

CURRICULUM VITAE

Bruce E. Sagan

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EDUCATION:

1974-1979 MASSACHUSETTS INSTITUTE OF TECHNOLOGY,
Cambridge, MA., Ph.D. in Mathematics, January 1979.
Thesis: “Partially Ordered Sets with Hooklengths
 - an Algorithmic Approach.”
Advisor: Professor Richard Stanley.

1971-1974 CALIFORNIA STATE UNIVERSITY, Hayward, CA.
B.S. in Mathematics, Summa Cum Laude, June 1974.

ACADEMIC CAREER:

1994–present MICHIGAN STATE UNIVERSITY, East Lansing, MI.
Full Professor

2007–2010 NATIONAL SCIENCE FOUNDATION, Arlington, VA.
Program Officer

2005–2006 DIMACS, Rutgers, NJ
Visiting Professor.

2005 (Spring) MITTAG-LEFFLER INSTITUTE, Djursholm, Sweden
Visiting Professor.

2001 (Winter) NEWTON INSTITUTE, Cambridge, England
Visiting Professor.

1997 (Winter) MATHEMATICAL RESEARCH INSTITUTE, Berkeley, CA

General Member.

1989–1994 MICHIGAN STATE UNIVERSITY, East Lansing, MI.
Associate Professor

1993–1994 ROYAL INSTITUTE OF TECHNOLOGY, Stockholm, Sweden,
Visiting Professor.

1991 (Spring) UNIVERSITY OF CALIFORNIA, San Diego, CA,
Visiting Professor.

1986–1989 MICHIGAN STATE UNIVERSITY, East Lansing, MI.
Assistant Professor

1988 (Spring) INSTITUTE FOR MATH. AND ITS APPLICATIONS,
Minneapolis, MN., Visiting Senior Member.

1986 (Fall) UNIVERSITE DU QUEBEC, Montréal PQ
Visiting Professor.

1985–1986 UNIVERSITY OF PENNSYLVANIA, Philadelphia, PA.
Visiting Lecturer.

1984–1985 MIDDLEBURY COLLEGE, Middlebury, VT.
Assistant Professor of Mathematics

1983–1984 UNIVERSITY COLLEGE OF WALES, Aberystwyth, Wales.
NATO postdoctoral fellow.

1980–1983 UNIVERSITY OF MICHIGAN, Ann Arbor, MI.
Assistant Professor of Mathematics.

1979–1980 UNIVERSITE LOUIS PASTEUR, Strasbourg, France.
NSF postdoctoral fellow.

GRANTS

1979–1980 NSF Postdoctoral Fellowship, U.S. – France
Exchange of Scientists Program

1980–1981 NSF Summer Research Grant

1983–1984 NATO Postdoctoral Fellowship in Science

1987–1988 All University Research Initiation Grant

1988–1989 NSF Summer Research Grant

1990 SCREMS Computer Hardware Grant
NSF/ICM-90 Travel Grant
National Science Council of Taiwan Research Grant

1991 Special Foreign Travel Fund Award

1991–1992 All University Research Initiation Grant

1993 Special Foreign Travel Fund Award

National Science Council of Taiwan Research Grant
 1994 Bar Ilan University Visitor Grant
 1995 Special Foreign Travel Fund Award
 Research In Pairs Grant, Oberwolfach
 1996 Australian National University Visitor Grant
 1997 MSRI General Membership Grant
 Special Foreign Travel Fund Award
 1999 University of Florida Visitor Grant
 2000 University of Waterloo Visitor Grant
 2001 Special Foreign Travel Fund Award
 Newton Institute Subsistence Award
 2003 Clay Institute Partnership (conference in honor of Richard Stanley)
 NSF Grant (conference in honor of Richard Stanley)
 2005 University of Florida Visitor Grant
 Mittag-Leffler Institute Subsistence Award
 Special Foreign Travel Fund Award
 2007 Visiting Faculty Program Grant (MSU)
 2011 co-PI, "Summer Undergraduate Research Institute in Experimental Mathematics,"
 H98230-11-1-0222, National Security Agency, \$176,107, 2011–2012.
 2011 co-PI, "REU Site in Applied and Discrete Mathematics," DMS-1062817,
 National Science Foundation, \$275,406, 2011–2014 .
 2013 co-PI, "Summer Undergraduate Research Institute in Experimental Mathematics,"
 H98230-11-1-0222, National Security Agency, \$94,045 in 2013,
 additional \$76,868 awarded in August 2013

