

CURRICULUM VITAE

NAME: Francis G. Garvan

PRESENT POSITION: Professor

ADDRESS: Department of Mathematics
University of Florida
Gainesville, Florida 32611
(352) 294-2305

BORN: March 9, 1955

DEGREES: B.Sc. (Hons), University of New South Wales,
Kensington, Australia – 1977
Dip.Ed., University of New South Wales,
Kensington, Australia – 1978
M.Sc., University of New South Wales,
Kensington, Australia – 1982
Ph.D., Pennsylvania State University – 1986

RESEARCH INTERESTS: Number Theory, Combinatorics,
Special Functions

PROFESSIONAL EXPERIENCE:

Professor, Department of Mathematics, University of Florida, 2000 – present.
Associate Professor, Department of Mathematics, University of Florida, 1994 – 1999.
Assistant Professor, Department of Mathematics, University of Florida, August 1990 — 1993.
NSERC International fellow, Department of Mathematics, Statistics and Computing Science, Dalhousie University, Halifax, January, 1991 – December, 1991.
Postdoctoral Research Fellow, School of Mathematics, Physics, Computing and Electronics, Macquarie University. August, 1988 – July, 1990.
Postdoctoral Fellow, I.M.A., University of Minnesota, Minneapolis, August, 1987 – July 1988.
Visiting Assistant Professor, Department of Mathematics, University of Wisconsin, Madison, August, 1986 – July, 1987.
Instructor, Math Department, Pennsylvania State University, York Campus, September, 1985 – July, 1986.
Research Assistant, Math Department, Pennsylvania State University, University Park, June – August, 1985.
Graduate Assistant, Math Department, Pennsylvania State University, University Park, September, 1982 – May, 1985.
Graduate Student, University of New South Wales, Kensington, Australia, August, 1981 – August, 1982.
High School Teacher, New South Wales Department of Education, February, 1978 – December, 1980.

GRANTS:

PI for NSF grant (ref. DMS-9208813) entitled “Dedekind’s eta-function, combinatorics, congruences and approximations” for the period July 1992 - June 1995.
PI for NSF grant (ref. DMS-9870052) entitled “Combinatorial, Differential & Modular Partition Problems: for the period May 1998 to June 2001. Total project funding \$77, 895.
PI for a conference on “Symbolic Computation, Number Theory, Special Functions, Physics and Combinatorics” for the period September 1999 to August 2000. Funded by NSF (DMS-9976638), NSA and The Number Theory Foundation. Total award \$12,000.
PI for Number Theory and Combinatorics in Physics Conference, for the period March 2003 to March 2004. Funded by NSF (DMS 0242148), NSA and The Number Theory Foundation. Total award \$20,000.

PI for Special Year in Number Theory and Combinatorics, for the period September 2004 to August 2005. Funded by NSF (DMS 0412622), NSA and The Number Theory Foundation. Total award \$35,000.

CoPI for NSA Grant (ref. H98230-07-1-0011) entitled “Some Problems in the Theory of Partitions” for the period December 2006 to December 2009. Total award \$123,380.

CoPI for NSA Grant (ref. H98230-09-1-0051) entitled “Some Problems in the Theory of Partitions” for the period February 2009 to February 2012. Total award \$131,450.

PI for a conference “Ramanujan 125” to be held November 5-7, 2012 at the University of Florida. Funded by NSF (DMS 1206696, \$15,000, September 1, 2012 to August 31, 2013) and the NSA (ref. H98230-12-0297, \$15,000, July 13, 2012 to July 12, 2013). Total external funding \$30,000.

PI for Simons Foundation Collaboration Grant (ref. 318714) entitled “Analytic, Combinatorial and Computational Study of Partitions” for the period September 1, 2014 to August 31, 2019. Total award \$35,000.

PI of The 2016 Gainesville International Number Theory Conference (ALLADI60), held March 17–21, 2016. Funded by NSF (\$45,000), NSA (\$15,000), PSU (\$6,000) and Number Theory Foundation (\$5,000). February 2016 to February 2017. Total external funding \$71,000.

ORGANIZATIONS:

American Mathematical Society

OTHER PROFESSIONAL ACTIVITIES:

- Co-ordinating editor of The Ramanujan Journal
- Member of Number Theory Review Panel for NSA Proposals for the years 2007, 2009 and 2014.
- Member of the Program Committee for The 29th international conference on Formal Power Series and Algebraic Combinatorics London (United Kingdom), July 9–13, 2017.

