Jerrold R. Griggs
Curriculum Vitæ

Department of Mathematics	Home:
University of South Carolina	54 Lyme Bay
Columbia, SC 29208	Columbia, SC 29212
(803) 777-6764, 777-4224	
Email: j@sc.edu Homepage:	http://people.math.sc.edu/griggs/

Professional Interests

Combinatorial Mathematics	Graph Theory	Analysis of Algorithms
Discrete Mathematical Models	Biological Applications	Communications

Regular Positions

University of South Carolina	Carolina Distinguished Professor	2008–
	Chair	2008–12
	Interim Chair	2006–08
	Professor	1988–
	Associate Professor	1983–88
	Assistant Professor	1981–83
University of Hawaii	Assistant Professor	1979–81
California Institute of Technology	Bateman Research Instr.	1977–79
Massachusetts Institute of Technology	Teaching Assistant	1973–77

Visiting Positions

Inst. Math. and Applns., Minneapolis	Invited Visitor	Fall, 2014
National Taiwan University/NCTS	Invited Visitor	August, 2012
Université Paris Diderot	Professeur Invité	May-June, 2012
IDA Center for Communications	Consultant	1992–2014
Research, La Jolla	Research Staff Member	Fall, 1991
Simon Fraser University	Sabbatical Visitor	Spring, 1992
Inst. Math. and Applns., Minneapolis	Invited Visitor	Spring, 1988
University of Southern California	Visiting Associate Prof.	1984–85
Jet Propulsion Laboratory	Programming	Summer, 1974–75
NASA Edwards Flight Research Center	Engineering Assistant	Summer, 1973
AEC/Battelle-Northwest Laboratory	Computer modelling	Summer, 1972
NSF Program, Pomona College	Cryogenics Expts.	Summer, 1971

Education

Massachusetts Institute of Technology	Ph.D., Applied Math	1977

Thesis advisor: Prof. Daniel J. Kleitman
Thesis title: "Symmetric Chain Orders, Sperner Theorems, and Loop Matchings"

Pomona College	B.A.	1973

Math major, physics minor   *Summa cum laude*, ΦBK
Honorable mention, 1972 Putnam Exam   Team 8th, Individual 24th

August 12, 2015

Background

Born 1951 in CA, US Citizen	Married to Deynise Lau	Daughter, Malia
Interests in Conservation, Birding, Gardens	Music, Design	

Honors

SIAM Fellow, Inaugural Class	2009
USC Carolina Distinguished Professor	2008–18
USC Russell Research Award in Science and Engineering	1999

Editorial Boards

SIAM J. Discrete Math.	1988–
Editor-in-Chief	2003–2009
Integers, the Electronic J. of Combinatorial Number Theory	1999–
Involve, an electronic j. for undergraduate research	2006–
Order	2008–
Amer. Math. Monthly (Probs. Contributing Editor)	1992–2007
Naval Research Logistics, Special Issue on Networks	2005
Discrete Math., Special Volume in Honor of D. Kleitman	2002

Conference Organization

Organizing committee, IMA Thematic Year on Discrete Structures	2014-15
Lead Organizer, IMA Workshop on Geom. and Enum. Combinatorics	2014
Organizer, Minisymp., SIAM Conf. on Disc. Math, Minneapolis	2014
Review committee, ICIAM, Vancouver	2011
Minisymposium and miniconference, SIAM Annual Meeting, Denver	2009
Co-organizer, USC Miniconf. in Appl. Combin.	2007
Special session, AMS meeting, Univ. Arkansas	2006
Scientific Comm., Spec. sess., Conf. on Info. Security, Tenerife	2005
Co-organizer, Minisymp., SIAM Conf. on Disc. Math, Nashville	2004
Program Committee, ACM–SIAM Symposium on	
Discrete Algorithms, Baltimore	2003
Organizing Comm., SIAM Conf. on Disc. Math, San Diego	2002
Special session, AMS meeting, USC	2001
Co-organizer, Kleitman Celebration Conference, MIT	1999
Workshop Organizer, DIMACS Institute, Rutgers University:	
"Combinatorial Structures in Molecular Biology"	1994
Special session, AMS meeting, Honolulu	1987

National Panel Service

Judge, Intern. Mathematical Competition in Modeling	1988–2015
Author, six MCM Contest Problems	2000–08
SIAM Outstanding Paper Prize (Chair)	2014,15
Program Review Panel, Georgia State Univ.	2009
IMA Postdoc Search Committee	2014
Chair, SIAM Activity Group in Discrete Math	2010–12
SIAM Outstanding Paper Prize (Chair, 2007,14)	2004,07,12,14
Program Review Panel, Univ. Colo. Denver	2009
Advisor to Canada/USA MathCamps for Talented H.S. Students	1994–2009
Board, Mathematics Foundation of America	1996–2009

AMS-NSF Math Postdoc Fellowship Panel	2004
SIAM Pólya Prize	2004
NSF Proposals in Combinatorics panel	1999,2003
NSF CAREERS award panel	1997
MAA Visiting Lecturers Committee	1992–96
NSF Graduate Fellowships Panel, Math	1990–92
SIAM Committee for Student Affairs	1988–91
NSF Science and Technology Centers Site Review	1988

Refereeing and Reviewing

Journal Articles Refereed: 284

Advances Appl. Math.	Aequationes Math.
Amer. Math. Monthly	Annals of Math. A. I.
Appl. Math. Letters	Ars Combinatoria
Bull. Malaysian Math. Sci. Soc.	Canadian J. Math.
Canadian Math. Bull.	Combinatorica
Computers and Math.	Czech. Math. J.
Disc. Math. Theo. Comp. Sci.	Discrete Appl. Math.
Discrete Math.	Elect. J. Combin.
European J. Combin.	Glasgow J. Math.
Graphs and Combin.	Info. Proc. Letters
Inst. Indust. Eng. Trans. Qual.	Intern. J. Comp. Math.
Intern. J. Math. Math. Sci.	IMA Volumes
Involve	J. Algebra
J. Algeb. Combin.	J. Austral. Math. Soc.
J. Combin. Designs	J. Combin. Theory, ser. A
J. Combin. Theory, ser. B	J. Comput. and Appl. Math.
J. Comput. Biology	J. Graph Theory
J. Parallel and Dist. Comp.	J. Pure and Appl. Algebra
Le Matematiche	Linear Multilin. Algebra
Math. Comput. Modeling	Monatshefte
Naval Res. Logistics	Networks
Order	Proc. Amer. Math. Soc.
Rocky Mtn. Math. J.	SIAM J. Algeb. Disc. Meths.
SIAM J. Disc. Math.	Theor. Comp. Sci. Dagstuhl vol.
Ars Math. Contemp.	J. Math. Ineqs.