PHD STUDENTS

1988–1992	Kathy Dempsey
1990–1993	Margaret Readdy
1991–1993	José Giraldo
1992–1995	Ping Zhang
1994–1998	David Gebhard
1994–1999	Larry Liu
1999–2003	Szu-En Cheng
2005–2007	Adam Goyt
2008–2011	Bob Willenbring
2011–present	Joshua Hallam
2011–present	Samantha Dahlberg
2011–present	Emad Zahedi
2013–present	Kenneth Barrese

ADDRESSES

- 1979 International Seminar on Algorithm and Combinatorics, Sophia-Antipolis, France
 Conference on Combinatorics and Representations of the Symmetric Group,
 Oberwolfach, Germany
- 1981 Michigan Graph Theory Conference, Ann Arbor, MI
 Lotharingien Seminar, Bayreuth, Germany
 Swedish Mathematical Society Annual Meeting, Stockholm, Sweden
- 1982 Conference on Combinatorics, Oberwolfach, Germany
 Conference on Combinatorics, Giessen, Germany
 AMS Meeting special session, Algebraic Combinatorics, Cincinnati, OH
- 1983 University of Manchester, Manchester, England
- 1984 AMS Meeting special session, Enumerative Combinatorics, Minneapolis, MN
 University of Warwick, Coventry, England
 University of Wales Pure Math Colloquium, Gregynog, Wales
 Lotharingien Seminar, Burg Feuerstein, West Germany
 University College of Wales, Bangor, Wales
 University of Birmingham, Birmingham, England
 University of College of Wales, Cardiff, Wales
 University of Wales History of Math Course, Gregynog, Wales
 Conference on Combinatorics, Invariant Theory, and
 Representations of the Symmetric Group, Oberwolfach, Germany
- 1985 Symposium on Combinatorics and the Symmetric Group,
 Durham, England
 Canadian Math. Soc. Meeting, special session on Combinatorics,
 Québec City, Québec
 AMS Meeting special session, Enumerative Combinatorics, Worcester, MA
 AMS Meeting special session, Algebraic Combinatorics, Anaheim, CA
 M.I.T. Special Year in Combinatorics, Cambridge, MA
- 1986 University of Pennsylvania, Philadelphia, PA
 Bryn Mawr College, Bryn Mawr, PA
- 1987 AMS Meeting special session, Combinatorics and Representation Theory,
 San Antonio, TX
 University of Waterloo, Waterloo, ONT
 Discrete Math. Conference, Wright State University, Dayton, OH
- 1988 Université du Québec, Montréal, P.Q.
 DePaul University, Chicago, IL

- M.I.T., Cambridge, MA
 Central Michigan University, Mt. Pleasant, MI
 XXXI Semester on Classical Algebraic Structures, Stefan Banach
 International Center, Warsaw, Poland
 Program in Applied Combinatorics, IMA, Minneapolis, MN
- 1989 Université de Bordeaux, Bordeaux, France
 Capitol City Conference on Combinatorics and Theoretical
 Computer Science, Washington, D.C.
 Conference on Combinatorics, Oberwolfach, Germany
- 1990 National Chengchi University, Taipei, Taiwan
 ICM, Kyoto, Japan
 Conference on Commutative Algebra and Combinatorics, Nagoya, Japan
 University of Illinois at Chicago, Chicago, IL
- 1991 University of Pennsylvania, Philadelphia, PA
 Arizona State University, Tempe, AZ
 3rd Conference on Formal Power Series and Algebraic Combinatorics,
 Bordeaux, France
 University of California at San Diego, La Jolla, CA
 California Institute of Technology, Pasadena, CA
 North Texas State University, Denton, TX
- 1992 University of Miami, Coral Gables, FL
 Hyperplane Workshop, Madison, WI
 AMS Meeting special session, Combinatorics and Graph Theory, Dayton, OH
 Mittag-Leffler Institute, Djursholm, Sweden
 4th Conference on Formal Power Series and Algebraic Combinatorics,
 Montréal, Québec
 7th International Conference on Graph Theory, Combinatorics,
 Algorithms and Applications, Kalamazoo, MI
 AMS Meeting special session, Combinatorics and Geometry, Springfield, MO
 University of Calgary, Calgary, Alberta
- 1993 Freie Universität, Berlin, Germany
 National Chiao Tung University, Hsinchu, Taiwan
 Academia Sinica, Taipei, Taiwan
 Dalian University of Technology, Dalian, China
 South China Normal University, Guangzhou, China
 3rd China - U.S.A. International Conference in Graph Theory,
 Combinatorics, Algorithms and Applications, Beijing, China
 Jerusalem Combinatorics '93, Jerusalem, Israel