REVIEWING & REFEREEING ACTIVITIES:

1993

Journal of Number Theory, 1 paper; Rocky Mountain Journal, 1 paper

1994

Crelle’s Journal, 1 paper; J. Symbolic Computation, 1 paper; J. Math. Analysis and Appl., 1 paper; Acta Arithmetica, 1 paper; Australian Research Council, 1 research proposal

1995

The Ramanujan Journal, 1 paper; Electronic J. Combinatorics, 1 paper; Proc. Illinois N. Thy. Conf., 1 paper; Australian Research Council, 1 research proposal

1996

NSERC (Canada), 1 research proposal; FPSAC 96 Conference, 1 abstract; Constructive Approx., 1 paper; J. Combinatorial Theory, 1 paper; Turkish Math. J., 1 paper; Trans. Amer. Math. Soc., 1 paper; Acta Arithmetica, 1 paper

1997

Israel J. Math., 1 paper; FPSAC 97 Conference, 1 abstract; Proc. of the 5th Conf. Canad. Number Theory Assoc., 1 paper; J. Math. Analysis and Appl., 1 paper; Trans. AMS, 1 revised paper; The Ramanujan Journal, 1 paper

1998

FPSAC 98 Conference, 1 abstract; Aeq. Math., 1 paper; Discrete Math., 1 paper; Methods and Applications of Analysis, 1 paper

1999

Canadian Journal of Math., 1 paper; Ramanujan J., 2 papers

2000

J. Number Theory, 1 paper; Ramanujan J., 2 papers; Discrete Math, 1 paper; Crelle’s Journal, 1 paper

2001

Conf. Proc., 2 papers

2002

NSF, 2 research proposals; Proc. AMS, 1 paper; Proc. London Math. Soc., 1 paper

2003

J. Symbolic Computation, 1 paper; NSA, 1 research proposal; J. Algebra, 1 paper; Trans AMS, 1 paper; J. Combinatorial Theory, 1 paper; Conf. Proc., 1 paper

2004

J. Integer Seq., 1 paper; Ramanujan J., 1 paper; J. Combinatorial Theory, 1 paper; J. Comp. Appl. Math., 1 paper

2005

J. London Math. Soc., 1 paper; NSA, 1 research proposal

2006

Proc. AMS, 2 papers; Dev. Math Book Series, 1 paper; Ramanujan J., 1 paper; Acta Arith., 1 paper

2007

Member of Number Theory Panel for NSA Proposals

Discrete Math., 1 paper

2008

Ramanujan Journal, 1 paper; Journal de Theorie des Nombres de Bordeaux, 1 paper; Rocky Mountain Journal, 1 paper

2009

Member of Number Theory Panel for NSA Proposals

J. Symbolic Computation, 1 paper; Rocky Mountain Journal, 1 paper

2010

Acta Arithmetica, 2 papers

2011

Electronic J, Combinatorics, 1 paper; Int. J. Number Theory, 1 paper

2012

Electronic J, Combinatorics, 1 paper; J. Combinatorial Theory, 1 paper; Ramanujan Journal, 2 papers

2013

J. Number Theory, 1 paper

2014

Member of Number Theory Panel for NSA Proposals

Elect. J. Comb., 1 paper; Bull. Austral. Math. Soc., 1 paper; Indian J. Math., 1 paper; J. Number Theory, 1 paper; J. Austral. Math Soc., 1 paper

2015

Int. J. Number Theory, 1 paper; Involve, 1 paper

2016

Israel J. Math, 1 paper;

2017

Monatshefte für Mathematik, 1 paper;

J. Number Theory, 1 paper;

THESES AND DISSERTATIONS DIRECTED:

Chair, 1 Masters Committee

Student Name	Research Topic	Home Department	Completion Date
Amitava Ghosh	Approximations to π , Dedekind's eta function, and modular equations	Mathematics	8/14/2007

Chair, 1 PhD Committee

Student Name	Research Topic	Home Department	Completion Date
C. Jennings-Shaffer	Analytic and Arithmetic Properties of Smallest Parts Partition Functions and Generalizations	Mathematics	May, 2015

DEPARTMENTAL SERVICE:

Math dept webmaster 2001 – July, 2009. Other past committees: Post-Doc Search Committee, Group Proposals Committee, Steering Committee, Resource Room Committee; Other present committees: Computer Committee, Graduate Committee, Undergraduate Committee Upper Division Committee

Organized the following Gainesville Number Theory Conferences:

- Symbolic Computation, Number Theory, Special Functions, Physics and Combinatorics (November 11 – 13, 1999)
- Number Theory and Combinatorics in Physics (March 21–23, 2003)
- Additive Number Theory (November 17–20, 2004)
- Partitions, q -Series and Modular Forms (March 8 – 16, 2008)
- Quadratic Forms, Sums of Squares, Theta Functions and Integral Lattices (March 7 – 15, 2009)
- Higher Degree Forms (May 21 – 23, 2009)
- Ramanujan 125 (November 5–7, 2012)
- ALLADI60 (March 17–21, 2016)

UNIVERSITY SERVICE:

Member of College Mathematical Sciences Committee 2004 – 2007.

