMS Special Session on Number Theory and arithmetic geometry, Montreal, Canada.
- April 1998 *p -divisibility of class numbers of imaginary and real quadratic fields, and orders of Tate-Shafarevich groups of rank zero elliptic curves*, (invited speaker)
AMS Special Session on Modular Identities and q -series,
Philadelphia, Pennsylvania.
- June 1998 *Nonvanishing of q -series coefficients*, (1 hour invited speaker),
10th Conference on Formal Power Series and Algebraic Combinatorics,
Fields Institute, Toronto, Canada.

- June 1998 *Nonvanishing of q -series coefficients*, (1 hour invited speaker), AMS Joint Summer Research Conference, “ q -series, Combinatorics, and Computer Algebra”, South Hadley, Massachusetts.
- October 1998 *In the beginning...* (1 hour invited speaker), Celebration of G. Andrews’ 60th Birthday, State College, Pa.
- June 1999, *New results on the partition function* (40 minute invited speaker), 6th Canadian Number Theory Conference, Winnipeg, Canada.
- June 1999, 1999 Park City - Institute for Advanced Study Institute on Arithmetic Algebraic Geometry, (invited participant), Park City, Utah.
- July 1999, *Ramanujan congruences and more....*, MASS REU MathFest (45 minute invited speaker), Penn State University
- November 1999, *Recent results for the partition function and some questions of Serre*, (50 minute invited speaker), Conference on symbolic computation, number theory, special functions, physics and combinatorics, Gainesville, Florida.
- December 1999, *Chebotarev in intervals and applications* (1 hour invited speaker), Galois theory and modular forms, Saga, Japan.
- January 2000, *Modular forms and elliptic curves*, (50 minute invited speaker), Joint AMS-MAA Meetings, Washington D. C.
- April 2000, *Tate-Shafarevich groups and ranks of quadratic twists of elliptic curves* (1 hour speaker), 6th Midwest Algebraic Number Theory Day, Ohio State University, Columbus, Ohio.
- April 2000, *Ranks and Tate-Shafarevich groups of quadratic twists of elliptic curves* (1 hour invited speaker), Recent trends in Analytic Number Theory, Institute for Advanced Study, Princeton.
- May 2000, *Ranks and Tate-Shafarevich groups of elliptic curves*, The Millennial Conference on Number Theory, (1 hour invited speaker), Urbana, Illinois.

- May-June 2000, *To be announced* (2 hour invited speaker),
NATO Advanced Study Institute, Special Functions 2000: Current Perspective and
Future Directions.
Tempe, Arizona.
- June 2000, *To be announced* (invited speaker),
Tenth SIAM Conference on Discrete Mathematics
Minneapolis, Minnesota.
- August 2000, *To be announced* (50 minute invited speaker),
Number Theory in Honor of the Lehmers,
Berkeley, California.
- September 2000, *To be announced*
AMS Special Session on Analytic Number Theory,
Toronto, Canada.
- December 2000, *To be announced*
CMS Winter Meeting, Special Session on Number Theory,
Vancouver, Canada.
- March 2001, *To be announced* (1 hour invited address)
AMS Central Sectional Meeting,
Lawrence, Kansas.

Colloquia and Seminars:

- November 1992 *Modern number theory and the importance of modular forms*,
University of Montana
- November 1992 *The arithmetic of modular forms*,
Brigham Young University
- January 1993 *Modular forms and Galois representations*,
University of Oregon
- February 1993 *The arithmetic of modular forms*,
University of Northern Colorado
- July 1993 *On Fermat's Last Theorem*, (with Sinai Robins),
University of Northern Colorado
- July 1993 *On Fermat's Last Theorem*,
University of Montana

- October 1993 *Diophantine Equations and Modular forms*,
SUNY, Brockport
- November 1993 *The arithmetic of modular forms*,
University of Florida
- November 1993 *Superlacunary Euler Products*,
The Pennsylvania State University
- May 1994 *Modular forms and number theory*,
Kennesaw State College
- November 1994 *Elliptic curves, partitions, and representation theory via modular theta functions*,
The Pennsylvania State University
- December 1994 *Lacunarity of modular forms, partitions and elliptic curves*,
University of Michigan at Ann Arbor
- February 1995 *Parity of the Fourier coefficients of modular forms*,
Brown University
- June 1995 *Conjectures for Partition functions*,
University of Montana
- September 1995 *Congruences for arithmetic functions*,
CUNY Graduate School: New York Number Theory Seminar, New York.
- November 1995 *Partitions and existence of t -cores*,
Institute for Advanced Study-Princeton University-Rutgers University Number Theory Seminar
- December 1995 *Partitions, blocks and class numbers*,
Columbia University, New York, New York.
- February 1996 *Twists of elliptic curves*,
Center for Computing Sciences, Bowie, Maryland.
- April 1996 *Ramanujan's ternary quadratic form*,
San Francisco State University, San Francisco, California.
- April 1996 *Ramanujan's ternary quadratic form*,
Reed College, Portland, Oregon.