- AMS Meeting, special session on Geometric Methods in Combinatorics,
Washington, D.C.
- AMS Meeting, special session on Algebraic Combinatorics, Knoxville, TN
Cornell University, Ithaca, NY
- 1994 MIGHTY XXIII, Kalamazoo, MI
Conference on Hyperplane Arrangements, Marseilles, France
Universität Wien, Vienna, Austria
Universita di Milano, Milan, Italy
Universität Erlangen, Erlangen, Germany
Royal Institute of Technology, Stockholm, Sweden
- 1995 George Washington University, Washington, D.C.
Howard University, Washington, D.C.
Séminaire Lotharingien de Combinatoire, Hesselberg, Germany
FPSAC 1995, Paris, France
Conference on combinatorics and the symmetric group, Oberwolfach, Germany
Hebrew University, Jerusalem, Israel
Technion University, Haifa, Israel
Bar Ilan University, Tel Aviv, Israel
Ben Gurion University, Be'er Sheva, Israel
- 1996 MRSI, Berkeley, California
MIGHTY XXIV, Alma, MI
University of Melbourne, Australia
University of Queensland, Brisbane, Australia
University of Central Queensland, Rockhampton, Australia
Australia National University, Canberra, Australia
University of Sydney, Sydney, Australia
Rotafest, M.I.T., Cambridge
University of Texas, El Paso, TX
- 1997 Ohio State University, Columbus, OH
FPSAC 1997, Vienna, Austria
Santa Clara University, Santa Clara, CA
California State University, Hayward, CA
AMS special session on Algebraic Combinatorics, San Diego, CA
- 1998 Winnipeg Combinatorial Math. Conference, Winnipeg, Canada
Japanese Math. Soc. Workshop on Hyperplane Arrangements, Tokyo, Japan
AMS special session on Algebraic Combin., Louisville, KY
State University of New York, Albany, NY

- 1999 AMS special session on Algebraic and Geometric Combin., Providence, RI
 FPSAC 1999, Barcelona, Spain
 MIGHTY XXXI, Oakland, MI
 AMS special session on Algebraic and Geometric Combin., Gainesville, FL
- 2000 Western Michigan University, Kalamazoo, MI
 9th Int'l Conference on Graphs, Combinatorics, Algorithms, and Appl., Kalamazoo, MI
 University of Waterloo, Waterloo, ONT
- 2001 Queen Mary College, London, England
 University of Manchester Institute of Science and Technology, Manchester, England
 University College of Wales, Aberystwyth, Wales
 Oxford University, Oxford, England
 Newton Institute, Cambridge, England
 University of Klagenfurt, Klagenfurt, Austria
 Conference on Tutte Polynomials and related topics, Barcelona, Spain
 Bay Area Discrete Math Day, Hayward, CA
- 2002 Conference on Multilinear Algebra and Matroid Theory, Lisbon, Portugal
- 2003 AMS special session on Lattice Theory, Baltimore, MD
 Conference on Permutation Patterns, Dunedin, New Zealand
 AMS special session on Algebraic and Topological Combinatorics, New York, NY
 Seminar: Université du Québec, Montréal, PQ
 Joint SIAM-CAIMS minisymposium on Graph Theory, Montréal, PQ
 FPSAC 2003, Vadstena, Sweden
- 2004 Colloquium: SUNY, Binghamton, NY
 Seminar: Rutgers, Piscataway, NJ
 Colloquium: Dalhousie University, Halifax, Nova Scotia
 Conference for Richard Stanley's 60th birthday, MIT, Cambridge, MA
 AMS special session on Graph Polynomials, Pittsburgh, PA
- 2005 Colloquium: Temple University, Philadelphia, PA
 Seminar: University of Pennsylvania, Philadelphia, PA
 Seminar: Dartmouth College, Hanover, NH
 Seminar: Rutgers University, Piscataway, NJ
 Seminar: Ohio State University, Columbus, OH
 3rd Conference on Permutation Patterns, Gainesville, FL
 Colloquium: University of Florida, Gainesville FL
 Colloquium: SUNY Binghamton, Binghamton, NY
 Seminar: Lafayette College, Easton, PA
 Mittag-Leffler Institute, Djursholm, Sweden