RECOGNITION OF TEACHING ACHIEVEMENTS:

1995 TIP Award

COURSE DEVELOPMENT

- 1997-1999: Developed a new Undergraduate course “Introduction to Maple”, which ran as a section of MAT4930
- Summer 2005: Developed Graduate Special Topics Course “Partitions and q -Series”, which ran as a section of MAT6932
- Summer 2009: Developed an online component of my Graduate Special Topics Course “Partitions and q -Series”, so I could offer it as a Reading Course. See the website <http://qseries.org/fgarvan/qs/summer2009/>

TEACHING EXPERIENCE

- MAA 4102 Introduction to Advanced Calculus 1 for Engineers and Physical Scientists, Fall 2013
- MAA 4103 Introduction to Advanced Calculus 3 for Engineers and Physical Scientists, Spring 2014
- MAA 4211 - Advanced Calculus 1, Fall 1995
- MAA 4212 - Advanced Calculus 2, Spring 1996

- MAA 4402/5404 - Functions of a Complex Variable, Fall 2007, Summer 1996, Summer 1997, Fall 2013, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Spring 2018, Fall 2018
- MAC 2233 - Survey of Calculus 1, Fall 1998
- MAC 2312 - Analytic Geometry and Calculus 2, Spring 1995, Fall 1996, Spring 1996, Spring 1998, Spring 2000, Spring 2010
- MAC 2313 - Analytic Geometry and Calculus 3, Fall 1992, Fall 1998, Spring 1999, Fall 2001, Fall 2003,
- MAC 3473 - Honors Calculus 2, Fall 1995, Fall 2000, Spring 2000, Fall 2007, Spring 2009
- MAC 3474 - Honors Calculus 3, Spring 2007
- MAD 3107 - Discrete Mathematics, Spring 2007
- MAP 2302 - Elementary Differential Equations, Spring 1993, Fall 1999, Spring 2000, Spring 2001, Fall 2002, Fall 2004, Spring 2008, Fall 2009, Spring 2011, Fall 2011, Spring 2012, Spring 2014
- MAP 4305/5304 - Differential Equations for Engineers and Physical Scientists, Summer 2003, Summer 2006, Summer 2012
- MAP 4403 - Mathematical Methods for Engineers, Fall 2000, Fall 2001
- MAS 3113 - Matrices and Vector Spaces, Fall 1993, Spring 1994
- MAS 3114 - Computational Linear Algebra, Fall 1994, Fall 1997, Summer 2004, Fall 2005, Summer 2013, Summer 2017
- MAS 3300 - Numbers and Polynomials, Fall 1992, Fall 1994, Fall 1997, Spring 1997, Summer 2001, Fall 2006, Fall 2008 Fall 2011
- MAS 4105 - Linear Algebra 1, Fall 1993, Spring 1993, Spring 1994, Fall 2002, Fall 2009, Spring 2011, Spring 2013, Fall 2014, Fall 2016
- MAS 4203 - Introduction to Number Theory, Spring 1995, Summer 1995, Spring 1997, Spring 2002, Spring 2005, Summer 2002, Spring 2009, Spring 2010, Summer 2011, Summer 2014, Summer 2015, Spring 2016, Spring 2017
- MAS 4301 - Abstract Algebra 1, Spring 2012, Fall 2012, Spring 2015, Fall 2015, Spring 2018, Fall 2018
- MAS 7215 - Theory of Numbers I, Fall 1999, Fall 2003, Fall 2005
- MAS 7216 - Theory of Numbers II, Spring 2001, Spring 2004, Spring 2006
- MAT 4930 - Introduction to Maple (Special Topics in Mathematics), Fall 1998, Spring 1998, Spring 1999, Spring 1999, Spring 2000
- MAT 6932 - Partitions and q -Series (Special Topics in Mathematics), Summer 2005
- MAT 6932 - Modular Forms and Mock Theta Functions (Special Topics in Mathematics), Fall 2014, Spring 2015

TALKS, LECTURES, AND INVITED ADDRESSES AT MEETINGS & COLLOQUIA:

- “Combinatorial Interpretations of Ramanujan’s Partition Congruences” at the Ramanujan Centenary Conference, University of Illinois, Urbana, 1987,
- “Ranks, Cranks and Congruences for Partitions” at the Summer Meeting of the A.M.S. on Theta Functions, Bowdoin, Maine, 1987.
- “Combinatorial interpretations of congruences for certain plane partitions” at the A.M.S. Special Session on Algebraic Combinatorics, East Lansing, Michigan, March 1988.
- “Recent developments in the combinatorics of partition congruences” at the annual conference of the Austral. Math. Soc., Macquarie University, July 1989.
- Invited speaker, Illinois Number Theory Conference, Urbana, April 1992.
- Invited speaker, Rademacher Centenary Conference, University Park, Pennsylvania, July 1992.
- Contributed talk, Joint AMS-CMS-MAA Conference, Vancouver, August 1993.
- Invited 30 minute lecturer, ACSyAM Workshop at MSI/Cornell University, September 1993.
- Invited 20 minute speaker, AMS Special Session on Special Functions, Manhattan, Kansas, March 1994.
- Invited speaker, *More cranks and t -cores*, AMS Special Session on q -series, Minneapolis, August 1994.

- Invited speaker, *Congruences for colored partitions*, AMS Special Session on Combinatorics, Richmond, Virginia, November 1994.
- Invited speaker, Session on Enumerative Combinatorics and Representations of the Symmetric Group, Oberwolfach, Germany, January 1995.
- Colloquium, Florida State University, Tallahassee, March 1995.
- Invited 30 minute speaker, Conference on Analytic Number Theory, Allerton Park, University of Illinois, May 1995.
- Contributed talk, Workshop on Special Functions, q -series and Related Topics, Fields Institute, University College, University of Toronto, June 1995.
- Invited speaker, CMS Special Session on Experimental and Constructive Mathematics, Simon Fraser University, Vancouver, December 1995.
- Invited speaker, Workshop on Organic Mathematics, Simon Fraser University, Vancouver, December 12 - 14, 1995.
- Colloquium, Macquarie University, Sydney, July 1996.
- Number Theory Seminar, University of New South Wales, Sydney, August 1996.
- Colloquium, University of Illinois, Urbana, March 1997.
- Number Theory Seminar, University of Illinois, Urbana, March 1997.
- Invited speaker, 1998 AMS-IMS-SIAM Summer Research Conference on q -Series, Combinatorics and Computer Algebra, Mt. Holyoke, June 21-25, 1998.
- Invited speaker, AMS Special Session on Partitions and q -Series, State College, PA, October 24-25, 1998
- Invited speaker, AMS Special Session on Elementary and Analytic Number Theory, Urbana, IL, March 18-21, 1999
- Colloquium speaker and Number Theory Seminar speaker, Macquarie University, Sydney, Australia, June 7, 1999
- Invited 30 minute speaker, Millennial Conference in Number Theory, University of Illinois, May 21-26, 2000
- Invited 30 minute speaker, NATO Advanced Study Institute Special Functions 2000: Current Perspective and Future Directions, Arizona State University, May 29 - June 9, 2000.
- Invited 30 minute speaker, Classical Combinatorics In honor of Dominique Foata's 65th birthday, Temple University, July 7-9, 2000.
- Colloquium and Number Theory Seminar speaker, University of Sussex, Brighton, England, July 2000.
- Invited 30 minute speaker, q -series with Applications to Combinatorics, Number Theory and Physics: University of Illinois at Urbana-Champaign, October 26-28, 2000.
- Colloquium and Number Theory Seminar speaker, Macquarie University, Sydney, Australia, July 2001.
- Invited speaker, AMS Special Session on q -Series in Number Theory and Combinatorics, Louisiana State University, Baton Rouge, March 14-16, 2003.
- Number Theory Seminar, University of Illinois, Urbana, April 9, 2003.
- Invited plenary speaker, ICNFT 2004, SASTRA University, Kumbakonam, India, December 20-22, 2004.
- Invited one hour speaker, 2005 Clifford Conference on Experimental Mathematics, Tulane University, March 31 - April 2, 2005.
- Two one hour lectures, REU Program, Clemson University, June 31 - July 1, 2005.
- Colloquium Speaker, University of Melbourne, Australia, July 21, 2005.
- Attended Miniconference on the Mathematics of Computation, Department of Computer Science, Dalhousie University, Halifax, Canada, August 5, 2006.
- 20 minute speaker, Number Theory Meeting in honor of Halberstam and Selfridge, University of Illinois at Urbana-Champaign, May 16-20, 2007.
- Plenary speaker, Partitions, q -Series and Modular Forms Workshop, University of Florida, Gainesville, March 8-16, 2008.