- May 1996 *Ramanujan's ternary quadratic form*,
University of Waterloo, Waterloo, Canada.
- May 1996 *Modular forms and the prime 2*,
University of Waterloo, Waterloo, Canada.
- November 1996 *Congruences and Diophantine equations*,
Temple University, Philadelphia, Pennsylvania.
- November 1996, *Congruences and Diophantine equations*,
Rutgers University, Newark, New Jersey.
- April 1997, *Congruences for the ordinary partition function*,
University of Illinois, Urbana.
- April 1997, *Ramanujan, 2719 and L -functions of elliptic curves*,
Bryn Mawr College and Haverford College Joint Colloquium.
- May 1998, *Divisibility of coefficients of modular forms and number theoretic applications*,
University of Maryland, College Park, Md.
- January 1999, *New results on the partition function*,
University of Maine, Orono.
- February 1999, *The partition function modulo m* ,
University of Texas, Austin.
- March 1999, *The partition function and new applications*,
University of Wisconsin, Madison.
- February 2000, *Number Theory and partitions: The Legacy of Ramanujan and Dyson, and beyond*,
Colgate University.

Other Professional Activities:

- April 1994 Judge, 46th Georgia Science and Engineering Fair, Athens, Georgia
- May 1994 Judge, International Science and Engineering Fair, Birmingham, Alabama
- July - August 1997 "Topics in Number Theory Conference",
Co-organizer with G. Andrews, Penn State University.
- October 24-25, 1998 AMS Special Session on "*Partitions and q -series*",

Co-organizer with S. Ahlgren and G. Andrews,
State College, Pennsylvania.

- July 1998 Invited Lecturer, “National Youth Science Foundation”
- March 1999 Seaway Number Theory Conference,
Co-organizer with S. Ahlgren,
State College, Pennsylvania.
- July 1999
Invited Lecturer and Group Study Leader, “National Youth Science Founda-
tion”
National Youth Science Camp, West Virginia.
- July 2000
Invited Lecturer and Group Study Leader, “National Youth Science Founda-
tion”
National Youth Science Camp, West Virginia.
- October 26-28, 2000 “*q-series with Applications to Combinatorics, Number Theory
and Physics*,”
Co-organizer with B. Berndt,
Urbana, Illinois.
- May 2000 - April 2001 “*NSF50, Where Discoveries Begin*”
Keynote scientist participating in the “Scientists and Engineers in the Schools”
program.
- March 30-31, 2001 “Special Session on Number Theory”, AMS Central Section
Meeting,
Co-organizer with C. Popescu and T. Yang,
Lawrence, Kansas.

Advising:

Post-doctoral Fellows and Visiting Assistant Professors:

- (1997-1999) Scott Ahlgren (Ph.D. 1996, U. Colorado)
Next Job: Colgate University (Tenure Track Assistant Professor)
- (1998-1999) James Haglund - NSF Postdoctoral Fellow (Ph.D. 1995, U. Georgia)
Next Job: University of California, San Diego (Visiting Asst. Prof.)
- (1997-2000) Kevin James (Ph.D. 1997, U. Georgia)
Next Job: Clemson University (Tenure Track Assistant Professor).

- (1998-2000) David Penniston (Ph.D. 1998, U. Georgia).
Next Job: Furman University (Tenure Track Assistant Professor).
- (1998-2000) Matt Papanikolas (Ph.D. 1998, Brown U.).
Next Job: Brown U., Tamarkin Assistant Professor. Brown U.).

Graduate Students:

- Jeremy Lovejoy: *Arithmetic and Combinatorial Properties of Partition functions*,
Co-advisor: George Andrews,
Penn State Ph.D. - Spring 2000.
First Job: Van Vleck Assistant Professor, University of Wisconsin.
- Maki Murata: *q-series identities and the modularity of certain K3 surfaces*,
Penn State M.A., Winter 1999.
First Job: Panasonic, Tokyo Japan (Research Scientist).
- Lawrence Sze: *On the combinatorial and number theoretic properties of (r, e) -core partitions*,
Penn State Ph.D. - Spring 1998
First Job: Cal Poly SLO (Tenure Track Assistant Professor).

Doctoral Defense Committees (External Examiner):

- Jeffrey Meyer: *Analogues of Dedekind sums*,
University of Illinois, August 1997.
Bruce Berndt (Thesis Advisor)
- Francesco Sica: *The order of vanishing of L-functions at the center of the critical strip*,
McGill University, Spring 1998.
Ram Murty (Thesis Advisor).