- Seminar: Saint Michael's College, Colchester, VT
 Words 2005, Université du Québec, Montréal, PQ
 Conference on Combinatorial Geometries and Applications, CIRM,
 Marseilles, France
 AMS special session on Graph Invariants, Bard College,
 Annandale-on-Hudson, NY
 AMS special session on Algebraic and Geometric Combinatorics, Bard College,
 Annandale-on-Hudson, NY
 Seminar: University of Linköping, Linköping, Sweden
 Seminar: Royal Institute of Technology, Stockholm, Sweden
- 2006 Seminar: Rutgers University, Piscataway, NJ
 Colloquium: Dartmouth College, Hanover, NH
 Colloquium: George Washington University, Washington, DC
 Discrete Mathematics Days in the Northeast, SUNY, Albany, NY
 Colloquium: SUNY Binghamton, Binghamton, NY
 4th Conference on Permutation Patterns, Reykjavík, Iceland
 Featured address: FPSAC 2006, UCSD, La Jolla, CA
- 2007 Featured address: 18th British Postgraduate Combinatorial Conference,
 St Andrews, Scotland
 5th Conference on Permutation Patterns, St Andrews, Scotland
 Lecture series: Summer School on Algebra and Combinatorics, Lisbon, Portugal
 Seminar: George Washington University, Washington, D.C.
 Colloquium: Howard University, Washington, D.C.
 CMS special session on Combinatorics and Physics, London, Canada
 Conference for Andreas Blass' 60th Birthday, Toronto, Canada
- 2008 Conference for Anders Björner's 60th Birthday, Stockholm, Sweden
 Colloquium: DePaul University, Chicago, IL
 Seminar: San Francisco State University, San Francisco, CA
 Seminar series: George Washington University, Washington, D.C.
 Conference on Combinatorics and Groups, Gainesville, FL
 Colloquium: George Mason University, Fairfax, VA
 Colloquium: Tulane University, New Orleans, LA
 Seminar: Dartmouth, Hanover, NH
 Memorial Conference in Honor of Tom Brylawski, UNC, Chapel Hill, NC
 Seminar: North Carolina State University, Raleigh, NC
 Colloquium: Howard University, Washington, D.C.
 Seminar: University of Delaware, Newark, DE
- 2009 Minicourse on Capstone Courses, Joint Mathematics Meetings, Washington, D.C.
 AMS special session on Applications of Algebraic and Geometric Combinatorics,

- North Carolina State University, Raleigh, NC
 Seminar: University of Illinois, Urbana-Champaign, IL
 Ulam Centennial Conference, University of Florida, FL
 AMS special session on Algebraic Combinatorics, Pennsylvania State University, College Park, PA
 7th Conference on Permutation Patterns, Florence, Italy
 FPSAC 2009, Hagenberg, Austria
 Colloquium: Howard University, Washington, D.C.
 AMS-KMS special session on Algebraic Combinatorics, Seoul, Korea
 Algebraic Combinatorics Workshop, KAIST, Daejeon, Korea
- 2010 Seminar: Rutgers University, Piscataway, NJ
 Seminar: Virginia Commonwealth University, Richmond, VA
 Colloquium: University of Virginia, Charlottesville, VA
 AMS special session on Enumerative Combinatorics, San Francisco, CA
 Workshop on Combinatorics, Enumeration, and Invariant Theory, George Mason University, Fairfax, VA
 Mathfest special session on Visualizing Combinatorics through Tilings, Pittsburgh, PA
 AMS special session on Analytic Combinatorics, Syracuse, NY
 SIAM mini-symposium on Enumerative Combinatorics, Austin, TX
 8th French Combinatorial Conference, Orsay, France
 Seminar: University of Pennsylvania, Philadelphia, PA
 Colloquium: Bucknell University, Lewisburg, PA
- 2011 Colloquium: University of Connecticut, Storrs, CT
 AMS special session on Algebraic Combinatorics, Iowa City, IA
 AMS special session on Algebraic and Geometric Combinatorics, Statesboro, GA
 Waterloo Workshop on Computer Algebra, Waterloo, ON, Canada
 Featured address: British Combinatorial Conference, Exeter, England
 Seminar: University of Michigan, Ann Arbor, MI
 Featured address: International Conference on Discrete Mathematics and Its Applications, Taipei, Taiwan
- 2012 AMS special session on Enumerative and Geometric Combinatorics, Lawrence, KS
 Seminar: University of Washington, Seattle, WA
 Seminar: Simon Fraser University, Burnaby, BC, Canada
 Colloquium: Chalmers University of Technology, Göteborg, Sweden
 SIAM mini-symposium on Algebraic Combinatorics, Halifax, NS, Canada
 SIAM mini-symposium on Graph Polynomials, Halifax, NS, Canada
 AMS special session on Rook Theory and Applications, New Orleans, LA
- 2013 Featured addresses: Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL

Colloquium: West Virginia University, Morgantown, WV
 Seminar: University of Michigan, Ann Arbor, MI
 Seminar: University of Kentucky, Lexington, KY
 Kappa Mu Epsilon Talk: Central Michigan University, Mt. Pleasant, MI
 Seminar: LACIM, Montréal, PQ, Canada
 CanaDAM mini-symposium on Enumerative Combinatorics, St John's, NL, Canada
 AMS special session on Multiple Analogues of Combinatorial Special Numbers
 and Associated Identities, Philadelphia, PA
 Featured addresses: Atlanta Lecture Series in Combinatorics
 and Graph Theory, Atlanta, GA
 Colloquium: Linköpings Universitet, Linköping, Sweden