- Plenary speaker, SouthEast Regional Meeting On Numbers (SERMON) & Palmetto Number Theory Series (PANTS) Clemson University, April 19-20, 2008.
- Invite 30 minute speaker, MATHEMATICAL INTERESTS OF PETER BORWEIN CONFERENCE, Simon Fraser University, Burnaby, British Columbia, Canada, May 12-16, 2008.
- One hour invited colloquium, University of Newcastle, Australia, July 17, 2008.
- Invited 20 minute speaker, Combinatory Analysis 2008: Partitions, q -series, and Applications Conference, Pennsylvania State University, December 5-7, 2008.
- Invited 45 minute speaker, Ramanujan Rediscovered Conference, Bangalore India, June 1-5, 2009.
- Invited 20 minute speaker, AMS Special Session on q -Series and Related Topics in Enumerative Combinatorics and Number Theory, Pennsylvania State University, University Park, PA, October 24-25, 2009.
- Opening invited plenary speaker, *Biranks for partitions into 2 colors and some theta function identities*, CARMA Workshop on Exploratory Experimentation and Computation in Number Theory University of Newcastle (Australia), July 7-10, 2010.
- Opening invited 30 minute speaker, *Biranks for partitions into 2 colors and some theta function identities*, Combinatorics and Mathematical Physics Conference, University of Queensland, Brisbane, Australia July 12-14, 2010.
- Invited plenary speaker, *Biranks for partitions into 2 colors and some theta function identities*, Prospects in q -Series and Modular Forms Conference, University College Dublin, July 14-16, 2010.
- Contributed speaker, *Higher order spt-functions*, AMS Session on Number Theory, New Orleans, January 6, 2011.
- Invited opening plenary speaker, *Higher order spt-functions*, Partitions, q -Series and Maass Forms Conference, Emory University, Atlanta, GA, January 21-23, 2011.
- Invited 30 minute speaker, *The Andrews spt-function and higher order generalizations*, A Workshop on Computational and Analytical Mathematics in honour of Jonathan Borwein's 60th Birthday The IRMACS Centre, Simon Fraser University, Burnaby, BC, Canada May 16-20, 2011.
- Invited keynote speaker, *The smallest parts partition function*, International Number Theory Conference in Memory of Alf van der Poorten, Newcastle, Australia, March 12-16, 2012.
- Invited keynote speaker, *The smallest parts partition function*, The Legacy of Srinivasa Ramanujan - An International Conference, 17-22 December 2012, New Delhi, India. Krishna Alladi delivered my talk since I was unable to attend for health reasons.
- Invited 20 minute speaker, *The smallest parts partition function*, AMS Special Session on q -series in Mathematical Physics and Combinatorics, San Diego, January 2013. George Andrews delivered my talk since I was unable to attend for health reasons.
- Invited speaker, *The Dyson rank of partitions*, Rutgers Experimental Mathematics Seminar, Rutgers University, April 25, 2013.
- Invited keynote speaker, *Dyson's rank function and Andrews' spt function*, The Combinatorics of q -Series and Partitions Conference in Honor of George Andrews' 75th Birthday, Nankai University, Tianjin, P.R. China, August 2-4, 2013.
- Invited seminar speaker, *Dyson's rank function and Andrews's SPT function*, CARMA OANT Seminar, University of Newcastle, August 20, 2013
- Invited 20 minute speaker, *Universal mock theta functions and two-variable Hecke-Rogers identities*, Special Session on Applications of Special Functions in Combinatorics and Analysis, AMS Spring Central Sectional Meeting, Texas Tech University, Lubbock, TX, April 11-13, 2014.
- Invited 40 minute speaker, *Congruences and relations for the Fishburn numbers*, Challenges in 21st Century Experimental Mathematical Computation ICERM, Brown University, July 21-25, 2014.
- Invited 20 minute speaker, *Congruences and relations for the Fishburn numbers*, AMS Special Session on Partitions, q -Series, and Modular Forms, San Antonio, TX, January 10-13, 2015.
- Invited 25 minute speaker, *Exotic Bailey-Slater Spt-Functions and Hecke-Rogers Double Series*, The 13th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA-13), at the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland on June 1-5, 2015. Mini-symposium on the Legacy of Ramanujan