Conference Papers Reviewed: 69

Research Proposals Reviewed

NSF: 72   Natl. Sec. Agency: 31   NRC/NAS: 2   NSERC: 9   Hong Kong RGC: 7

Promotion and/or Tenure Evaluations for Outside Instns. : 68

AMS Math. Reviews (Published Short Reviews): 129 articles, 2 books

Books Reviewed for Publishers: 24

Grant Support

SIMONS FOUNDATION

| Poset-free Families | $35,000 | 2013–2018 |

NATIONAL SCIENCE FOUNDATION

Combinatorics with Applications(with L. Székely)	$210,600	2003–2006
Combinatorics with Applications(with L. Székely)	$165,000	2000–2003
Extremal Combinatorics (with L. Székely)	$135,000	1997–2000
Computational Equipment (with 3 others)	$ 24,011	1994–96
Research in Combinatorics	$ 56,500	1987–89
Research in Combinatorics (with W.T.Trotter)	$157,000	1984–87
EPSCoRe in Discrete Math. renewal (project member)	$115,000	1983–86
Math. Sciences Research Equipment (project member)	$112,000	1982–84
Combinatorial Analysis (with W.T.Trotter)	$ 52,500	1982–84
Algebra and Combinatorics (with R.Freese)	$ 33,500	1980–82

NATIONAL SECURITY AGENCY

Kleitman and Combinatorics	$ 9,990	1999
Problems in Combinatorics	$ 39,748	1994–96
Generalized Graph Colorings	$ 38,138	1992–94
Extremal Probs. in Combin. and Graph Theory	$ 59,078	1990–92

Research Supervision

Doctoral Dissertations

1. *Mingshen Wu*, "Algorithms for spanning trees with many leaves and for edge colorings of multigraphs," 1989. Tenured Full Professor at University of Wisconsin-Stout.
2. *Roger K.-C. Yeh*, "Labelling graphs with conditions at distance two," 1990. Tenured Full Professor at Feng Chia University, Taiwan.
3. *Christine Sun*, "Binomial determinants with applications," 1991. Tenured position at Mt. San Antonio College, CA.
4. *Daphne Liu*, "Graph homomorphisms and the channel assignment problem," 1991. U.S.C. Outstanding Graduate Student award. Tenured Full Professor at Cal-State Los Angeles. Active researcher, holds current NSF grant.
5. *Yan-Chyuan Lin*, "Planar graphs with few vertices of small degree," 1993. Tenured position at Institute for Secondary School Teachers, Taiwan.
6. *T. Kim Jonas*, "Graph coloring analogues with a condition at distance two," 1993. College teaching position for 5 years; now technical staff member at U.S. Census Bureau.
7. *J. Ouyang*, "(0, 1)-Matrices without any half-half all 1's submatrix and connectivity of k-chromatic graphs," 1994. Formerly at Corbis Corp. in Seattle, WA; now computer consultant in China.
8. *Chuanzhong Zhu*, "Results on intersecting families of subsets of a finite set," 1996. Won University award as Outstanding Graduate Student. Software development, MediaNet Digital, Inc., Seattle.
9. *Peter Sandberg*, "Finding independent sets in connected graphs without large complete subgraphs," 1997. Chair, Math, Judson College.
10. *Chih-Chang Ho*, "The cycling of partitions and compositions under repeated shifts," 1998. Tenure-track asst. prof., applied math, Chinese Culture University, Taiwan.
11. *Éva Czabarka*, "Shifting in finite vector spaces," 1998. After being a research staff member at National Institutes for Health, working on problems from microbiology, she is now a tenured Assoc. Prof. at South Carolina.
12. *Teresa Xiaohua Jin*, "Real number graph labeling with distance conditions," 2005. Served as Visiting Assistant Professor at University of Vermont. Completed second Ph.D. in Electrical Engineering, now teaching in Columbia.
13. *Kelly Kross Jordan*, "The necklace poset is a symmetric chain order," 2008. Won award for being the 2008 Outstanding Graduate Student in Mathematics at USC. Now on research staff at NSA in MD.
14. *Wei-Tian Li*, "Extremal problems of families of subsets with forbidden subposets," 2011. Tenure-track Assistant Prof., National Chung Hsing Univ., Taiwan.
15. *Andrew Dove*, "Generalizations of Sperner's Theorem: packing posets, families forbidding posets, and supersaturation," 2013. Research staff of computer software company Vast in Austin, TX.

Master's Theses

1. *Ronetta Todd*, "On the average running time of the simplex algorithm," 1984. Staff position at I.B.M. in NC.
2. *Terri Miley*, "An application of bipartite matching to chain partitions," 1986. Scientist, Risk and Decision Sciences, Pacific Northwest Labs, Richland, WA.
3. *Sneh Gulati*, "A study of Sperner theory and its application to $L(m, n)$, the Young's lattice," 1987. Completed Ph.D. in Statistics. Prof., Florida International University.

4. *Christine Sun*, "A study of interval numbers of graphs," 1989. Ph.D. noted above.
5. *Tomáš Dvořák*, "On some conjectures on the chromatic index of hypergraphs," 1993. Assoc. Prof., Charles University, Prague.
6. *Fabián Chudak* "On quotient posets and the LYM-inequality and convex hulls of families of subsets," 1994. Completed Ph. D. in Operations Research at Cornell. Won Best Student Paper prize at 1998 SIAM National Meeting. Postdoc at I.B.M. Yorktown. Was on O.R. faculty at ETH-Zürich, now O.R. analyst at D-Wave Systems in Canada.
7. *Jenny Han*, "The k-choosability of a graph," 1995. Pursued doctorate in math in Taiwan.
8. *Brian Dalpiaz*, "The assignment problem and three efficient algorithms," 1997. Instructor, Spoon River College, Illinois.
9. *Keith Morris*, "An analysis of k-sums on N-wheels," 2000. Teaching high school locally.
10. *Paul Akers*, "Minimum upper bounds on 2-colored Ramsey numbers," 2001. Pursued a doctorate in model theory.
11. *Tracy Tiller McCoy*, "The maximumum size of nonspanning subsets of finite abelian groups," 2003. Math faculty, Midlands Technical College.
12. *Blair Angle*, "Observations on the Flat Antichain Theorem," 2003. Complete doctorate in Math at UCSD in CR-geometry. Now on research staff at Metron, Inc., in Virginia.
13. *Peerapong Rattanakusoomp*, "Finding optimal edge-colorings of bipartite multigraphs efficiently," 2003. Working with the Thai army.
14. *Julie Emery*, "Properties of the graph labeling problem for the infinite triangular lattice," 2005. Taught high school and at Midlands Tech. Now owns and teaches at a dance academy in Charlotte, NC.

OTHER SUPERVISION

1. *Jürgen Stahl*, graduate student, 1981–83; we wrote two joint research papers.
2. *Philip Crotwell*, summer research project and support in combinatorics, 1993.
3. *Christian Bey*, Fulbright Scholar, 1995–96 academic year, graduate student of K. Engel from Rostock University, Germany.
4. *Aseem Sood*, Brilliant undergrad double-major in Math and Computer Engineering, who led USC Modelling team to first-ever "Meritorious" awards–twice! Transferred to Carnegie-Mellon for the AI program. Earned MBA, now working at Google.
5. Closely followed work and maintain contact with former graduate students *In-Jen Lin, Yi-Wu Chang, and Andre Kündgen,* who each pursued Master's degrees here before transferring to the Univ. of Illinois to complete their Ph.D.'s in combinatorics. All now hold tenured or tenure-track positions.
6. Many reading courses for graduate students.
7. Supervisor for high school honors projects by Fozail Alvi (Spring Valley, 1999) and Chad Moore (Heathwood, 2001).
8. With the support of the Department, the I.M.I., and my own grant, I led a 5-week Summer Research Project with U.S.C. math majors Julie Emery and Katherine Heller, along with grad student Teresa Jin, on efficient channel assignments for the triangular lattice, 2003.
9. Supervised S.C. Honors College thesis, "The mathematics of cryptography," by Chris Jones (2004).