- 2014 Colloquium: University of Michigan, Ann Arbor, MI
 Seminar: University of Washington, Seattle, WA
 Lecture Series: Lake Michigan Workshop on Combinatorics and Graph Theory,
 Kalamazoo, MI
 Featured address: Conference on Bijective and Algebraic Combinatorics, Gainesville, FL
 Featured address: CombinaTexas, College Station, TX
 Colloquium: Michigan Technological University, Houghton, MI
 Seminar: Center for Combinatorics, Nankai, China
 Lecture series: 4th Encuentro Colombiano de Combinatoria, Bogotá, Colombia
 Stanley@70 Conference, Cambridge, MA
 Patterns in Permutations, Johnson City, TN
 Colloquium: York University, Toronto, ONT, Canada
 AMS Special Session on Algebraic Combinatorics, Eau Claire, WI
 Featured address: Clemson Mini-Conference, Clemson, SC
 Seminar: Central Michigan University, Mt. Pleasant MI
- 2015 AMS special session on Enumerative Combinatorics, San Antonio, TX
 Seminar: Rutgers University, Piscataway, NJ
 Invited address: Midwest Combinatorics Conference, Minneapolis, MN
 Featured address: Patterns in Permutations, London, England
 AMS special session on Enumerative Algebraic and Geometric Combinatorics, Chicago, IL

AWARDS, HONORS, SERVICE

1985	Good Teaching Award, University of Pennsylvania
1990	J.S. Frame Teaching Award, Michigan State University
2004	J.S. Frame Teaching Award, Michigan State University
2004-present	Editor-in-chief, Electronic Journal of Combinatorics

RESEARCH INTERESTS

Algebraic, enumerative, and topological combinatorics as well as graph theory: symmetric functions, groups and representations, tableaux algorithms, chromatic and independence polynomials of graphs, the mobius function and homology of partially ordered sets, pattern avoidance and containment in permutations and other combinatorial structures.

PUBLICATION LIST

Bruce E. Sagan

PAPERS

1. An analog of Schensted's algorithm for shifted Young tableaux, *J. Combin. Theory Ser. A* **27** (1979), 10–18.
- 1a. Also included in “Young Tableaux in Combinatorics, Invariant Theory, and Algebra, an Anthology of Recent Work,” Joseph P. S. Kung ed., Academic Press, New York (1982), 29–37.
2. A cyclic derivative in non-commutative algebra (with G.-C. Rota and P. Stein), *J. Algebra* **64** (1980), 54–75.
3. On selecting a random shifted Young tableau, *J. Algorithms* **1** (1980), 213–234.
4. Congruences derived from group action (with G.-C. Rota), *European J. Combin.* **1** (1980), 67–76.
5. From sets to functions: 3 elementary examples (with S.-N. Joni and G.-C. Rota), *Discrete Math.* **37** (1981), 193–202.
6. Enumeration of partitions with hooklengths, *European J. Combin.* **3** (1982), 85–94.
7. Bijective proofs of certain vector partition identities, *Pacific J. Math.* **102** (1982), 171–178.
8. A note on Abel polynomials and rooted labeled forests, *Discrete Math.* **44** (1983), 293–298.
9. Computer-aided analysis of monotonic sequence games (with F. Harary and D. West), *Atti Accad. Perolitana Pericolanti Cl. Sci. Fis. Mat. Natur.* **61** (1983), 67–78.
10. Signed posets (with F. Harary), *Bull. Calcutta Math. Soc.* (1983), 3–10.
11. Congruences via Abelian groups, *J. Number Theory* **20** (1985), 210–237.
12. Bijective proofs of two broken circuit theorems (with A. Blass), *J. Graph Theory* **10** (1986), 15–21.
13. Shellability of exponential structures, *Order* **3** (1986), 47–54.
14. Shifted tableaux, Schur Q -functions, and a conjecture of R. P. Stanley, *J. Combin. Theory Ser. A* **45** (1987), 62–103.

