

# DHRUV MUBAYI

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## PERSONAL

- Born on August 20, 1973 in Bombay (now Mumbai), India

## MATHEMATICAL INTERESTS

- Combinatorics, especially extremal and probabilistic questions on graphs and hypergraphs, with applications to Theoretical Computer Science

## EMPLOYMENT HISTORY

- 2008-: Professor, University of Illinois at Chicago
- 2007-2008: Associate Professor, Department of Mathematical Sciences, Carnegie Mellon University
- 2005-2008: Associate Professor, University of Illinois at Chicago
- 2002-2005: Assistant Professor, University of Illinois at Chicago
- 2001-2002: Postdoctoral Researcher, Theory Group, Microsoft Research
- 1998-2001: Visiting Assistant Professor, School of Mathematics, Georgia Institute of Technology

## EDUCATION

- Ph.D. in Mathematics, University of Illinois at Urbana-Champaign, 1998
- B.S. in Mathematics, Magna cum Laude, Davidson College, 1995  
Second person in the history of Davidson College to graduate with High Honors in mathematics

## AWARDS/GRANTS

- 2013-18: National Science Foundation (NSF) grant DMS-1300138
- 2013-18: Simons Foundation Collaboration grant (declined)
- 2010-13: NSF grant DMS-0969092
- 2007-10: NSF grant DMS-0653946
- 2005-07: Alfred P. Sloan Research Fellowship
- 2004-07: NSF grant DMS-0400812
- 2003: Campus Research Board grant, University of Illinois at Chicago
- 1999-03: NSF grant DMS-9970325
- 1998: Phi Kappa Phi, University of Illinois
- 1998: Trjitzinski and Parker Fellowships, University of Illinois
- 1996: Liberal Arts Scholarship and Trjitzinski Fellowship, University of Illinois
- 1995: Phi Beta Kappa, Davidson College

## INSTITUTIONAL GRANT

- 2009-: PI and Project Director of UIC portion of NSF grant HRD-0904024, Illinois Louis Stokes Alliance for Minority Participation

## DEPARTMENT/UNIVERSITY SERVICE

- 2017-18: Director of Graduate Studies, Department of Mathematics, Statistics, and Computer Science, UIC
- 2016-18: UIC Graduate College Awards Committee
- 2013-14: Associate Head for Operations, Department of Mathematics, Statistics, and Computer Science, UIC
- 2002-: Various departmental committees at UIC (most multiple times), including hiring committee (tenure-track and postdoc), advisory committee (elected), salary committee, colloquium committee (as chair), Mathematical Computer Science program committee (as chair), graduate studies committee, undergraduate studies committee, math education committee, personnel review committees for promotion cases
- 2007-08: Postdoctoral hiring committee, Department of Mathematical Sciences, Carnegie Mellon University

## PROFESSIONAL SERVICE

- Editorial work  
Managing Editor, *Journal of Combinatorial Theory, Series B* (2013-)  
Associate Editor, *SIAM Journal on Discrete Mathematics* (2010-)  
Advisory Board, *Journal of Combinatorial Theory, Series A* (2007-)  
Associate Editor, *Discrete Mathematics* (2007-2010), Editorial Board (2010-)  
Editorial Board, *Order* (2008-)  
Editorial Board, *International Journal of Combinatorics* (2009-2013)
- Conference organizing:  
05/2017: Recent Advances in Extremal Combinatorics (with Tao Jiang, Jie Ma) Yau Mathematical Sciences Center, Sanya, China  
08/2016: EXCILL III: Extremal Combinatorics at Illinois (with Jozsef Balogh, Tao Jiang, Hemanshu Kaul, Douglas West, Gexin Yu) Illinois Institute of Technology, Chicago  
2016-2018: SQuaRE Workshop on Turán problem for sparse hypergraphs (with Zoltan Füredi, Tao Jiang, Alexandr Kostochka, Jacques Verstraëte), American Institute of Mathematics (AIM), San Jose (three annual week long visits fully funded by AIM)  
01/2015: Workshop on Graph Ramsey Theory (with David Conlon and Jacob Fox), American Institute of Mathematics (AIM), Palo Alto