10. Twice weekly Putnam problem seminar with undergrads Jim Manning and Hudson Harper (Fall, 2007). Weekly seminars in subsequent years (2008–2010).
11. Supervised S.C. Honors College thesis, "Searching for simple symmetric Venn diagrams," by Gary Hollis (2011).
12. Supervised Goldwater Scholar Cole Franks, on research in graph theory (2011–13) and S.C. Honors College thesis, "Graph labeling with distance conditions and the delta squared conjecture." Pursing Ph.D. at Rutgers on NDSEG fellowship.
13. Supervised Huei-Ling Lai, a graduate student at National Chiao Tung University (Taiwan), who visited USC for two months (2013).
14. An unsolved problem on the triangular numbers, which I have proposed for years in my graduate course sequence Math 774-775, was solved by students in my class in 2011, and led to the research article, "Arithmetic Progressions in the Polygonal Numbers," by K. Brown, S. Dunn, and J. Harrington (*Integers*, **12** (2012)).
15. Currently supervising junior Honors College student Emily Theus, since 2013. She was awarded a USC Magellan Scholarship to support this mentored project, for $2,000, on symmetric chain decompositions of quotient posets. She was nominated by USC for a prestigious Rhodes Scholarship.
16. Mentor for math major Jeffrey Davis, 2013– , who went to the REU in Hilo, HI, in 2014. He is currently a USC nominee for a Goldwater Scholarship.
17. Collaborating on research with extraordinary high school student David Stoner of Aiken, SC. Stoner, a winner of the USC Math Contest, has represented the USA in international competitions. He is coauthor of a paper, now in preparation, on tiling hypercubes.

COMMITTEE MEMBER FOR OTHER GRADUATE STUDENTS: 46

Curriculum Development

DISCRETE MATH FOR COMPUTER SCIENTISTS	Reqd. for CSCE majors
DISCRETE MATH	Reqd. for sophomore majors
MATHEMATICAL MODELLING	For majors (in planning)
LINEAR PROGRAMMING	Senior level
PROBABILISTIC OPERATIONS RESEARCH	Senior level (Univ. Hawaii)
DISCRETE OPTIMIZATION	Graduate level
COMBINATORIAL ALGORITHMS	Graduate level
MATCHING THEORY	Graduate level
EXTREMAL SET THEORY I & II	Advanced graduate level
EXTREMAL GRAPH THEORY	Advanced graduate level

Departmental and University Service

MATH FACULTY HIRING, STAFF SUPERVISION, T&P (AS CHAIR)	2006–2012
PROVOST'S GENED MATH REASONING COMMITTEE	2007
UNIVERSITY FAMILY FUND COMMITTEE	2007
MATH GRADUATE ADMISSIONS AND ADVISORY COMMITTEE	1985–2006
UNIV. COMMITTEE ON BIOINFORMATICS HIRING	2004–2012
UNIV. COMMITTEE ON TENURE AND PROMOTION	2001–2004
CHAIR, MATH DEPT. FACULTY ADVISORY COMMITTEE	2001–2002
UNIV. RUSSELL RESEARCH AWARD COMMITTEE	2000–2002
MATH DEPT. CHAIR SEARCH COMMITTEE	1991, 2000
CHAIR, HIRING COMMITTEE	1988–89, 1999-2000
HIRING COMMITTEE	1995–96, 2000–01, 2004–05
INDUSTRIAL MATH INST. EXECUTIVE COMMITTEE	1999–2004
PEER REVIEW OF TEACHING COMMITTEE	1999–2000, 2013-14
CHAIR'S ADVISORY COMMITTEE	1995–99
CHAIR, DISCRETE MATH. COMMITTEE	1988–2005
COMPUTER ADVISORY COMMITTEE	1995–2001
FACULTY SENATE	1995–98
REVIEWER, USC EPSCOR PROPS. TO AID DISABLED STUDS.	1996
STATISTICS DEPT. FULL PROF. PEER REVIEW COMMITTEE	1993
S.C. SCIENCE FAIR JUDGE	1991,1993
U.S.C. MATH CONTEST JUDGE	1990–97
CHAIR, APPLIED MATH. COMMITTEE	1988–91
CHAIR, TENURE AND PROMOTION COMMITTEE	1986–87, 89–90
UNIV. VENTURE FUND COMMITTEE	1988
CHAIR, GRADUATE QUALIFYING EXAM COMMITTEE	1986
UNDERGRADUATE ADVISOR	1981–86

Other Experience and Service

ACTIVE IN TRANSYLVANIA COUNTY BIRD CLUB	2010–
SECY., CONSERVATION CHAIR, COLUMBIA AUDUBON SOCIETY	1994–97
MEMBER, POLIO SURVIVORS ASSN.	1984–99
CONSULTANT, MCCREARY&SNOW, ARCHITECTS	1993
CHAIR, SIERRA CLUB HONOLULU GROUP	1981

Jerrold R. Griggs

List of Publications as of August 12, 2015

Refereed Articles

1. Sufficient conditions for a symmetric chain order, *SIAM J. Appl. Math.* **32** (1977), 807–809.

2. A three part Sperner theorem, *Discrete Math.* **17** (1977), 281–289 (with D. J. Kleitman).

3. Another three part Sperner theorem, *Studies in Appl. Math.* **57** (1977), 181–184.

4. The uniqueness of odd pair designs, *Studies in Appl. Math.* **58** (1978), 1–4.

5. Algorithms for loop matchings, *SIAM J. Appl. Math.* **35** (1978), 68–82 (with D. J. Kleitman, R. Nussinov, and G. Pieczenik).

6. Extremal values of the interval number of a graph, *SIAM J. Algeb. Disc. Meths.* **1** (1980), 1–7 (with D. B. West).

7. Extremal values of the interval number of a graph, II, *Discrete Math.* **28** (1979), 37–47.

8. On chains and Sperner k-families in ranked posets, *J. Combin. Theory (ser. A)* **28** (1980), 156–168.

9. The Littlewood-Offord problem: Tightest packing and an M-part Sperner theorem, *Europ. J. Combin.* **1** (1980), 225–234.

10. On chains and Sperner k-families in ranked posets, II, *J. Combin. Theory (ser. A)* **29** (1980), 391–394 (with M. Saks and D. Sturtevant).

11. Poset measure and saturated partitions, *Studies in Appl. Math.* **66** (1982), 91–93.

12. Collections of subsets with the Sperner property, *Trans. A. M. S.* **269** (1982), 575–591.

13. On packing sums of vectors, *Congressus Numer.* **35** (1982), 317–320.

14. Lower bounds on the independence number in terms of the degrees, *J. Combin. Theory (ser. B)* **34** (1983), 22–39.

15. An upper bound on the Ramsey numbers $R(3, k)$, *J. Combin. Theory (ser. A)* **35** (1983), 145–153.

16. On the tightest packing of sums of vectors, *Europ. J. Combin.* **4** (1983), 231–236 (with J. C. Lagarias, A. M. Odlyzko, and J. B. Shearer).

17. The strict Sperner property, *Congressus Numer.* **39** (1983), 441–446.

18. A Sperner theorem on unrelated chains of subsets, *J. Combin. Theory (ser. A)* **36** (1984), 124–127 (with J. Stahl and W. T. Trotter).