15. A note on independent sets in trees, *SIAM J. on Discrete Math.* **1** (1988), 105–108.
16. Inductive and injective proofs of log concavity results, *Discrete Math.* **68** (1988), 281–292.
17. Probabilistic algorithms for trees (with Y.-N. Yeh), *Fibonacci Quart.* **27** (1989), 201–208.
- 17a. Also included as a *Rapport de Recherche*, Université du Québec, Montréal (1987).
18. The ubiquitous Young tableau, in “Invariant Theory and Tableaux,” Dennis Stanton ed., IMA Volumes in Math. and its Applications, Vol. 19, Springer-Verlag, New York (1990), 262–298.
19. Robinson-Schensted algorithms for skew tableaux (with R. P. Stanley), *J. Combin. Theory Ser. A* **55** (1990), 161–193.
20. The twisted N -cube with application to multiprocessing (with Abdol-Hossein Esfahanian and Lionel M. Ni), *IEEE Trans. on Computers* **40** (1991), 88–93.
- 20a. Also appeared as: On enhancing hypercube multiprocessors, “1988 International Conference on Parallel Processing,” 86–89.
21. A maj statistic for set partitions, *European J. Combin.* **12** (1991), 69–79.
22. Eigenvectors and eigenvalues of some special graphs IV. Multi-level circulants (with S.-L. Lee, Y.-L. Luo and Y.-N. Yeh), *Internat. J. of Quantum Chem.* **41** (1992), 105–116.
23. Log concave sequences of symmetric functions and analogs of the Jacobi-Trudi determinants, *Trans. Amer. Math. Soc.* **329** (1992), 795–811.
24. Inductive proofs of q -log concavity, *Discrete Math.* **99** (1992), 298–306.
25. Congruence properties of q -analogs, *Adv. in Math.* **95** (1992), 127–143.
26. The *Combinatorica* software package, *College Math. J.* **23** (1992), 335–339.
27. Lattice paths, reflections, & dimension-changing bijections (with R. K. Guy and C. Krattenthaler), *Ars Combin.* **34** (1992), 3–15.
28. Basic derivations for subarrangements of Coxeter arrangements (with T. Józefiak), *J. Algebraic Combin.* **2** (1993), 291–320.
29. Combinatorial proofs of hook generating function for skew plane partitions, *Theoret. Comput. Sci.* **117** (1993) 273–287.
- 29a. Also appeared in: “Series Formelles et Combinatoire Algebrique (Actes de Colloque, Bordeaux, 1991),” 369–384.

30. Maximizing Möbius functions on subsets of Boolean algebras (with Y.-N. Yeh and G. Ziegler), *Discrete Math.* **126** (1994), 293–311.
31. Partition lattice q -analogs associated with q -Stirling numbers (with K. Dempsey and C. Bennett), *J. Algebraic Combin.* **3** (1994), 261–283.
32. A generalization of Rota’s NBC theorem, *Adv. in Math.* **111** (1995), 195–207.
33. Enumeration of trees by inversions (with I. M. Gessel and Y.-N. Yeh), *J. Graph Theory* **19** (1995), 435–459.
34. A relative of the Thue-Morse sequence (with J.-P. Allouche, A. Arnold, J. Berstel, S. Brlek, W. Jockusch, and S. Plouffe), *Discrete Math.* **139** (1995), 455–461.
35. A generalization of semimodular supersolvable lattices (with C. Bennett), *J. Combin. Theory Ser. A* **72** (1995), 209–231.
36. La correspondance de Robinson-Schensted pour les tableaux oscillants gauches (with S. Dulucq), *Discrete Math.* **139** (1995), 129–142.
37. The Tutte polynomial of a graph, depth-first search, and simplicial complex partitions (with I. M. Gessel), *Electronic J. Combin.* (*Foata Festschrift Volume*), **3** (1996), R9, 36 pages.
38. Subspace arrangements of type B_n and D_n (with A. Björner), *J. Algebraic Combin.*, **5** (1996), 291–314.
39. The Wiener polynomial of a graph (with Y.-N. Yeh and P. Zhang), *Internat. J. of Quantum Chem.*, **60** (1996), 959–969.
40. Arithmetic properties of generalized Euler numbers (with P. Zhang), *Southeast Asian Bull. Math.*, **21** (1997), 73–78.
41. Möbius functions of lattices (with A. Blass), *Adv. in Math.*, **127** (1997), 94–123.
42. Characteristic and Ehrhart polynomials (with A. Blass), *J. Algebraic Combin.*, **7** (1998), 115–126.
43. Unimodality and the reflection principle, *Ars Combin.*, **48** (1998), 65–72.
44. Why the characteristic polynomial factors, *Bull. Amer. Math. Soc.*, **36** (1999), 113–134.
45. A Littlewood-Richardson rule for factorial Schur functions (with A. Molev), *Trans. Amer. Math. Soc.* **351** (1999), 4429–4443.
46. Young tableaux, in “CRC Handbook of Discrete and Combinatorial Mathematics,” Kenneth Rosen ed., CRC Press, Boca Raton, 2000, 129–132.