- 09/2014: Workshop on Extremal and Probabilistic Combinatorics (with Penny Haxell, Eyal Lubetzky, Benny Sudakov), Institute for Mathematics and its Applications (IMA), Minneapolis
- 06/2013: Invited Minisymposium in Extremal Combinatorics, CANADAM 2013, Newfoundland, Canada
- 04/2012: Workshop on Hypergraph Turán Problem (with Penny Haxell, Oleg Pikhurko and Tibor Szabo), Oberwolfach, Germany
- 03/2011: Workshop on Hypergraph Turán Problem (with Oleg Pikhurko and Benny Sudakov), American Institute of Mathematics (AIM), Palo Alto
- 02/2010: Workshop in Graph Theory and Combinatorics in Memory of Uri Peled (with Shmuel Friedland and Gyuri Turán), UIC
- 11/2009: Workshop on Topics on Graphs and Hypergraphs (with Penny Haxell, Benny Sudakov, Jacques Verstraëte), IPAM, UCLA
- 10/2007: Special Session on Extremal and Probabilistic Combinatorics (with Jozsef Balogh), AMS Central Section Meeting (#1030), Chicago
- 07/2006: Minisymposium, SIAM Discrete Mathematics conference, Victoria, Canada
- 10/2004: Special Session on Extremal Combinatorics (with Yi Zhao), AMS Central Section Meeting (#1001), Evanston
- 06/2004: Minisymposium, SIAM Discrete Mathematics conference (with André Kündgen), Nashville
- 04/2003: Special Session on Extremal Combinatorics (with Jozef Skokan), AMS Central Section Meeting (#985), Bloomington, Indiana
- 04/2000: Special Session on Graph Theory (with Robin Thomas), AMS Southeastern Section Meeting (#954), Lafayette, Louisiana
- Reviewer of grant proposals for National Science Foundation (NSF), National Security Agency (NSA), U.S.-Israel Binational Science Foundation (BSF), Israel Science Foundation (ISF), Natural Sciences and Engineering Research Council (NSERC), Hungarian Scientific Research Fund (OTKA), International Centre for Mathematical Sciences (ICMS); served on NSF combinatorics panel (multiple times) and NSF Core Math CAREER panel
  - Program Committee, EuroComb 2011
  - Judge for orals competition, Illinois Council of Teachers of Mathematics (ICTM) annual high school mathematics contest (2005, 2006, 2009, 2013)
  - Judge for QED: Chicago's Youth Math Symposium (2013)
  - Co-taught a workshop in Discrete Mathematics to K-8 Chicago public school teachers (2006)
  - External committee member for Ph.D defense of David Offner at Carnegie Mellon (2009)
  - External examiner for Ph.D qualifying exam of John Wilmes at University of Chicago (2012)

## STUDENT AND POSTDOCTORAL ADVISING

- Ph.D. Students with first post Ph.D job  
Jeff Cooper, UIC (2010-2014); Software Engineer, Google  
Randall Stading, UIC (2009-2014); Engineer, Epic Systems  
Caroline Terry, UIC (2010-2016); Brin Postdoctoral Fellow, Dept of Math, University of Maryland  
Lujia Wang, UIC (2013-)  
Alex Cameron, UIC (2013-)
- Postdocs Mentored  
Yi Zhao (2003-2006), currently Associate Professor at Georgia State University  
John Lenz (2011-2015)