19. Maximum antichains in the product of chains, *Order* **1** (1984), 21–28.

20. The Sperner property, *Annals of Disc. Math.* **23** (1984), 397–408.

21. The lexicographic sum of Cohen-Macaulay and shellable ordered sets, *Graphs and Combin.* **1** (1985), 145–163 (with A. R. Kustin, J. A. Ross, and J. Stahl).

22. Interval graphs and maps of DNA, *Bull. Molecular Biol.* **48** (1986), 189–195 (with M. S. Waterman).

23. *k*-color Sperner theorems, *J. Combin. Theory (ser. A)* **42** (1986), 31–54 (with A. M. Odlyzko and J. B. Shearer).

24. Sequence alignments with matched sections, *SIAM J. Algeb. Disc. Meths.* **7** (1986), 604–608 (with P. Hanlon and M. S. Waterman).

25. Families of finite sets with minimum shadows, *Combinatorica* **6** (1986), 355–364 (with Z. Füredi).

26. Ramsey-Sperner theory, *Discrete Math.* **63** (1987), 143–152 (with Z. Füredi, A. M. Odlyzko, and J. B. Shearer).

27. Partitioning Boolean lattices into chains of subsets, *Order* **4** (1987), 65–67 (with C. M. Grinstead and R. K.-C. Yeh).

28. The number of maximal independent sets in a connected graph, *Discrete Math.* **68** (1988), 211–220 (with C. M. Grinstead and D. Guichard).

29. Saturated chains of subsets and a random walk, *J. Combin. Theory (ser. A)* **47** (1988), 262–283.

30. Problems on chain partitions, *Discrete Math.* **72** (1988), 157–162.

31. Anticlusters and intersecting families of subsets, *J. Combin. Theory (ser. A)* **51** (1989), 90–103 (with J. W. Walker).

32. Pair labellings with given distance, *I.M.A. Preprint Series* **423** (1988), and *SIAM J. Discrete Math.* **2** (1989), 491–499 (with Z. Füredi and D. J. Kleitman).

33. Minimum cutsets for an element of a Boolean lattice, *I.M.A. Preprint Series* **499** (1989), and *Order* **6** (1989), 31–37 (with D. J. Kleitman).

34. Spanning trees with many leaves in cubic graphs, *I.M.A. Preprint Series* **455** (1988), and *J. Graph Theory* **13** (1989), 669–695 (with D. J. Kleitman and A. Shastri).

35. A minimal cutset of the Boolean lattice with almost all members, *I.M.A. Preprint Series* **421** (1988), and *Graphs and Combin.* **5** (1989), 327–332 (with Z. Füredi and D. J. Kleitman).

36. Representations of families of triples over $GF(2)$, *I.M.A. Preprint Series* **422** (1988), and *J. Combin. Theory (ser. A)* **53** (1990), 306–315 (with Z. Füredi, Ron Holzman, and D. J. Kleitman).

37. On the number of alignments of *k* sequences, *Graphs and Combin.* **6** (1990), 133–146 (with P. Hanlon, A. M. Odlyzko, and M. S. Waterman).

38. Iterated exponentials of two numbers, *I.M.A. Preprint Series* **424** (1988), and *Discrete Math.* **88** (1991), 193–209.

39. On the *r*-domination number of a graph, *Discrete Math.* **101** (1992), 65–72 (with J. P. Hutchinson).

40. Spanning trees in graphs of minimum degree 4 or 5, *Discrete Math.* **104** (1992), 167–183 (with M. Wu).

41. Labelling graphs with a condition at distance two, *SIAM J. Discrete Math.* **5** (1992), 586–595 (with R. K.-C. Yeh).

42. Towers of powers and Bruhat order, *Europ. J. Combin.* **13** (1992), 367–370 (with M. L. Wachs).

43. On the distribution of sums of residues, *Bull. A. M. S. (New Series)* **28** (1993), 329–333.

44. Independence and the Havel-Hakimi residue, *Discrete Math.* **127** (1994), 209–212 (with D. J. Kleitman).

45. Applications of the symmetric chain decomposition of the lattice of divisors, *Order* **11** (1994), 41–46 (with C. Zhu).

46. The channel assignment problem for mutually adjacent sites, *J. Combin. Theory (ser. A)* **68** (1994), 169–183 (with D. D.-F. Liu).

47. A unique arithmetic labeling of hexagonal lattices, *J. Combin. Designs* **3** (1995), 169–177 (with G. J. Chang, F. K. Hwang, and P. E. Wright).

48. Maximum size graphs with k-subgraphs of size at most $k-2$, in *Graph Theory, Combinatorics, and Applications, Proc. 7th Intern. Conf. on Theory and Applns. of Graphs* (Y. Alavi, A. Schwenk, eds.), John Wiley and Sons New York (1995) 1147–1154 (with G. R. Thomas).

49. Planar graphs with few vertices of small degree, *Discrete Math.* **143** (1995), 47–70 (with Y.-C. Lin).

50. Matchings, cutsets, and chain partitions in graded posets, *Discrete Math.* **144** (1995), 33–46.

51. Edge density and independence ratio in triangle-free graphs with maximum degree three, *Discrete Math.* **152** (1996), 157–170 (with O. Murphy).

52. An application of matching theory to edge-colourings, *Discrete Math.* **156** (1996), 253–256 (with R. P. Anstee).

53. Concentrating subset sums at k points, *Bull. Inst. Comb. Applns.* **20** (1997), 65–74.

54. Small forbidden configurations, *Graphs and Combin.* **13** (1997), 97–118 (with R. P. Anstee and A. Sali).

55. The maximum sum of degrees above a threshold in planar graphs, *Discrete Math.* **169** (1997), 233–243 (with Y.-C. Lin).

56. $(0,1)$-matrices with no half-half submatrix of ones, *Europ. J. Combin.* **18** (1997), 751–761 (with J. Ouyang).

57. The cycling of partitions and compositions under repeated shifts, *Adv. in Math.* **21** (1998), 205–227 (with C.-C. D. Ho).

58. Extremal graphs with bounded densities of small subgraphs, *J. Graph Th.* **29** (1998), 185–207 (with M. Simonovits and G. R. Thomas).

59. Database security and the distribution of subset sums in $\mathbf{R}^m$, in *Graph Theory and Combinatorial Biology, Balatonlelle 1996* (), Bolyai Math. Studs. 7 (1999) 223–252.

60. On the distribution of sums of vectors in general position, in *Proceedings of the DIMATIA/DIMACS Conference on The Future of Discrete Mathematics* (J. Nesetril et al.), DIMACS Ser. in Discrete Math. and Theor. Comp. Sci. 49 (1999) 139–142 (with G. Rote).

61. A new extension of Lubell's inequality to the lattice of divisors, *Stud. Sci. Math. Hungar.* **35** (1999), 347–351 (with F. Chudak).

62. Landau's theorem revisited, *Australian J. Combinatorics* **20** (1999), 19–24 (with K. B. Reid).

63. Spanning subset sums for finite abelian groups, *Discrete Math.* **229** (2001), 89–99.

64. On the half-half case of the Zarankiewicz problem, *Discrete Math.* **249** (2002), 95–104 (with C.-C. D. Ho).

65. Intersecting families with minimum volume, *Discrete Math.* **257** (2002), 411–414.

66. Permutations with low discrepancy consecutive k-sums, *J. Combin. Theory (ser. A)* **100** (2002), 302–321 (with R. Anstee and R. Ferguson).