47. Left-modular elements of lattices (with L. Liu), *J. Combin. Theory, Ser. A*, (special issue dedicated to the memory of Gian-Carlo Rota) **91** (2000), 369–385.
48. Sinks in acyclic orientations of graphs (with D. Gebhard), *J. Combin. Theory, Ser. B*, **80** (2000), 130–146.
49. Schur functions in algebraic combinatorics, in “Encyclopaedia of Mathematics, Supplement II” M. Hazewinkel ed., Kluwer Academic Publishers, Dordrecht, 2000, 409–411.
50. A chromatic symmetric function in noncommuting variables (with D. Gebhard), *J. Algebraic Combin.*, **13** (2001), 227–255.
51. The multiplicities of a dual-thin Q -polynomial association scheme (with J. Caughman, IV), *Electronic J. Combin.*, **8** (2001), Note 4, 5 pp. (electronic).
52. Pattern frequency sequences and internal zeros (with M. Bóna and V. Vatter), *Adv. in Appl. Math.* (special issue in memory of Rodica Simion,) **28** (2002), 395–420.
53. Two injective proofs of a conjecture of Simion (with M. Bóna), *J. Combin. Theory, Ser. A* **102** (2003), 212–216.
54. Bounding quantities related to the packing density of the pattern $1(\ell + 1)\ell \dots 2$ (with M. Hildebrand and V. Vatter), *Adv. in Appl. Math.*, **33** (2004), 633–653.
55. Topological properties of activity orders for matroid bases (with R. Blok), *J. Combin. Theory, Ser. B*, **94** (2005), 101–116.
56. On divisibility of Narayana numbers by primes, (with M. Bóna), *J. Integer Seq.*, **8** (2005), Article 05.2.4, 5 pages.
57. GCD matrices, posets, and nonintersecting paths (with E. Altınışık and N. Tuglu), *Linear and Multilinear Algebra*, **53** (2005) 75–84.
58. Symmetric functions in noncommuting variables (with M. Rosas), *Trans. Amer. Math. Soc.*, **358** (2006), 183–214.
59. A new notion of transitivity for groups and sets of permutations (with W. Martin), *J. London Math. Soc.*, **73** (2006), 1–13.
60. Congruences for Catalan and Motzkin numbers and related sequences (with E. Deutsch), *J. Number Theory*, **117** (2006), 191–215.
61. An algorithmic sign-reversing involution for special rim-hook tableaux (with J. Lee), *J. Algorithms*, **59** (2006), 149–161.
62. Rationality of the Möbius function of a composition poset (with A. Björner), *Theoret. Comput. Sci.*, **359** (2006), 282–298.

63. Maximal independent sets in graphs with at most r cycles (with C. Y. Goh, K. M. Koh, and V. Vatter), *J. Graph Theory*, **53** (2006), 270–282.
64. Maximal and maximum independent sets in graphs with at most r cycles (with V. Vatter), *J. Graph Theory*, **53** (2006), 283–314.
65. The Möbius function of a composition poset (with V. Vatter), *J. Algebraic Combin.*, **24** (2006), 117–136.
66. Counting permutations by congruence class of major index (with H. Barcelo and S. Sundaram), *Adv. in Appl. Math.*, **39** (2007), 269–281.
67. What power of two divides a weighted Catalan number? (with A. Postnikov), *J. Combin. Theory, Ser. A*, **114** (2007), 970–977.
68. Proper partitions of a polygon and k -Catalan numbers, *Ars Combin.*, **88** (2008), 109–124.
69. A human proof for a generalization of Shalosh B. Ekhad’s 10^n Lattice Paths Theorem (with N. Loehr and G. Warrington), *Ars Combin.*, **89** (2008), 421–429.
70. Set partition statistics and q -Fibonacci numbers (with A. Goyt), *European J. Combin.*, **30** (2009), 230–245.
71. Probabilistic proofs of hook length formulas involving trees, *Sém. Lothar. Combin.* (special issue dedicated to the memory of Pierre Leroux), **61A** (2009), Art. B61Aa, 10 pp. (electronic).
72. Compositions inside a rectangle and unimodality, *J. Algebraic Combin.*, **29** (2009), 405–411.
73. Monotone sequence games (with M. Albert, R. Aldred, M. Atkinson, C. Handley, D. Holton, and D. McCaughan), “Games of No Chance III,” M. Albert and R. Nowakowski eds., (2009), 309–327.
74. Monomial bases for broken circuit complexes (with J. Brown), *European J. Combin.* (special issue dedicated to Oriented Matroids 2005), **30** (2009), 1786–1800.
75. Rationality, irrationality, and Wilf equivalence in generalized factor order (with S. Kitaev, J. Liese, and J. Remmel), *Electronic J. Combin.* (special issue for Anders Björner’s 60th birthday), **16(2)** (2009), R22, 26 pages.
76. Infinite log concavity (with P. McNamara), *Adv. in Appl. Math.*, **44** (2010), 1–15.
77. Pattern avoidance in set partitions, *Ars Combin.*, **94** (2010), 79–96.
78. Combinatorial interpretations of binomial coefficient analogues related to Lucas sequences (with C. Savage), *Integers*, **10** (2010), A52, 697–703.

