

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

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|------|---|
| | 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," National Security Agency, amount awarded: \$167,323, award duration: 2 years. |
| 2012 | co-PI, REU Site Proposal DMS-1062817, National Science Foundation, award amount: \$275,406, award duration: 3 years. |

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 | Bryan Johnson |
| 2011–present | Samantha Dahlberg |
| 2011–present | Emad Zahedi |

ADDRESSES (SELECTED)

| | |
|------|---|
| 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
 Università 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
Plenary lecture: FPSAC 2006, UCSD, La Jolla, CA
- 2007 Plenary lecture: 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, New Brunswick, 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
 Plenary Lecture: British Combinatorial Conference, Exeter, England
 Seminar: University of Michigan, Ann Arbor, MI
 Plenary Lecture: 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
 Seminar, Chalmers University of Technology, Göteborg, Sweden
 SIAM mini-symposium on Algebraic Combinatorics, Halifax, NS, Canada
 Lecture series: First ICTP-IPM School & Conference in Combinatorics and Graph Theory, Trieste, Italy

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 and enumerative 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.

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. Altinisik 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. Partitions, rooks, and symmetric functions in noncommuting variables (with M. Can), *Electronic J. Combin.*, (Zeilberger Festschrift volume), **18(2)** (2011), P3, 7 pages.
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