67. Venn diagrams and symmetric chain decompositions in the Boolean lattice, *Elect. J. Combinatorics* **11** (2004), no. R2, 30 pp. (with C. E. Killian and C. D. Savage).

68. Optimal channel assignments for lattices with conditions at distance two, 5th IEEE Internat. Parallel and Distributed Processing Symposium (Internat. Workshop on Wireless, Mobile, and Ad Hoc Networks) extended abst., one of 19 accepted out of 100 submissions (2005), 8 pp., (with X. T. Jin).

69. Real number graph labellings with distance conditions, *SIAM J. Disc. Math* **20** (2006), 302–327 (with X. T. Jin).

70. Recent progress in mathematics and engineering on optimal graph labellings with distance conditions, *J. Combinatorial Optimization* **14** (2007), 249–257 (with X. T. Jin).

71. No four subsets forming an N, *J. Combin. Theory (ser. A)* **115** (2008), 677–685 (with G. O. H. Katona).

72. Real number channel assignments for lattices, *SIAM J. Disc. Math.* **22** (2008), 996–1021 (with X. T. Jin).

73. Graph labellings with variable weights, a survey, *Disc. Appl. Math.* **157** (2009), 2646–2658 (with D. Král').

74. Real number labellings of paths and cycles, *Internet Math˙* **4** (2007, online 2009), 65–86 (with X. T. Jin).

75. On families of subsets with a forbidden subposet, *Combinatorics, Probability, and Computing* **18** (2009), 731–748 (with L. Lu).

76. Diamond-free Families, *J. Combin. Theory (ser. A)* **119** (2012), 310–322 (with W.-T. Li, L. Lu).

77. The partition method for poset-free families, *J. Combinatorial Optimiz.* **25** (2013), 587–596 (with W.-T. Li).

78. Supersaturation in the Boolean lattice, *Integers* **14A** (2014), A5, 6 pages (with A. Dove, R. Kang, J.-S. Sereni).

79. Packing posets in the Boolean lattice, *Order* (2015), , 16 pages (with A. Dove).

80. Poset-free families and Lubell-boundedness, *J. Combin. Theory (ser. A)* (2015), (with W.-T. Li).

81. Progress on poset-free families of subsets, *IMA Volume, Recent Trends in Combinatorics,* in press, 22 pages (with W.-T. Li).

82. Full and maximal squashed flat antichains of minimum weight, preprint (with S. Hartmann, U. Leck, and I. T. Roberts).

83. Extending YBLM for Sperner families, preprint (with G. O. H. Katona).

Surveys and Expository Articles

S1. The Sperner property in geometric and partition lattices, in *The Dilworth Theorems*, (K. Bogart, R. Freese, and J. Kung,eds.), Birkhäuser, Boston (1990), 298–304.

S2. Developments inspired by matching theory and cubical lattice papers of G.-C. Rota, in *Gian-Carlo Rota on Combinatorics*, (J. Kung, ed.) Birkhäuser, Boston (1995), 572–580.

S3. Judge's commentary: The outstanding lawful capacity papers, *UMAP Journal* **20** (1999), 331–333.

S4. Judge's commentary: The outstanding channel assignment papers, *UMAP Journal* **21** (2000), 379–386.

S5. Kleitman and combinatorics: a celebration, *Discrete Math.* **257** (2002), 193–224 (with L. Cowen and D. B. West, all under name "G. W. Peck").

S6. 20 years of good advice, in *The MCM at 21: COMAP's Mathematical Contest in Modeling*, (P. Campbell, ed.), COMAP, Lexington, MA (2007), 27–34 (with P. Driscoll, M. Parker, P. Boisen, W. P. Fox, M. Tortorella, and P. J. Campbell).

S7. Judges' Commentary, the Ben Fusaro Award, *UMAP Journal* **35** (2014), 153–156.

Edited Volumes

E1. Special issues devoted to conference in honor of D. J. Kleitman, *Discrete Math.* **257** (2002), 191–628 (with L. Cowen, D. B. West, co-editors).

E2. Proceedings of the Fourteenth Annual ACM-SIAM Symposium on Discrete Algorithms, Assoc. for Comput. Mach., Baltimore, and Soc. for Indust. Appl. Math., Philadelphia (2003), 874 pp. (with 19 other co-editors).

E3. Special issue devoted to Networks, *Naval Res. Logistics* **52** (2005), 137–192 (with M. Tortorella, co-editor).

E4. Recent trends in combinatorics, *IMA Volume*, Springer, in preparation (with 4 other co-editors).

Problems Used in the International Mathematical Competition in Modeling

Collected Winning Student Papers

P1. 2000 Problem B: The channel assignment problem, *UMAP Journal* **21** (2000), 311–378.

P2. 2001 Problem B: The hurricane evacuation, *UMAP Journal* **22** (2001), 257–336.

P3. 2003 Problem B: Gamma knife treatment, *UMAP Journal* **24** (2003), 325–390 (with Jie Wang).

P4. 2004 Problem B: A faster quick pass system, *UMAP Journal* **25** (2004), 281–353.

P5. 2005 Problem A: Flood planning, *UMAP Journal* **26** (2005), 229–283.

P6. 2008 Problem A: Polar Melt, *UMAP Journal* **29** (2008), 223–304.

Published Problems (Refereed)

1. *Amer. Math. Monthly* **95**(1988), Problem E3291, p. 872.
2. *Amer. Math. Monthly* **96**(1989), Advanced Problem 6591, p. 66 (with R.J.Evans).
3. *Discrete Math.* **80** (1990), Res. Prob. 128, p. 221 (with D. B. West).
4. *Amer. Math. Monthly,* **105**(1998), Problem 10641.
5. *Amer. Math. Monthly,* **105**(1998), Problem 10665.
6. *Pomona College Magazine,* (Spring, 1999).
7. *Amer. Math. Monthly,* **109**(2002), Problem 10932 (with C. Bey).
8. *Discrete Math.,* (2002), Problem 386.
9. IWOCA 2013 Conference Problems website, "Finding posets P in a family of subsets," 2 p.

10. IWOCA 2014 Conference Problems website, "Tiling hypercubes with copies of a given graph," 1 p.

Published Problem Solutions (Refereed)

1. *SIAM Review* **18**(1976), 300–301.
2. *Amer. Math. Monthly* **84**(1977), 573–574.
3. *Amer. Math. Monthly* **84**(1977), p. 654.
4. *Amer. Math. Monthly* **85**(1978), 602–603.
5. *Amer. Math. Monthly* **86**(1979), 64–65.
6. *Amer. Math. Monthly* **100**(1993), p. 503.
7. *Amer. Math. Monthly* **104**(1997), p. 976.

Published Book Review

1. *Applied Combinatorics* by A. Tucker, in *Networks,* 1982.

