

# Curriculum Vitae

## Guantao Chen

### ADDRESS

Department of Mathematics and Statistics  
Georgia State University, Atlanta, GA 30303

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### EDUCATION

1987–1991 Ph.D., Mathematics, The University of Memphis, Memphis, Tennessee  
1978–1984 B.S.(82), M.S.(84), Mathematics, Huazhong Normal University, Wuhan, China

### RESEARCH INTERESTS

Graph Theory and Its Applications

### PRIMARY APPOINTMENTS

95-date **Department of Mathematics and Statistics, Georgia State University**  
Regents' Professor (17-date), Distinguished University Professor (13-17)  
Professor (04-date), Associate Professor (99-04), Assistant Professor (95-99)  
Chair (09-21)  
1991-1995 **Department of Mathematics, North Dakota State University**  
Assistant Professor

### PROFESSIONAL ACTIVITIES

Journal **Managing Editor**, *Graphs and Combinatorics* (by Springer), (2011-date)

Editor:

Officer: **Coordinator**, SIAM Discrete Mathematics Active Group (2014-16)

Reviewer: Mathematical Reviews, zbMath

Grant NSF, NSA, NSFC(China), RGC(Hong Kong), NWO-VIDI(Netherlands),  
Reviewer: ANID(Chile), FCT(Portugal)

Journal J. of AMS, Acta Mathematica, J. Combin. Theory Ser. B, J. Graph Theory,  
Referee: SIAM J. Discrete Math., European J. Combin., Discrete Math., Graphs Combin.,  
Discrete Appl. Math., Ars combin., Electronic J. Combin., Letters of Appl. Math.,  
Random Structures & Algorithms, Science in China

P&T external Iowa State University, Virginia Commonwealth University, University of Alaska,  
reviewer: Auburn University, Emory University, University of Memphis

Program Florida Atlantic University, Middle Tennessee State University  
Reviewer

University Georgia Board Regents' Core Course Committee  
Program

### PROFESSIONAL MEMBERSHIPS

Member of American Mathematical Society (AMS)  
Member of Society for Industrial and Applied Mathematics (SIAM)

**OTHER ACADEMIC POSITIONS**

1991-date Various long term and short term visiting positions at multiple institutions: Hong Kong University, Universite Paris-Sud, the University of Louisville, Central China Normal University, Hubei University, East China University of Science and Technology, and the University of Memphis

**AWARDS**

2005 **The Best Paper Award of Cocoon 2005** – The Eleventh International Computing and Combinatorics Conference (with Jason Gao, Xingxing Yu, and Wenan Zang)

2001 **Outstanding Faculty Achievement Award**, Georgia State University

1989-91 **Van Vleet Memorial Fellowship**, University of Memphis

1990 **The Second Place Prize of Graduate Research Forum**, University of Memphis

**ACADEMIC ADVISING**

Ph.D. **Xuli Qi** (2021), *On extensions of Vizing fans and the Vizing's theorem*  
**Yan Cao** (2020), *A new approach to the overfull conjecture*  
**Guangming Jing** (2019) (Co-directed), *Density and chromatic index, and minimum ranks of sign pattern matrices*  
**Amy Yates** (2016), *Intersection of longest paths and predicting performance in facial recognition*  
**Ping Yang** (2016), *Spanning Halin subgraphs involving forbidden subgraphs*  
**Songling Shan** (2015), *Homeomorphically irreducible spanning trees, Halin graphs, and long cycles in 3-connected graphs with bounded maximum degrees*  
**Nana Li** (2014), *Union closed set conjecture and maximum directed cut in connected digraph*  
**Xue Wang** (2009), *Towards predicting protein calcium-binding pockets*,  
**Hai Deng** (2007), *Identifying calcium-binding sites and predicting disulfide connectivity*,  
**Nizamettin Toker**, (2023 expected), Graph Theory  
**Guoning Yu**, (2024 expected), Graph Theory  
**Yanli Hao**, (2023 expected), Graph Theory  
**Anna Johnsen**, (2026 expected), Graph Theory  
**Alireza Laali**, (2028 expected). Graph Theory  
**Lida Jalili**, (2028 expected), Graph Theory