## INVITED TALKS

- 01/2018: Workshop on Extremal Problems in Combinatorial Geometry, BIRS, Banff, Canada
- 01/2018: Workshop on Model Theory and Combinatorics, Institut Henri Poincaré, Paris, France
- 01/2018: International conference in Mathematics, University of Mumbai, Mumbai, India
- 01/2018: Workshop on Extremal and Structural Combinatorics, IMPA, Rio De Janeiro, Brazil
- 10/2017: Colloquium, Department of Mathematical Sciences, University of Delaware
- 07/2017: Seminar, Theoretical Statistics and Mathematical Unit, Indian Statistical Institute, Delhi
- 05/2017: Seminar, School of Mathematical Sciences, University of Science and Technology Hefei, China
- 05/2017: Seminar, Institute of Mathematics, Hunan University Changsha, China
- 06/2016: Workshop on Probabilistic and Extremal Combinatorics Downunder, Monash University, Melbourne, Australia
- 05/2016: 50 Years of the Hales-Jewett Theorem, Western Washington University, Bellingham
- 04/2016: Colloquium, Monday Lecture (75 mins) of the Research Training Group *Methods for Discrete Structures*, Freie University, Berlin, Germany
- 01/2016: Combinatorics Seminar, Freie University, Berlin, Germany
- 02/2016: 2016 International workshop on Graph theory and Combinatorics Ewha Womans University, Seoul, Korea
- 01/2016: Combinatorics Seminar, University of Illinois at Urbana-Champaign
- 11/2015: Distinguished Lecture, Department of Mathematics and Statistics Georgia State University, Atlanta
- 09/2015: Workshop on Extremal and Probabilistic Combinatorics, Birmingham, UK
- 08/2015: Colloquium, School of Mathematics, Tata Institute of Fundamental Research (TIFR) Mumbai, India
- 07/2015: FriezeFest 2015 in honor of the 70th birthday of Alan Frieze (one of nine invited speakers)

at the 17th International Conference on Random Structures and Algorithms  
Carnegie-Mellon University, Pittsburgh

- 06/2015: Combinatorics Seminar, Center for Graph Theory, Combinatorics and Networks  
Chinese Academy of Sciences, Beijing, China
- 06/2015: Minicourse in “Methods in Extremal Set Theory” (six 90 minute lectures)  
East China Normal University, Shanghai, China
- 06/2015: Seminar, Shanghai Jiao Tong University, Shanghai, China
- 06/2015: Canadian Discrete and Algorithmic Mathematics Conference (CANADAM 2015)  
(Plenary Speaker)
- 03/2015: Graduate Student Combinatorics Conference (Plenary Speaker)  
University of Kentucky, Lexington
- 03/2015: 2nd Lake Michigan Workshop on Combinatorics and Graph Theory,  
(one of two Plenary Speakers giving three 50 minute tutorials), Notre Dame, Indiana
- 07/2014: Workshop in Extremal Combinatorics, ICMS, Edinburgh
- 06/2014: Westfest (conference in honor of Doug West’s 60th birthday), IMA, Minneapolis
- 05/2014: Workshop in Graph Theory, Zhejiang Normal University, Jinhua, China
- 05/2014: Combinatorics Seminar, East China Normal University, Shanghai, China
- 04/2014: Combinatorics Seminar, KTH, Stockholm
- 04/2014: Combinatorics Seminar, Mittag Leffler, Stockholm
- 02/2014: Combinatorics Seminar, MIT, Boston
- 02/2014: Colloquium, Emory University, Atlanta
- 01/2014: Workshop in Combinatorics, Oberwolfach, Germany
- 12/2013: ACO seminar, Carnegie-Mellon University, Pittsburgh
- 11/2013: Atlanta Lecture Series in Combinatorics and Graph Theory X (Featured Speaker, 2 talks)  
Emory University, Atlanta
- 10/2013: Combinatorics Seminar, Ohio State University, Columbus
- 08/2013: Computer Science Seminar, Indian Institute of Technology (IIT) Bombay, India
- 07/2013: Seminar, Indian Statistical Institute (ISI), Delhi, India
- 07/2013: Erdős Centennial Conference, Budapest, Hungary
- 04/2013: Combinatorics and Graph Theory Seminars (2 talks), Georgia Tech, Atlanta
- 04/2013: Theory Seminar, Department of Computer Science, University of Chicago
- 04/2013: Colloquium, Dept of Math, Stats, and Comp Sci, UIC
- 03/2013: Conference on Extremal Combinatorics at Illinois (EXCILL2), Urbana
- 03/2013: Discrete Math Seminar, Institute for Advanced Study, Princeton
- 01/2013: Workshop in Extremal and Probabilistic Combinatorics, IPAM, UCLA
- 12/2012: Conference on Recent Trends in Discrete Mathematics,