Invited Paper Presentations at Professional Meetings

1. "Lower bounds on the independence number of a graph," special session, Amer. Math. Soc., Bryn Mawr (March, 1982), 20 min.
2. "The Sperner property," Conference on Ordered Sets and Their Applications, Lyon, France (July, 1982), 60 min.
3. "k-color Sperner theorems," Combinatorics and Ordered Sets, Oberwolfach (Jan., 1985), 30 min.
4. "Ramsey-Sperner theory," Colloquium on Ordered Sets, Szeged, Hungary (Aug., 1985), 30 min.
5. "Problems on chain partitions," First Japan Conference on Graph Theory and Applications, Hakone (June, 1986), 25 min.
6. "Saturated chain partitions and a random walk," special session, Amer. Math. Soc., Denton (Oct., 1986), 20 min.
7. "Anticlusters and intersecting families of sets," Workshop on Computational Combinatorics, S.F.U., Vancouver (August, 1987), 30 min.
8. "Towers of powers and Bruhat order," Combinatorics of Ordered Sets, Oberwolfach (May, 1988), 30 min.
9. "Representations of uniform hypergraphs," Algebraic Graph Theory Conference, Leibnitz, Austria (June, 1989), 30 min.
10. "Representations of uniform hypergraphs," Discrete Math. Conference, Clemson (Sept., 1989), 40 min.
11. "Algorithms for large independent sets," 2nd Japan conference on graph theory, Hakone (August, 1990), 20 min.
12. "Three problems on vertex labellings," Graph Labellings Workshop, Northeastern Univ. (March, 1991), 30 min.
13. "Chain partitions in B_n and Π_n," Combinatorics of Ordered Sets, Oberwolfach (Oct., 1991), 40 min.
14. "Vertices of small degree in planar graphs," Planar Graphs Workshop, DIMACS, Rutgers Univ. (Nov., 1991), 15 min.
15. "On the distribution of sums of residues," Special Session in honor of P. Erdős, Amer. Math. Soc. meeting, DeKalb, IL (May, 1993), 20 min.
16. "Subset sums spanning abelian groups," Amer. Math. Soc. meeting, Greensboro, NC (Nov., 1995), 20 min.
17. "Concentrating subset sums at k points," International Colloq. on Combin. and Graph Th., Balatonlelle, Hungary (July, 1996), 45 min.
18. "Database security and concentrating sums of vectors," Special session on partially ordered sets, Amer. Math. Soc. annual meeting, San Diego (Jan., 1997), 20 min.
19. "The Distribution of Subset Sums in R^m and in Abelian Groups," DIMATIA-DIMACS Conference, "The Future of Discrete Mathematics," Štiřín, Czech Republic (May, 1997), 60 min.
20. "Database security and concentrating sums of vectors," Mini-conference on Combinatorics, UNC-Greensboro (October, 1997), principal lecturer, 60 and 20 min.
21. "Database security and concentrating sums of vectors," 5th Czech-Slovak Colloq. on Combinatorics, Prague (July, 1998), plenary address, 50 min.
22. "Minimum span channel assignments," SIAM Disc. Math. Conf., Toronto (July, 1998), minisymposium lecture, 25 min.
23. "Domino cover problems," Canada-USA Mathcamps, Toronto (July, 1998), plenary lecture, 50 min.

24. "Database security and concentrating sums of vectors," Los Alamos National Labs workshop, "Frontiers in Combinatorics," (August, 1998), 60 min.
25. "The cycling of partitions and compositions under repeated shifts," Special session on combinatorics, Amer. Math. Soc. meeting, Wake Forest Univ. (Oct., 1998), 20 min.
26. "Extremal graphs with bounded densities of small subgraphs," Special session on extremal combinatorics, Canadian Math. Soc. meeting, Kingston, Ont. (Dec., 1998), 20 min.
27. "Database security and concentrating sums of vectors," Special session on Erdős's contributions, Amer. Math. Soc. meeting, Univ. of Florida (Mar., 1999), 20 min.
28. "Independent sets and spanning trees with many leaves," Special session on graph theory, Amer. Math. Soc. meeting, Univ. of Illinois (Mar., 1999), 20 min.
29. "Applications of posets to database security," SIAM annual meeting, Atlanta (May, 1999), minisymposium lecture, 25 min.
30. "Extremal graphs with bounded densities of small subgraphs," Cumberland Conference, Louisville (May, 1999), 20 min.
31. "Concentrating sums of vectors," Memorial conference "Paul Erdős and his Mathematics," Budapest (July, 1999), 30 min.
32. "Three problems on posets," DIMACS Research and Education Institute, Rutgers (August, 1999), 30 min.
33. "Chains and antichains in posets," Canada-USA Mathcamps, Seattle (August, 1999), plenary lecture, 90 min.
34. "The distribution of sums," Kleitman Celebration Conference, MIT (August, 1999), 30 min.
35. "The distribution of sums," Miniconference in discrete mathematics, University of North Carolina, Greensboro (November, 1999), 20 min.
36. "Minimum span vertex labellings," Special session on graph theory, Amer. Math. Soc. meeting, Univ. of Louisiana-Lafayette (Apr., 2000), 20 min.
37. "Channel assignments with distance conditions," Pacific Inst. Math. workshop, Simon Fraser University, Vancouver (July, 2000), 50 min.
38. "Database security and concentrating sums of vectors," Optimal Discrete Structures and Algorithms - ODSA 2000, Rostock, Germany (September, 2000), plenary lecture, 50 min.
39. "Circular permutations with low discrepancy consecutive k-sums," Miniconference in discrete mathematics, University of North Carolina, Greensboro (November, 2000), 20 min.
40. "An application of Sperner theory to Venn diagram construction," Special session on combinatorics, Amer. Math. Soc. meeting, Univ. of South Carolina (Mar., 2001), impromptu 20 min.
41. "Permutations with low discrepancy consecutive k-sums," Cumberland Conference, Memphis (May, 2001), 20 min.
42. "Problems on chain partitions," Conference on hypergraphs, Budapest (June, 2001), 30 min.
43. "Channel assignments with distance conditions," Special session on graph theory, Amer. Math. Soc. meeting, Chattanooga (Oct., 2001), 20 min.
44. "Intersecting families with minimum volume," Special session on graph theory, Amer. Math. Soc. annual meeting, San Diego (Jan., 2002), 20 min.
45. "Database security and concentrating sums of vectors," Special session on lattice theory, Amer. Math. Soc. annual meeting, San Diego (Jan., 2002), 20 min.