- M.S. **Yuan Shi** (2021), *Size Ramsey numbers involving double stars and brooms*  
**Thomas Hippchen** (2008), *Intersections of longest paths and cycles*  
**Kun Zhao** (2008), *Treatments of Chlamydia Trachomatis and Neisseria Gonorrhoeae*  
**Brian Michael Cook** (2007), *An extension of Ramsey's theorem to multipartite graphs*  
**Xin Wei** (2007), *An optimal solution on screening and treatment of chlamydia trachomatis and neisseria gonorrhoeae*  
**Kinnari Patel** (2004), *Some eigenvalue results for certain matrices associated with graphs*  
**Ken Keating** (2004), *Bar-visibility Graphs*  
**Bartholomew Kweku Abban** (2003), *Re-screening women who test-positive for C. trachomatis infection: An integer programming to determine numbers of women cured under fixed program budgets*  
**Tran Nguyen** (2002), *Path Spectrum*  
**Nhi Vuong** (2000), *Hamiltonian Graphs*
- Ph.D. Committee Ming Han (External Reviewer, Arizona State Univ., 21), Shushan He (M&S, 21), Zaobo He (CS, 18), Hao Xiao (Hong Kong Univ., 16), Chaoyang Li (CS, 17), Chunyu Zang (M&S, 15-16), Jie Han (M&S, 12-15), Qing Hu (CS, 12-15), Yang Wang (CS, 10-12), Jing He (CS, 10-12), Tianjun Ye (Georgia Tech, 12), Ken D. Nguyen (CS, 09-11), Yiwei Wu (CS, 07-09), Eunjung Cho (CS, 06-08), Guanghui Wang (Paris-Sud University and Shangdong University, 06-07), Michael Ferrara (Emory University, 05), Xinjin Chen (The University of Hong Kong, 04), Allen Fulton (Emory University, 98), M. Sherman (North Dakota State University, 94-97)
- Conference Organizer: **Atlanta Lecture Series in Combinatorics and Graph Theory**, 25 conferences (since 2010) hosted rotating among three major research universities in Atlanta: Emory University, Georgia Institute of Technology, and Georgia State University, 2010-2021 (with Ronal Gould, Huang and Xingxing Yu)
- Recent Developments in Graph Theory**, AMS Spring 2023 meeting at Georgia Tech, March 18-19, 2023, Atlanta, GA (with Zhiyu Wang and Xingxing Yu)
- The 34th Midwestern Conference on Combinatorics and Combinatorial Computing (MCCCC34)**, (Program Committee), Illinois State University, October 21-23, 2022, Normal, IL
- Minisymposium on Graph Theory (3 sessions)**, SIAM Conference on Discrete Mathematics 2016, June 6-10, Atlanta, GA (with Xingxing Yu)
- Special Session on Topics in Graph Theory**, AMS Spring Southeastern Sectional Meeting, University of Georgia, Athens, GA, March 5-6, 2016 (with Songling Shan)
- Minisymposium on Extremal Combinatorics, Probabilistic Combinatorics, and Their Applications**, The 8th International Congress on Industrial and Applied Mathematics, Beijing, China, August, 2015 (with J. Ma and H. Hao)

**International Symposium on Graph Theory and Combinatorial Algorithms (GTCA'2010)** (on the Best Student Paper Selection Committee), Beijing, China, August

**International Symposium on Graph Theory and Combinatorial Algorithms (GTCA'2007)** (on program committee), Beijing, China, July, 2007

**IEEE International Conference on Granular Computing 2006**, Atlanta (on Program Committee), May, 2006

**Minisymposium on Cycles in Graphs**, SIAM Discrete Math Conference, Victoria, Canada, June, 2006(with X. Yu)

**Wuhan International Workshop on Graph Structure Theory**, Huazhong Normal University, Wuhan, China (with Zhiquan Hu) July 2005