Tata Institute of Fundamental Research (TIFR), Mumbai, India

- 12/2012: Seminar, Indian Statistical Institute (ISI), Delhi, India
- 10/2012: Combinatorics Seminar, Queen Mary University of London, UK
- 09/2012: Colloquium, Western Michigan University, Kalamazoo
- 09/2012: ICTP-IPM Workshop and Conference in Combinatorics and Graph Theory, Trieste, Italy
- 08/2012: New Trends and Directions in Combinatorics, Banff, Canada
- 07/2012: Midsummer Combinatorial Workshop XVIII, Prague, Czech Republic
- 05/2012: Conference honoring the 50th birthday of Robin Thomas, Georgia Tech, Atlanta
- 12/2011: Colloquium, University of Illinois at Urbana Champaign
- 10/2011: Undergraduate Mathematics Symposium (plenary talk), UIC, Chicago
- 07/2011: Midsummer Combinatorial Workshop XVII, Prague, Czech Republic
- 05/2011: Minisymposium in Extremal Graph Theory, CanaDAM 2011, Victoria, Canada
- 05/2011: 24th Cumberland Conference on Combinatorics, Graph Theory, and Computing, University of Louisville (one of four main speakers)
- 05/2011: 2011 Erdős conference, Memphis
- 03/2011: AIM workshop on Hypergraph Turán Problem (organizer)
- 02/2011: Colloquium, University of California at San Diego
- 01/2011: Workshop in Combinatorics, Oberwolfach, Germany
- 11/2010: AMS Special Session on Graph Theory, Notre Dame
- 10/2010: AMS Special Session on Extremal and Probabilistic Combinatorics, UCLA
- 09/2010: ICM 2010 Satellite Conference On Algebraic and Probabilistic Aspects of Combinatorics and Computing, Bangalore, India
- 08/2010: Guest Lecturer in Combinatorics, Department of Computer Science and Engineering, Indian Institute of Technology (IIT) Bombay, Mumbai, India
- 08/2010: Seminar, Tata Institute of Fundamental Research (TIFR), Mumbai, India
- 07/2010: Midsummer Combinatorial Workshop XVI, Prague, Czech Republic
- 06/2010: Minisymposium on Extremal Graph Theory, SIAM Conference on Discrete Mathematics, Austin
- 05/2010: Focused Research Group on Sparse Pseudorandom Structures, Banff, Canada
- 04/2010: Colloquium, Ohio State University, Columbus
- 03/2010: Combinatorics, Groups, Algorithms, and Complexity, Conference in honor of Laci Babai's 60th birthday, Ohio State University, Columbus
- 02/2010: Workshop in Graph Theory and Combinatorics in Memory of Uri Peled, UIC, Chicago
- 11/2009: Workshop on topics in graphs and hypergraphs, IPAM, UCLA, Los Angeles
- 10/2009: Colloquium, Arizona State University, Tempe