79. Eulerian quasisymmetric functions and cyclic sieving (with J. Shareshian and M. Wachs), *Adv. in Appl. Math.*, (special issue for Dennis Stanton’s 60th birthday), **46** (2011), 536–562.
80. The cyclic sieving phenomenon: a survey, in “Surveys in Combinatorics 2011,” Robin Chapman ed., London Math. Soc. Lecture Note Series, Vol. 392, Cambridge University Press, Cambridge, (2011), 183–234.
81. Partitions, rooks, and symmetric functions in noncommuting variables (with M. Can), *Electronic J. Combin.*, (Zeilberger Festschrift volume), **18(2)** (2011), P3, 7 pages.
82. Counting $(\mathbf{3} + \mathbf{1})$ -avoiding permutations (with M. Atkinson and V. Vatter), *European J. Combin.*, **33** (2012), 49–61.
83. Mahonian pairs (with C. Savage), *J. Combin. Theory, Ser. A*, **119** (2012), 526–545.
84. The Möbius function of generalized subword order (with P. McNamara), *Adv. in Math.*, **229** (2012), 2741–2766.
85. Permutation Patterns and Statistics (with with T. Dokos, T. Dwyer, B. P. Johnson, and K. Selsor), *Discrete Math.*, **312** (2012), 2760–2775.
86. Discrete Morse theory and the consecutive pattern poset (with R. Willenbring), *J. Algebraic Combin.*, **36** (2012), 501–514.
87. Combinatorics of Tesler matrices in the theory of parking functions and diagonal harmonics (with D. Armstrong, A. Garsia, J. Haglund, and B. Rhoades), *J. of Combin.*, **3** (2012), 451–494.
88. On 021-avoiding ascent sequences (with W. Chen, A. Dai, T. Dokos, and T. Dwyer), *Electronic J. Combin.*, **20(1)** (2013), P76, 6 pages.
89. Permutations with given peak set (with S. Billey and K. Burdzy), *J. Integer Seq.*, **16** (2013), Article 13.6.1, 18 pages.
90. Inversion polynomials for 321-avoiding permutations (with S.-E. Cheng, S. Elizalde, and A. Kasraoui), *Discrete Math.*, **313** (2013), 2552–2565.
91. m -level rook placements (with K. Barrese, N. Loehr, and J. Remmel), *J. Combin. Theory, Ser. A*, **124** (2014), 130–165.
92. Descent sets for symplectic groups (with M. Rubey and B. Westbury), *J. Algebraic Combin.*, **40** (2014), 187–208.
93. On the fractal nature of the Fibonomial triangle (with X. Chen), *Integers*, **14** (2014), A3, 12 pp.

94. Generalized Fibonacci polynomials and Fibonomial coefficients (with T. Amdeberhan, X. Chen, and V. Moll), *Ann. Combin.*, **18** (2014), 541–562.
95. On meteors, earthworms, and WIMPs (with S. Billey, K. Burdzy, and S. Pal), *Ann. Appl. Probab.*, accepted.
96. On constructing regular distance-preserving graphs (with A.-H. Esfahanian, Ronald Nussbaum, and D. Ross), *Congr. Numer.*, accepted.
97. Factoring the characteristic polynomial of a lattice (with J. Hallam), *J. Combin. Theory Ser. A*, submitted.
98. Set partition patterns and statistics (with Samantha Dahlberg, Robert Dorward, Jonathan Gerhard, Thomas Grubb, Carlin Purcell, and Lindsey Reppuhn), *Discrete Math.*, submitted.
99. Distance preserving graphs and graph products (with Mohammad Khalifeh, and Emad Zahedi), *Graphs Combin.*, submitted,
100. Antipodes and involutions (with Carolina Benedetti), in preparation.
101. Valuations of Fibonomial coefficients (with X. Chen), in preparation.
102. Bijections on m -level rook placements (with K. Barrese, N. Loehr, and J. Remmel), in preparation.

BOOKS

1. Mathematical Essays in Honor of Gian-Carlo Rota (co-editor with R. Stanley), Birkhäuser, Cambridge, 1998.
2. The Symmetric Group: Representations, Combinatorial Algorithms, and Symmetric Functions, 2nd edition, Springer-Verlag, New York, 2001.
3. Festschrift in Honor of Richard Stanley (editor), *Electronic J. Combin.*, 2004–2006.
4. An Introduction to Enumerative Combinatorics (with C. Lee), 2nd edition, American Mathematical Society, in preparation.