46. "Channel assignments with distance conditions," Clemson Mini-Conference on Combinatorial Optimization, Clemson (Oct., 2002), 40 min.
47. "Database security and concentrating sums of vectors," Australasian Conference on Combinatorics, Newcastle, Australia (Dec., 2002), plenary hour lecture.
48. "Channel assignments with distance conditions," MAA-SIAM Southeast Sectional meeting, Clemson, SC (Mar., 2003), 30 min.
49. "Real number channel assignments with distance conditions," Special session on graph theory, Amer. Math. Soc. sectional meeting, Bloomington, IN (Apr., 2003), 20 min.
50. "Venn diagrams and symmetric chain decompositions in the Boolean Lattice," Special session on extremal combinatorics, Amer. Math. Soc. sectional meeting, Bloomington, IN (Apr., 2003), 20 min.
51. "Real number channel assignments with distance conditions," Cumberland Conference, Atlanta, GA (May, 2003), 15 min.
52. "Real number channel assignments with distance conditions," Joint DIMACS-DIMATIA-Rényi Institute Workshop on Graph Colorings, Rutgers, NJ (Oct., 2003), 30 min.
53. "Real number channel assignments with distance conditions," Integers Conference, State University of West Georgia, GA (Nov., 2003), 20 min.
54. "Labelling graphs with distance conditions: an overview," Minisymposium keynote lecture, SIAM Discrete Math Conference, Nashville TN (June, 2004), 25 min.
55. "Channel assignments for infinite graphs," Miniconference in discrete mathematics, Clemson, SC (Oct., 2004), 40 min.
56. "Channel assignments for infinite graphs," Special session on extremal combinatorics, Amer. Math. Soc. sectional meeting, Evanston, IL (Oct., 2004), 20 min.
57. "Optimal channel assignments for lattices with conditions at distance two," IEEE International Workshop on Algorithms for Wireless, Mobile, Ad Hoc, and Sensor Networks, Denver, CO (Apr., 2005), (18 papers accepted out of 100 submitted), 20 min. (with X. T. Jin).
58. "Channel assignments for infinite graphs," CTS Conference on Combinatorics and Its Applications, National Chiao Tung University, Taiwan (May, 2005), plenary address, 50 min.
59. "Real number labellings," DIMACS/DIMATIA/Renyi Combin. Challenges Workshop, Rutgers Univ., NJ (April, 2006), plenary lecture, 35 min.
60. "Chain decompositions and Venn diagrams," Minisymposium lecture, SIAM Discrete Math Conference, Victoria, B.C. (June, 2006), 25 min.
61. "Chain decomposition problems", Problem Session presentation, AMS Special Session in Fayetteville, AR (Nov., 2006), 10 min.
62. "Problems in the Boolean lattice," EXCILL Conference, Urbana, IL (Nov., 2006), 25 min.
63. "No four subsets forming an N," Special session on algebraic and extremal combinatorics, Amer. Math. Soc. secional meeting, Davidson, NC (Mar., 2007), 20 min.
64. "Two problems in extremal set theory," Conference on Extremal Combinatorics, Rényi Institute, Budapest (June, 2007), plenary lecture, 45 min.
65. "Minimum span real number graph labellings with separation conditions," Workshop on Frequency Assignment Problems, Sadek, Czech Republic (Sep., 2007), plenary lecture, 2 hrs.
66. "Large families of subsets avoiding a given configuration," Special session on graph theory, Amer. Math. Soc. annual meeting, San Diego, CA (Jan., 2008), 20 min.

67. "On chain partitions for quotients of the Boolean lattice," Special session on Combinatorics of Posets, Amer. Math. Soc. sectional meeting, Claremont, CA (May, 2008), 20 min.
68. "Large families of subsets avoiding a given configuration," New Directions in Algorithms, Combinatorics, and Optimization, Georgia Tech, Atlanta, GA (May, 2008) plenary lecture, 40 min.
69. "Minimum span real number graph labellings with separation conditions," Cumberland Conference on Combinatorics, Nashville, TN (May, 2008), 20 min.
70. "Minimum span real number graph labellings with separation conditions," Minisymposium lecture in Graph Theory SIAM Discrete Math Conference, Burlington, VT (June, 2008), 20 min.
71. "Venn diagrams and symmetric chain decompositions," Minisymposium lecture on Posets, SIAM Discrete Math Conference, Burlington, VT (June, 2008), 20 min.
72. "Diamond-free families of subsets," Special session on Extremal Set Theory, Amer. Math. Soc. sectional meeting, Urbana, IL (March, 2009), 20 min.
73. "Venn diagrams, necklaces, and chain decompositions of posets," Plenary lecture, CombinaTexas, Houston, TX (April, 2009), one hour.
74. "Families of subsets with forbidden subposets," Minisymposium on the combinatorics of partially ordered sets, SIAM Annual Meeting, Denver, CO (July, 2009).
75. "The Lubell function and H-free families of subsets," Special session on Probabilistic and Extremal Combinatorics, Amer. Math. Soc. sectional meeting, St. Paul, MN (April, 2010), 20 min.
76. "Searching for diamonds," Atlanta Lecture Series in Combinatorics and Graph Theory, Atlanta, GA (February, 2011), 50 min.
77. "Searching for harps," Special session on Applied Combinatorics, Amer. Math. Soc. sectional meeting, Statesboro, GA (March, 2011), 20 min.
78. "Simple symmetric Venn diagrams," Minisymposium on Combinatorics, SIAM-Southeastern Atlantic Section meeting, Charlotte, NC (March, 2011), 20 min.
79. "Searching for diamonds," plenary lecture, EuroComb'11/Katona70, Budapest, Hungary (August, 2011), 50 min.
80. "Forbidden subposets with nice answers," Special session on Extremal Combinatorics, Amer. Math. Soc. sectional meeting, Winston-Salem, NC (September, 2011), 20 min.
81. "The Δ^2 conjecture for graph labellings with separation conditions," Special session on Great Conjectures in Graph Theory, Amer. Math. Soc. annual meeting, Boston, MA (January, 2012), 25 min.
82. "The Lubell function of a family of subsets," Special session on Extremal Combinatorics, Amer. Math. Soc. sectional meeting, Tampa, FL (March, 2012), 25 min.
83. "Searching for diamonds," plenary lecture, SIAM-SouthEast Atlantic Section annual meeting, Huntsville, AL (March, 2012), 50 min.
84. "The Δ^2 conjecture for graph labellings with separation conditions," Minisymposium on Distance in Graphs, SIAM Discrete Math Conference, Halifax, NS (June, 2012), 25 min.
85. "Poset-free families of sets," Minisymposium on Combinatorics and Partially Ordered Sets, SIAM Discrete Math Conference, Halifax, NS (June, 2012), 25 min.
86. "Families of subsets with a forbidden subposet," plenary lecture, 2012 Workshop on Graph Theory and Combinatorics and 2012 Symposium for Young Combinatorialists, Kaohsiung, Taiwan (August, 2012) 50 min.

87. "Searching for Diamonds," plenary lecture, CombinaTexas, Houston, TX (April, 2013), 50 min.
88. "Forbidding posets in a family of subsets," Atlanta Lecture Series, plenary lecture, (April, 2013), 50 min.
89. "The Δ^2 conjecture for graph labellings with separation conditions," IWOCA–International Workshop on Combinatorial Algorithms, Rouen, France, plenary lecture (July, 2013), 60 min.

90. "Problems in graph theory from set system conjectures," Special session on Graph Theory, Amer. Math. Soc. sectional meeting, Knoxville, TN (March, 2014), 20 min.
91. "Poset-free families and packing posets in the Boolean lattice," Cumberland Conference plenary lecture, West Virginia Univ., Morgantown, WV (May, 2014), 50 min.
92. "Packing posets in the Boolean lattice," Minisymposium on Posets, SIAM Discrete Math Conference, Minneapolis, MN (June, 2014), 25 min.
93. "Poset-free families and packing posets in the Boolean lattice," Special session on Combinatorial Problem-Solving, Amer. Math. Soc. sectional meeting, Eau Claire, WI (September, 2014), 45 min.
94. "Tiling the n-cube graph with copies of a given graph," Special session on Graph and Hypergraph Theory, Amer. Math. Soc. sectional meeting, Eau Claire, WI (September, 2014), 20 min.