- 10/2009: Combinatorics Seminar, Arizona State University, Tempe
- 09/2009: Combinatorics Seminar, Emory University, Atlanta
- 08/2009: Workshop on extremal and probabilistic combinatorics, Banff, Canada
- 07/2009: SIAM Annual Meeting, special session in honor of  
Danny Kleitman's 75th birthday, Denver
- 06/2009: ASCEND Colloquium; talk given to high school students selected as Assuring STEM  
Credential Expansion through Nurturing Diversity (ASCEND) scholars to study at UIC
- 03/2009: AMS Special Session on Extremal and Probabilistic Combinatorics, Urbana
- 02/2009: Theory Seminar, University of Chicago, Chicago
- 12/2008: Computer Science Seminar, Indian Institute of Technology, Bombay, India
- 10/2008: Colloquium, Illinois Institute of Technology, Chicago
- 06/2008: Joint AMS/Brazilian Mathematical Society Special Session on extremal and  
probabilistic combinatorics, Rio de Janeiro, Brazil
- 06/2008: SIAM conference in Discrete Mathematics, Burlington
- 05/2008: New Directions in Algorithms, Combinatorics, and Optimization  
(conference in honor of Tom Trotter's 65th birthday), Atlanta
- 01/2008: Colloquium, Monday Lecture (75 mins) of the Research Training Group  
*Methods for Discrete Structures*, Humboldt University, Berlin, Germany
- 01/2008: Workshop in Combinatorics, Oberwolfach, Germany
- 06/2007: CMS-MITACS Joint Conference 2007, Winnipeg, Canada
- 05/2007: 1st Canadian Discrete and Algorithmic Mathematics Conference  
(CANADAM 2007), Banff, Canada
- 04/2007: Colloquium, Carnegie Mellon University, Pittsburgh
- 03/2007: AMS Special Session on graph theory, Miami University, Ohio
- 03/2007: Combinatorics Seminar, McGill University, Montreal, Canada
- 01/2007: Colloquium, Georgia State University, Atlanta
- 11/2006: Pure Mathematics Seminar, Queen Mary University of London
- 11/2006: Pure Mathematics Seminar, University College London
- 11/2006: Combinatorics Seminar, University of Cambridge
- 11/2006: EXCILL: Conference on Extremal Combinatorics at Illinois, Urbana
- 10/2006: Workshop in Combinatorics, Probability and Computing, Oberwolfach, Germany
- 06/2006: SIAM conference in Discrete Mathematics, Victoria, Canada
- 05/2006: Colloquium, Indian Institute of Technology (IIT), Bombay, India
- 04/2006: Colloquium, Iowa State University, Ames
- 04/2006: Workshop em Fundamentos da Ciencia da Computacao:  
Algoritmos Combinatorios e Estruturas Discretas, IMPA, Rio de Janeiro, Brazil

- 03/2006: 2006 Erdős conference, Memphis
- 01/2006: Workshop in Combinatorics, Oberwolfach, Germany
- 12/2005: Joint AMS/Taiwanese Mathematical Society Special Session on graph coloring, Taichung, Taiwan
- 11/2005: Combinatorics Seminar, Mumbai University, Mumbai, India
- 11/2005: Discrete Math Seminar, Princeton University, Princeton
- 10/2005: Discrete Math Seminar, Carnegie Mellon University, Pittsburgh
- 10/2005: AMS Special Session on extremal and probabilistic combinatorics, Annandale-on-Hudson
- 10/2005: AMS Special Session on graph theory, Lincoln
- 09/2005: Colloquium, Tata Institute of Fundamental Research, Mumbai, India
- 05/2005: WaterMellon workshop on extremal graph theory, Carnegie Mellon University
- 02/2005: Combinatorics Seminar, California Institute of Technology, Pasadena
- 05/2004: Combinatorics Seminar, University of Delaware, Newark
- 03/2004: Colloquium, Emory University, Atlanta
- 03/2004: Combinatorics Seminar, Georgia Tech, Atlanta
- 03/2004: Colloquium, University of Louisville, Louisville
- 11/2003: Seminar, Ohio State University, Columbus
- 10/2003: Seminar, Carnegie Mellon University, Pittsburgh
- 08/2003: Seminar, Indian Institute of Technology, Bombay, India
- 06/2003: Conference in honor of Miklós Simonovits, Csopak, Hungary
- 05/2003: Focused Research Group, Banf Center, Alberta, Canada
- 03/2003: Combinatorics Seminar, Rényi Institute, Budapest, Hungary
- 01/2003: Combinatorics Seminar, Microsoft Research, Redmond
- 10/2002: Combinatorics Seminar, University of Illinois, Urbana
- 08/2002: SIAM Conference in Discrete Mathematics, San Diego
- 01/2002: Workshop in Combinatorics, Oberwolfach, Germany
- 06/2001: Conference on Hypergraphs, Rényi Institute, Budapest
- 02/2001: Colloquium, Colorado State University, Fort Collins
- 02/2001: Colloquium, Drexel University, Philadelphia
- 02/2001: Colloquium, University of Kentucky, Lexington
- 02/2000: Combinatorics Seminar, University of Waterloo, Canada
- 02/2000: Colloquium, Clemson University, Clemson
- 02/2000: Colloquium, University of Pittsburgh, Pittsburgh
- 08/1999: DREI workshop on graphs, posets, and algorithms, DIMACS