- 40 minute Keynote speaker, *Transformation Properties of Dyson's Rank Function*, International Conference on Orthogonal Polynomials and q -Series to be held on the campus of UCF in Orlando, May 10-12, 2015. The conference celebrated the 70th birthday of Mourad Ismail.
- Invited Colloquium speaker, *Transformation Properties for Dyson's Rank Function*, University of Newcastle, Australia, December 16, 2015.
- Invited 50 minute address, *Dyson's Conjectures and Predictions in the Work of Ramanujan*, AMS Spring Southeastern Sectional Meeting, University of Georgia, Athens, March 6, 2016.
- Invited 1 hour Plenary Speaker, *Lambert and Ramanujan*, Lambert W-Conference, University of Western Ontario, London, Canada, July 27, 2016.
- Invited 20 minute speaker, *The Andrews spt-function mod 4*, AMS Special Session on Arithmetic Properties of Sequences from Number Theory and Combinatorics, Atlanta, GA, January 4, 2017.
- Invited 20 minute speaker, *Weighted partition identities and divisor sums*, AMS Special Session on Partition Theory and Related Topics, Atlanta, GA, January 6, 2017.
- Invited 50 minute speaker, *New Mock Theta Function Identities*, Number Theory Seminar, University of Illinois, Urbana, March 9, 2017.
- Invited 50 minute speaker, *Playing with partitions and q -series*, Graduate Number Theory Seminar, University of Illinois, Urbana, March 9, 2017.
- 20 minute speaker, *New Mock Theta Function Identities*, SERMON XXX, University of North Florida, Jacksonville, March 31 - April 2, 2017.
- Invited 20 minute speaker, *New Mock Theta Function Identities*, Jon Borwein Commemorative Conference Newcastle, September 23-29, 2017.
- Invited 20 minute speaker, *New Mock Theta Function Identities*, AMS Special Session on Special Functions and Combinatorics (in honor of Dennis Stanton's 65th birthday) San Diego, January 10-13, 2018.
- Invited 50 minute speaker, *Higher Order Mock Theta Conjectures* BIRS workshop on Modular Forms and Quantum Knot Invariants Banff, March 11-16, 2018.
- Invited 50 minute speaker, *Higher Order Mock Theta Conjectures* AMS Special Session on Mock Modular and Quantum Modular Forms, Portland (Oregon), April 14-15, 2018.
- Plenary speaker, *Higher Order Mock Theta Conjectures*, Combinatory Analysis 2018 Conference in honor of George Andrews's 80th birthday, Penn State (State College, PA), June 21-24, 2018.

PUBLICATIONS: (Published, accepted, submitted)

1. *A simple proof of Watson's partition congruences for powers of 7*, J. Austral. Math. Soc. (Ser. A) **36** (1984), 316-334.
2. *Combinatorial interpretations of Ramanujan's partition congruences*, in Ramanujan Revisited: Proceedings of the Centenary Conference, University of Illinois at Urbana-Champaign, June 1-5, 1987 (1988), Acad. Press, San Diego.
3. *New combinatorial interpretations of Ramanujan's partition congruences mod 5, 7, and 11*, Trans. Amer. math. Soc. **305** (1988), 47-77.
4. (with George E. Andrews), *Dyson's crank of a partition*, Bull. Amer. Math. Soc. **18** (1988), 167-171.
5. *A beta integral associated with the root system G_2* , SIAM J. Math. Anal. **19** (1988), 1462-1474.
6. (with George E. Andrews), *Ramanujan's "lost" notebook VI: the mock theta conjectures*, Advances in Math. **73** (1989), 242-255.
7. *Some Macdonald-Mehta integrals by brute force*, in "q-series and Partitions" (Dennis Stanton, ed.), IMA Volumes in Math. and its Applications **18** (1989), Springer-Verlag, New York, 77-98.
8. *A proof of Macdonald-Morris root system conjecture for F_4* , SIAM J. Math. Anal. **21** (1990), 803-821.
9. (with Dennis Stanton), *Sieved partition functions and q -binomial coefficients*, Math. Comp. **55** (1990), 803-821.
10. *The crank of partitions mod 8, 9, and 10*, Trans. Amer. Math. Soc. **322** (1990), 79-94.
11. (with Dennis Stanton and Dongsu Kim), *Cranks and t -cores*, Inventiones Math. **101** (1990), 1-17.
12. *A number theoretic crank associated with open bosonic strings*, in Number Theory and Cryptography (J.H. Loxton, ed.), London Math. Soc. Lecture Note Series **154** (1990), Cambridge University Press, Cambridge, New York, 221-226.