Papers Contributed at Professional Meetings

1. "Sufficient conditions for a symmetric chain order," Amer. Math. Soc. annual meeting, St. Louis (Jan., 1977), 10 min.
2. "Extremal values of the interval number of a graph," Amer. Math. Soc. annual meeting, Atlanta (Jan., 1978), 10 min.
3. "On chains and Sperner k-families in ranked posets," Amer. Math. Soc. annual meeting, Biloxi (Jan., 1979), 10 min.
4. "On packing sums of vectors," Southeastern Conf. on Combinatorics, Graph Theory, and Computing, Boca Raton (Feb., 1982), 20 min.
5. "The strict Sperner property," Southeastern Conf., Boca Raton (Feb., 1983), 15 min.
6. "Enumeration of biological sequence alignments," British Combinatorial Conference, Glasgow (July, 1985), 20 min.
7. "Enumerating biological sequence alignments," SIAM Disc. Math. Conference, Clemson (May, 1986), 15 min.
8. "On a problem of Sands," Southeastern Conf., Boca Raton (Feb., 1987), 15 min.
9. "Anticlusters and intersecting families of sets," 7th Hungarian Colloq. on Finite and Infinite Sets, Eger (July, 1987), 20 min.
10. "Anticlusters and intersecting families of sets," 11th British Combinatorial Conf., London (July, 1987), 20 min.
11. "Pair labellings with given distance," Amer. Math. Soc. annual meeting, Phoenix (Jan., 1989), 10 min.
12. "Pair labellings with given distance," Southeastern Conf., Boca Raton (Feb., 1989), 15 min.
13. "Cutsets in the Boolean lattice," Southeastern Conf., Boca Raton (Feb., 1990), 15 min.
14. "Algorithms for large independent sets," SIAM Disc. Math. Conf., Atlanta (June, 1990), 20 min.

15. "Labelling graphs with a condition at distance two," 7th International Conf. on Graph Theory, Kalamazoo (June, 1992), 15 min.
16. "The channel assignment problem for mutually adjacent sites," SIAM Discrete Math. Conf., Vancouver (June, 1992), 15 min.
17. "Matchings, cutsets, and chain partitions," Southeastern Conf., Boca Raton (Feb., 1993), 15 min.
18. "Coloring faces of infinite planar triangulations," Southeastern Conf., Boca Raton (Mar., 1994), 15 min.
19. "Concentrating subset sums at k points," Southeastern Conf., Baton Rouge (Feb., 1996), 15 min.
20. "Spanning trees with many leaves in hypercubes," Connections in Disc. Math., Burnaby, B.C. (June, 2015), 25 min.

Seminars and Colloquia at Outside Institutions

1. Claremont Colleges Math. Colloquium (9/77).
2. U. C. L. A. Combinatorics Seminar (10/77).
3. U. C. San Diego Combinatorics Seminar (6/78).
4. Rutgers Discrete Math. Seminar (2/79).
5. Colorado State University Math. Colloquium (2/79).
6. University of South Carolina Math. Colloquium (3/79).
7. Caltech Math. Colloquium (4/79).
8. University of Hawaii Math. Colloquium (9/79).
9. Bell Labs Math. Colloquium, Murray Hill (7/80).
10. Bell Labs Math. Colloquium, Murray Hill (3/82).
11. Rutgers University Operations Research Seminar (3/82).
12. L'Université de Quebec à Montréal Combinatorics Seminar (3/82).
13. Rutgers University Combinatorics Seminar (5/83).
14. Simon Fraser University Combinatorics Seminar (6/83).
15. University of Hawaii Math Seminar (8/83).
16. U. C. San Diego Combinatorics Seminar (1/84).
17. University of Southern California Applied Math. Colloquium (1/84).
18. University of New Orleans Math. Colloquium (3/84).
19. New Mexico State Math. Colloquium (8/84).
20. University of Southern California Algebra Seminar (12/84).
21. University of Hawaii Algebra Seminar (1/85).
22. University of Southern California Math. Colloquium (1/85).
23. Technische Hochschule Darmstadt Allgemeine Algebra Seminar (1/85).
24. University of Southern California Optimization Seminar (2/85).
25. Caltech Combinatorics Seminar (2/85).
26. Claremont Colleges Math. Colloquium (4/85).
27. Caltech Combinatorics Seminar (4/85).
28. U. C. Riverside Math. Colloquium (5/85).
29. Technische Hochschule Darmstadt Allgemeine Algebra Seminar (7/85).
30. University of Miami Math. Colloquium (2/87).
31. Bellcore Math. Seminar (6/87).
32. University of Connecticut Math. Colloquium (6/87).
33. University of Minnesota Graph Theory Seminar (2/88).
34. University of Hawaii Algebra Seminar (7/88).

35. Virginia Tech Math. Colloquium (12/88).
36. University of Michigan Combinatorics Seminar (10/89).
37. University of Connecticut Math. Colloquium (5/90).
38. California State University, San Marcos, Undergrad. Math. Seminar (10/91).
39. Simon Fraser University Graduate Math. Seminar (2/92).
40. University of British Columbia Combinatorics Seminar (4/92).
41. University of Georgia Joint Math.-Computer Science Colloquium (5/93).
42. Claremont Colleges Math. Colloquium (3/97).
43. Caltech Combinatorics Seminar (3/97).
44. Univ. Paderborn, Germany, Combinatorics Seminar (7/98).
45. Wake Forest Univ. Colloquium (11/01).
46. University of California, Santa Barbara, Computer Science Colloquium (3/02).
47. Trinity College, Hartford, Distinguished Lecture Series (4/02).
48. Combinatorics Problem Seminar, University of Newcastle, Australia (12/02).
49. Dalhousie University (Halifax) Math. Colloquium (7/04).
50. Georgia State Math. Colloquium (5/05).
51. National Taiwan University Combinatorics Seminar (2 hours) (5/05).
52. Caltech Combinatorics Seminar (2/06).
53. University of British Columbia Combinatorics Seminar (4/06).
54. Rényi Institute Combinatorics Seminar, Budapest (5/06).
55. Miami University, OH, Mathematics Colloquium (3/07).
56. Charles University Applied Math Seminar, Prague (9/07).
57. U.N.C.-Asheville Research Experience for Undergraduates (7/08).
58. Iowa State University Mathematics Colloquium (9/09).
59. University of Rome Information Theory Seminar (5/10).
60. Georgia Tech Combinatorics Seminar (9/10).
61. Carnegie-Mellon Combinatorics Seminar (11/10).
62. Virginia Commonwealth Univ. Mathematics Colloquium (12/11).
63. Université Paris Diderot Séances Combinatoire Extremale, 4 seminars (5/12).
64. Charles University Noon Seminar, Prague (6/12).
65. National Taiwan University Discrete Math Seminar (4 seminars, 8 hours) (8/12).
66. Univ. Wisconsin-Superior Seminar (11/12).
67. Univ. Minnesota-Duluth Seminar for Undergrads (11/12).
68. Seminar Orpailleur, LORIA Nancy, France (7/13).
69. Seminari Combinatoria Teoria de Grafs i Aplicacions, UPC Barcelona, Spain (90 mins.) (7/13).
70. West Virginia Univ. Mathematics Colloquium (5/14).
71. IMA, Univ. of Minnesota Seminar on applying for academic jobs (10/14).
72. IMA, Univ. of Minnesota Learning Seminar (11/14).
73. IMA, Univ. of Minnesota Annual Program Seminar (11/14).
74. Univ. of Minnesota Combinatorics Seminar (11/14).
75. Univ. of Minnesota Combinatorics Problems Seminar (11/14).
76. Univ. Wisconsin-Superior Math and Computer Club Seminar (12/14).
77. Univ. of North Carolina-Greensboro Barton Lecture in Computational Math (2/15).