- 05/1999: Twelfth Cumberland Conference, University of Louisville, Louisville
- 03/1999: AMS Special Session in Graph Theory, University of Illinois, Urbana

## PUBLICATIONS

1. Edge-Coloring Cliques with Three Colors on all 4-cliques, *Combinatorica*, 18 (1998), no. 2, 293–296.
2. Connectivity and Separating Sets of Cages (with T. Jiang), *Journal of Graph Theory*, 29 (1998), no. 1, 35–44.
3. Signed Domination in Regular Graphs and Set-Systems, (with Z. Füredi), *Journal of Combinatorial Theory, Series B*, 76 (1999), no. 2, 223–239.
4. Edge Bandwidth of Graphs (with T. Jiang, A. Shastri, D. B. West), *SIAM Journal on Discrete Mathematics* 12 (1999), no. 3, 307–316.
5. Graphic Sequences that have a Realization with Large Clique Number, *Journal of Graph Theory*, 34 (2000), no. 1, 20–29.
6. On generalized Ramsey theory: the bipartite case (with M. Axenovich, Z. Füredi), *Journal of Combinatorial Theory, Series B*, 79 (2000), no. 1, 66–86.
7. New Upper Bounds for a Canonical Ramsey Problem (with T. Jiang), *Combinatorica*, 20 (1) (2000) 141–146.
8. Multiple Vertex Coverings by Specified Induced Subgraphs (with Z. Füredi, D. B. West), *Journal of Graph Theory*, 34 (2000), no. 2, 180–190.
9. Edge-Coloring Cliques with Many Colors on Subcliques (with D. Eichhorn), *Combinatorica*, 20 (3) (2000) 441–444.
10. Edge-Bandwidth of Theta Graphs (with D. Eichhorn, K. O’Byrant, D. B. West), *Journal of Graph Theory*, 35 (2000) 89–98.
11. On the Number of Vertices with Specified Eccentricity (with D. B. West), *Graphs and Combinatorics*, 16 (4) (2000) 441–452.
12. Minimal Completely Separating Systems of  $k$ -Sets (with A. Kündgen, P. Tetali), *Journal of Combinatorial Theory, Series A*, 93 (2001), no. 1, 192–198.
13. Large induced forests in sparse graphs (with N. Alon, R. Thomas), *Journal of Graph Theory*, 38 (2001), no. 3, 113–123.
14. On the chromatic number of set-systems (with A. Kostochka, V. Rödl, P. Tetali), *Random Structures and Algorithms*, 19 (2001), no. 2, 87–98.
15. Asymptotically optimal tree-packings in regular graphs (with A. Kelmans, B. Sudakov), *Electronic Journal of Combinatorics* 8 (2001), no. 1, Research Paper 38, 8 pp. (electronic).
16. Realizing Degree Imbalances in Directed Graphs (with D. B. West, T. G. Will), *Discrete Mathematics* 239 (2001), no. 1–3, 147–153.