13. (with Gaston H. Gonnet), *Macdonald's constant term conjectures for exceptional root system*, Bull. Amer. Math. Soc. (N.S.) **24** (1991), 343-347.
14. (with Gaston H. Gonnet), *A proof of the two parameter q -cases of the Macdonald-Morris constant term root system conjecture for $S(F_4)$ and $S(F_4)^\vee$ via Zeilberger's method*, J. Symbolic Computation **14** (1992), 141-177.
15. (with J.M. Borwein and P.B. Borwein), *Hypergeometric analogues of the arithmetic-geometric mean iteration*, Constructive Approximation **9** (1993), 509-523.
16. *Some congruences for partitions that are p -cores*, Proc. London Math. Soc. **66** (1993), 449-478.
17. (with M.D. Hirschhorn and J.M. Borwein), *Cubic analogues of the Jacobian theta function $\theta(z, q)$* , Canad. J. Math. **45** (1993), 673-694.
18. (with J.M. Borwein and P.B. Borwein), *Some cubic modular identities of Ramanujan*, Trans. Amer. Math. Soc. **343** (1994), 35-47.
19. *Cubic modular identities of Ramanujan, hypergeometric functions and analogues of the arithmetic-geometric mean iteration*, Contemp. Math. **166** (1994), 245-264.
20. *Generalizations of Dyson's rank and non-Rogers-Ramanujan partitions*, Manuscripta Math. **84** (1994), 343-359.
21. *A combinatorial proof of the Farkas-Kra theta function identities and their generalizations*, J. Math. Anal. and Applications **195** (1995), 354-375.
22. *Ramanujan's theories of elliptic functions to alternative bases - a symbolic excursion*, J. Symbolic Computation **20** (1995), 517-536.
23. (with B.C. Berndt and S. Bhargava), *Ramanujan's theories of elliptic functions to alternative bases*, Trans. Amer. Math. Soc. **347** (1995), 4163-4244.
24. *Maple V Primer*, CRC Press, Boca Raton, 1996.
25. (with J.M. Borwein), *Approximations to π via the Dedekind eta function*, Organic mathematics (Burnaby, BC, 1995) **20** (1997), Amer. Math. Soc, Providence, RI, 89-115, CMS Conf. Proc.
26. *Modular functions, Maple and Andrews's 10th Problem*, in Topics in Number Theory (University Park, PA 1997), Math. Appl. **467** (1999), Kluwer Acad. Publ., Dordrecht, 163-179.
27. *A q -product tutorial for a q -series MAPLE package*, Art. 42d, 27pp. (electronic), Séminaire Lotharingien de Combinatoire **42** (1999).
28. *The Maple Book*, Chapman & Hall/CRC, Boca Raton, 2001.
29. *Symbolic computation, number theory, special functions, physics and combinatorics*, Proceedings of the conference held at the University of Florida, Gainesville, FL, November 11-13, 1999 (Edited by Frank G. Garvan and Mourad E. H. Ismail), Developments in Mathematics, vol. 4, Kluwer Academic Publishers, Dordrecht, 2001.
30. *A generalization of the Hirschhorn-Farkas-Kra septagonal numbers identity*, Discrete Math. **232** (2001), 113-118.
31. *More cranks and t -cores*, Bull. Austral. Math. Soc. **63** (2001), 379-391.
32. *Shifted and shiftless partition identities*, in Number theory for the millennium, II (Urbana, IL, 2000) (2002), A.K. Peters, Natick, MA, 75-92.
33. (with A. Berkovich), *Some observations on Dyson's new symmetries of partitions*, J. Combin. Theory Ser. A **100** (2002), 61-93.
34. (with A.O.L. Atkin), *Relations between the ranks and cranks of partitions*, (Rankin memorial issues), Ramanujan J. **7** (2003), 343-366.
35. (with A. Berkovich), *Dissecting the Stanley partition function*, J. Combin. Theory Ser. A **112** (2005), 277-291.
36. (with A. Berkovich), *On the Andrews-Stanley refinement of Ramanujan's partition congruence modulo 5 and generalizations*, Trans. Amer. Math. Soc. **358** (2006), 703-726.
37. (with H. Yesilyurt), *Shifted and shiftless partition identities II*, Int. J. Number Theory **3** (2007), 1-42.
38. (with A. Berkovich), *The BG-rank of a partition and its applications*, Adv. in Appl. Math. **40** (2008 pages 377 - 400).
39. (with A. Berkovich), *K. Saito's conjecture for nonnegative eta products and analogous results for other infinite products*, J. Number Theory **128** (2008), 1731-1748.
40. (with K. Bringmann and K. Mahlburg), *Partition statistics and quasiweak Maass forms*, Int. Math. Res. Not. IMRN (2009), 63-97.
41. (with A. Berkovich), *The GBG-Rank and t -Cores I. Counting and 4-Cores*, Journal of Combinatorics and Number Theory **1** (2009), 49-64.
42. *Congruences for Andrews' smallest parts partition function and new congruences for Dyson's Rank*, Int. J. Number Theory **6** (2010), 1-29.