Undergraduate Students:

- Rhiannon Weaver: *Finding new congruences for the partition function*,
Penn State Honors Thesis (Spring 2000),
2000 Schreyer Honors College Dean's Award for Research or Creative Achievement,
Penn State University.

High School Students:

- Jayce Getz: 2nd place (\$75,000) - 2000 Intel Science Talent Search
(Note: This was formerly known as the Westinghouse Talent Search),
2nd place overall, 2000 International Science and Engineering Fair,
1st place in Mathematics, 2000 International Science and Engineering Fair.
- Brittany Kirkland: 1st place - 2000 Rocky Mountain Science Symposium,
3rd place in Mathematics, 2000 International Science and Engineering Fair.

- Jayce Getz: Finalist - 1999 International Science and Engineering Fair.
- Jayce Getz: Finalist - 1998 International Science and Engineering Fair.
- Nick Eriksson: 3rd place \$20,000-1997 Westinghouse Talent Search
2nd place in Mathematics-1997 International Science and Engineering Fair.
- Nick Eriksson: 2nd place in Mathematics -1996 International Science and Engineering Fair.
- Sarah Lord: 2nd place in Mathematics - 1994 International Science and Engineering Fair.
- Sarah Lord: 2nd place in Mathematics -1993 International Science and Engineering Fair.

Reviewing, Refereeing, Editorial Work etc.:

- 2000-present Member, Editorial Board,
The International Mathematical Journal.
- 2000 Algebra and Number Theory Proposal Panel Member
National Science Foundation.
- 1995-00 Reviewer of National Science Foundation (NSF) grants
- 1997, 2000 Reviewer for National Sciences and Engineering Research Council of
Canada (NSERC) grants
- 1998-00 Reviewer of National Security Agency Grants
- Referee work: Acta Arithmetica, Acta Applicandae Mathematicae, American Mathematical Monthly, Bulletin of the London Mathematical Society, Canadian Journal of Mathematics, Canadian Mathematical Bulletin, Compositio Mathematica, Discrete Mathematics, Duke Math. Journal, Journal für die Reine und Angewandte Mathematik, Journal of Number Theory, Journal of the Australian Mathematical Society, Journal of the London Mathematical Society, Journal of Symbolic Computation, Illinois Journal of Math., International Journal of Mathematics and the Mathematical Sciences, Inventiones Mathematicae, Mathematisches Annalen, Mathematics of Computation, Proceedings of the American Mathematical Society, The Ramanujan Journal, Rocky Mountain Journal of Mathematics, Transactions of the American Mathematical Society

- Review work: Mathematical Reviews
- Review work: The Plenum Publishing Co., Addison- Wesley Publishing Co.
- 1995 International Committee Member: Korea Science and Engineering Foundation

Professional Awards and Grants:

- 2000 Presidential Early Career Award for Scientists and Engineers
\$500,000
- 1999 David and Lucile Packard Fellowship
\$625,000
- 1999-present Louis Martarano Professor of Mathematics,
Endowed Chair for Junior Faculty at Penn State University.
- 1999-2001 Alfred P. Sloan Foundation Research Fellow
\$35,000
- 1998-2004 NSF CAREER
DMS-9874947
\$200,000
- 1998 AMS-NSF Berlin ICM Travel Grant
\$1,950.
- 1997-1999 National Security Agency:
Young Investigator
\$38,500 Grant Number MSPR-97Y012
- July - August 1997 “Topics in Number Theory Conference”,
Co-organizer with G. Andrews, Penn State University.

National Science Foundation
\$10,000 Grant DMS 9711159

Institute for Mathematics and its Applications Grant
\$3,000

Penn State Continuing and Distance Education Grant
\$2,300
- 1995-1999 National Science Foundation

Postdoctoral Fellow:
\$75,000 Grant Number DMS-9508976

- 1994 AMS-NSF Zurich ICM Travel Grant
\$1,500.

Professional Positions:

- July 1999 - present Associate Professor
University of Wisconsin at Madison
(on leave for 1999-2000 academic year).
- September 1999 - present Louis A. Martarano Professor of Mathematics
Penn State University
- June 1997 - August 1999 Assistant Professor
Penn State University
- September 1995- May 1997 Member
Institute for Advanced Study, Princeton
NSF Grant DMS-9304580
- September 1994- August 1995 Visiting Assistant Professor
University of Illinois at Urbana-Champaign
- August 1993- July 1994 Visiting Assistant Professor
The University of Georgia
- September 1991- August 1993 Instructor
Woodbury University, Burbank, California.