17. The Chromatic Spectrum of Mixed Hypergraphs (with T. Jiang, Z. Tuza, V. Voloshin, D. B. West), *Graphs and Combinatorics*, 18 (2002), no. 2, 309–318.
18. New lower bounds for Ramsey numbers of graphs and hypergraphs (with F. Lazebnik), *Advances in Applied Mathematics*, 28 (2002), no. 3-4, 544–559.
19. Some exact results and new asymptotics for hypergraph Turán numbers, *Combinatorics Probability and Computing*, 11 (2002), no. 3, 299–309.
20. On Restricted Edge-Colorings of Bicliques (with D. B. West), Kleitman and combinatorics: a celebration (Cambridge, MA, 1999). *Discrete Mathematics* (2002), no. 2-3, 513–529.
21. Generalizing the Ramsey Problem through Diameter, *Electronic Journal of Combinatorics*, 9 (2002), no. 1, Research Paper 42, 10 pp. (electronic).
22. On the Turán number of Triple Systems (with V. Rödl), *Journal of Combinatorial Theory, Series A*, 100 (2002), no. 1, 136–152.
23. Intersecting Curves in the Plane, *Graphs and Combinatorics*, 18 (2002), no. 3, 583–589.
24. Coloring with three-colored subgraphs, *Journal of Graph Theory* 42 (2003), no. 3, 193–198.
25. On hypergraphs with every four points spanning at most two triples, *Electronic Journal of Combinatorics*, 10 (2003), no. 1, Research Paper N10, 4 pp. (electronic).
26. On a two-sided Turán problem (with Y. Zhao), *Electronic Journal of Combinatorics*, 10 (2003), no. 1, Research Paper R42, 17 pp. (electronic).
27. How many disjoint 2-edge paths must a cubic graph have? (with A. Kelmans), *Journal of Graph Theory*, 45 (2004), no. 1, 57–79.
28. A hypergraph extension of the Bipartite Turán problem (with J. Verstraëte), *Journal of Combinatorial Theory, Series A*, 106 (2004), no. 2, 237–253.
29. An explicit construction for a Ramsey problem, *Combinatorica*, 24 (2004), no. 2, 313–324.
30. Stability results for cancellative hypergraphs (with P. Keevash), *Journal of Combinatorial Theory, Series B*, 92 (2004) 163–175.
31. Uniform edge distribution in hypergraphs is hereditary (with V. Rödl), *Electronic Journal of Combinatorics*, 11 (2004) Research Paper R55, 32 pp (electronic).
32. A family of switch equivalent graphs (with B. Guenin, P. Tetali), *Discrete Mathematics*, 288 (2004), no. 1-3, 29–35.
33. Efficient Algorithms for the Inverse Protein Folding Problem on 2D and 3D Lattices (with P. Berman, B. DasGupta, R. Sloan, G. Turán, Y. Zhang), *Fifteenth Annual Combinatorial Pattern Matching (CPM) Symposium LNCS 3109*, C. S. Sahinalp, S. Muthukrishnan and U. Dogrusoz (editors), pp. 244-253, July 2004.

34. Constructions of bipartite graphs from finite geometries (with K. Mellinger), *Journal of Graph Theory*, 49 (2005), no. 1, 1–10.
35. Nonuniform Turán-type problems (with Y. Zhao), *Journal of Combinatorial Theory, Series A*, 111 (2005), 106–110.
36. Proof of a conjecture of Erdős on triangles in set systems (with J. Verstraëte), *Combinatorica*, 25 (2005), no. 5, 599–614.
37. The Co-degree density of the Fano plane, *Journal of Combinatorial Theory, Series B*, 95 (2005), no. 2, 333–337.
38. A hypergraph extension of Turán’s theorem, *Journal of Combinatorial Theory, Series B*, 96 (2006) 122–134.
39. Erdős-Ko-Rado for three sets, *Journal of Combinatorial Theory, Series A*, 113 (2006), no. 3, 547–550.
40. The DNF exception problem (with G. Turán, Y. Zhao), *Theoretical Computer Science* 352 (2006), no. 1-3, 85–96.
41. Supersaturation for Ramsey-Turán Problems (with V. Rödl), *Combinatorica*, 26 (2006), no. 3, 315–332.
42. Explicit constructions of triple systems for Ramsey-Turán problems (with V. T. Sós), *Journal of Graph Theory*, 52 (2006), no. 3, 211–216.
43. On the edge-bandwidth of graph products (with J. Balogh, A. Pluhar), *Theoretical Computer Science*, 359 (2006) 43–57.
44. Set systems with no singleton intersection (with P. Keevash, R. Wilson), *SIAM Journal on Discrete Mathematics*, 20 (2006), 1031–1041.
45. Structure and Stability of triangle-free set systems, *Transactions of the American Mathematical Society*, 359 (2007), 275–291.
46. Rainbow Turán Problems (with P. Keevash, B. Sudakov, J. Verstraete), *Combinatorics Probability and Computing*, 16 (2007), 109–126.
47. On the chromatic number and independence number of hypergraph products (with V. Rödl), *Journal of Combinatorial Theory, Series B*, 97 (2007) no. 1, 151–155.
48. On the VC-dimension of Uniform Hypergraphs (with Y. Zhao), *Journal of Algebraic Combinatorics*, 25 (2007) no. 1, 101–110.
49. A new generalization of Mantel’s theorem to  $k$ -graphs (with O. Pikhurko), *Journal of Combinatorial Theory, Series B* 97 (2007), no. 4, 669–678.
50. The inverse protein folding problem on 2D and 3D lattices (with P. Berman, B. DasGupta, R. Sloan, G. Turán, Y. Zhang), *Discrete Applied Mathematics* 155 (2007), no. 6-7, 719–732.