43. *Biranks for partitions into 2 colors*, Ramanujan Rediscovered: Proceedings of a Conference on Elliptic Functions, Partitions, and q -Series in memory of K. Venkatachaliengar: Bangalore, 1-5 June, 2009, N. D. Baruah, B. C. Berndt, S. Cooper, T. Huber, and M. J. Schlosser, eds., Ramanujan Mathematical Society, Mysore, 2010, pp. 89–111..
44. *Higher order spt-functions*, Adv. Math. **228** (2011), 241–265.
45. *Congruences for Andrews’ spt-function modulo powers of 5, 7 and 13*, Trans. Amer. Math. Soc. **364** (2012), 4847–4873.
46. *Congruences for Andrews’ spt-function modulo 32760 and extension of Atkin’s Hecke-type partition congruences*, Number Theory and Related Fields: Proceedings of an International Number Theory Conference in Memory of Alf van der Poorten, Newcastle, Australia, 12-16 March, 2012, J. M. Borwein, I. Shparlinski, W. Zudilin, eds., Springer Proc. Math. Stat., Vol. 43, Springer, New York, 2013, pp. 165–185.
47. *Partitions, q -Series and Modular Forms*, Proceedings of the conference held at the Department of Mathematics, University of Florida, Gainesville, March 8–16, 2008, edited by K. Alladi and F.G. Garvan, Developments in Mathematics, Vol 23, Springer, New York, 2012.
48. (with G. E. Andrews and J. L. Liang), *Combinatorial interpretations of congruences for the spt-function*, Ramanujan J. **29** (2012), 321–338.
49. (with Song Heng Chan and Atul Dixit), *Rank-Crank type PDEs and generalized Lambert series identities*, Ramanujan J. **31** (2013), 163–189.
50. (with G. E. Andrews and J. L. Liang), *Self-conjugate vector partitions and the parity of the spt-function*, Acta Arith. **158** (2013), 199–218.
51. *Computational and Analytical Mathematics: In Honor of Jonathan Borwein’s 60th Birthday*, edited by D.H. Bailey, H.H. Bauschke, P. Borwein, F. Garvan, M. Théra, J.D. Vanderwerff, and Henry Wolkowicz, Springer Proceedings in Mathematics & Statistics, Vol. 50, Springer, New York, 2013..
52. (with J. A. Sellers), *Congruences for generalized Frobenius partitions with an arbitrarily large number of colors*, INTEGERS **14** (2014), Article A7.
53. (with C. Jennings-Shaffer), *Hecke-type congruences for Andrews’ spt-function modulo 16 and 32*, Int. J. Number Theory **10** (2014), 375–390.
54. (with C. Jennings-Shaffer), *The spt-crank for overpartitions*, Acta Arith. **166** (2014), 141–188.
55. *Universal mock theta functions and two-variable Hecke-Rogers identities*, (Basil Gordon memorial issue) Ramanujan J. **36** (2015), 267–296.
56. *Proceedings of the Ramanujan 125 Gainesville Conference*, November 5–7, 2012, edited by K. Alladi, F.G. Garvan and A.J. Yee, Volume 627, Contemporary Mathematics, American Mathematical Society, Providence, RI, 2014.
57. *Congruences and relations for r -Fishburn numbers*, J. Combin. Theory Ser. A, **134** (2015), 147–165.
58. (with C. Jennings-Shaffer), *Exotic Bailey-Slater SPT-functions II: Hecke-Rogers-type double sums and Bailey pairs from groups A , C , E* , Adv. Math. **299** (2016), 605–639.
59. *Transformation properties of Dyson’s rank function*, Trans. Amer. Math. Soc, to appear (50 pages); DOI: <https://doi.org/10.1090/tran/7219>.
60. *Weighted partition identities and divisor sums*, in Frontiers in Orthogonal Polynomials and q -Series (M. Zuhair Nashed and Xin Li eds), Contemporary Mathematics and Its Applications, Monographs, Expositions and Lecture Notes **1** (2018), World Scientific, Singapore, 239–249.
61. (with M. Schlosser), *Combinatorial interpretations of Ramanujan’s tau function*, Discrete Math. **241** (2018), 2831–2840.
62. (with J. Frye), *Automatic proof of theta-function identities in “Elliptic Integrals, Elliptic Functions and Modular Forms in Quantum Field Theory,”*, Springer Wien, provisionally accepted (51 pages).
63. *Analytic Number Theory, Modular Forms and q -Hypergeometric Series; In Honor of Krishna Alladi’s 60th Birthday*, edited by G.E. Andrews and F. Garvan, Springer Proceedings in Mathematics & Statistics, Vol. 221, Springer, New York, 2018.
64. *New fifth and seventh order mock theta function identities*, submitted (17 pages).

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