51. Minimal paths and cycles in set-systems (with J. Verstraëte), *European Journal of Combinatorics* 28 (2007), no.6, 1681–1693.
52. Co-degree density of hypergraphs (with Y. Zhao), *Journal of Combinatorial Theory, Series A* 114 (2007), no. 6, 1118–1132.
53. On the independence number of the Erdős-Rényi and Projective Norm graphs, and a related hypergraph (with J. Williford), *Journal of Graph Theory* 56 (2007), no. 2, 113–127.
54. An intersection theorem for four sets, *Advances in Mathematics* 215 (2007) no. 2, 601–615.
55. Forbidding complete hypergraphs as traces (with Y. Zhao), *Graphs and Combinatorics* 23 (2007), no. 6, 667–679.
56. A new short proof of a theorem of Ahlswede and Khachatrian (with J. Balogh), *Journal of Combinatorial Theory, Series A* 115 (2008), no. 2, 326–330.
57. Extremal problems for  $t$ -partite and  $t$ -colorable hypergraphs (with J. Talbot), *Electronic Journal of Combinatorics* 15 (2008), no. 1, Research Paper 26, 9 pp.
58. Constructions of non-principal families in extremal hypergraph theory (with O. Pikhurko), *Discrete Mathematics*, 308 (2008), no. 19, 4430–4434.
59. When is an almost monochromatic  $K_4$  guaranteed? (with A. Kostochka), *Combinatorics, Probability and Computing* 17, (2008), no. 6, 823–830.
60. Quadruple systems with independent neighborhoods (with Z. Füredi, O. Pikhurko), *Journal of Combinatorial Theory, Series A* 115 (2008), no. 8, 1552–1560
61. On the chromatic number of simple triangle-free triple systems (with A. Frieze), *Electronic Journal of Combinatorics* 15 (2008) no. 1, Research Paper 121, 27 pp.
62. Two-regular subgraphs of hypergraphs (with J. Verstraëte), *Journal of Combinatorial Theory, Series B* 99 (2009), no. 3, 643–655.
63. Set systems with union and intersection constraints (with R. Ramadurai), *Journal of Combinatorial Theory, Series B* 99 (2009), no. 3, 639–642
64. Simplex stability (with R. Ramadurai), *Combinatorics, Probability and Computing* 18 (2009), no. 3, 441–454.
65. Combinatorial problems for horn clauses (with M. Langlois, R. Sloan, G. Turan), *Tenth International Symposium on Artificial Intelligence and Mathematics*, ISAIM 2008, Fort Lauderdale, Florida, in: *Graph Theory, Computational Intelligence and Thought* (M.Lipshteyn, V.E.Levit, R.M.McConnell, eds.), Springer LNCS 5420, 2009, 54–65.
66. Set systems without a simplex or a cluster (with P. Keevash), *Combinatorica* 30 (2010), no. 2, 175–200

67. Hypergraphs with independent neighborhoods (with T. Bohman, A. Frieze, O. Pikhurko), *Combinatorica* 30 (2010), no. 3, 277–293
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