**Three sessions of Minisymposiums on Paths and Cycles in Graphs**, SIAM Discrete Math Conference, Nashville, TN (with X. Yu), June 2004

**Atlanta International Graph Theory Conference –East meets West**, Georgia State University, Atlanta, June 2004

**The 16th Cumberland Conference on Combinatorics, Graph Theory, and Computing**, Georgia State University, Atlanta, GA (with G. Domke and J. Hattingh), May 2003

**Minisymposium on Problems in Extremal Graph Theory**, SIAM Discrete Math Conference, San Diego, CA, August 2002

**Minisymposium on Cycle Structures in Graph Theory**, SIAM Discrete Math Conference, San Diego, CA, August 2002

## EXTERNAL GRANTS

**National Science Foundation**, DMS-2154331 *Graph edge coloring*, PI, July 2022 - June 2025, (\$179,870)

**National Science Foundation**, DMS-1855716, *Edge coloring and edge cover packing*, PI, July 2019 - June 2022, (\$179,710)

**National Science Foundation**, DEU 1624970, *Collaborative Research: Promoting reasoning in undergraduate mathematics (PRIUM)* , Co-PI (PI: Draga Vidakovic), September 2016 - August 2020 , (\$ 310,409)

**National Science Foundation of China**, NSFC 11871239, *Graph Structural Properties and Spanning Subgraphs* , PI, January 2019 – December 2023, Y520,000

**National Security Agency**, H98230-12-1-0239, *The Chromatic Index and the Circumference of a Graph*, PI, February 2012 - January 2014, (\$66,848)

**National Science Foundation**, DMS-0500951, *Graph Computing on Finding Long Cycles and Small Dense Subgraphs with Applications*, June 2005 – June 2009, PI, (\$99,998)

**National Security Agency**, *Problems Surrounding Graph Minors and Connectivities*, December 2003 – December 2005, PI, (\$30,017)

**National Science Foundation** DMS-0070059, *Circumferences and Graphic Ramsey Theory*, July 00 – July 04 (\$74,492)

**National Security Agency**, MDA904-97-1-0101, *Cycles in Graphs and Graph Ramsey Theory – Research in Graph Theory*, July 1997 – July 1999 (\$14,011 )

**National Security Agency**, MDA904-94-H-2060 and MDA904-95-1-1091, *Hamiltonian Graphs and Graph Ramsey Theory – Research in Graph Theory*, November 1994 – October 1996 (\$26,373)

**The Centers of Disease Control and Prevention**, CDC Award 200-2006-M-18895, PR 35074, *An Interactive Decision-Support Tool to Maximize Chlamydia and Gonorrhea Screening Resources: A Means to Reduce Disparities in STD Burden*. PI, (with Guoyu Tao and Tom Gift) September 2006 – September 2009(\$60,000)

**The Centers of Disease Control and Prevention**, *STD transmission Model*. PI, (with Guoyu Tao) September 2007 -September 2012 (\$24,500)

## CONFERENCE GRANTS

**National Science Foundation**, *Atlanta Lecture Series on Combinatorics and Graph Theory*, DMS 1802397, October 2018 – October 2022, Co-PI (Huang(PI) and Yu(Co-PI)), \$20,000

**National Security Agency**, H98230-19-1-026,1 *Atlanta Lecture Series on Combinatorics and Graph Theory* August 2019 – September 2022 , PI (Co-PI: Yu), Pending, \$24,900.20

**National Security Agency**, H98230-18-1-0232, *Atlanta Lecture Series on Combinatorics and Graph Theory*, October 2018 – September 2019, PI (Co-PIs: Huang and Yu) \$19,663

**National Science Foundation**, MDS 1700355, *Atlanta Lecture Series on Combinatorics and Graph Theory*, July 2017 – June 2018, Co-PI (Huang (PI) and Yu (Co-PI)) \$17,800

**National Science Foundation**, MDS 1606418, *Atlanta Lecture Series on Combinatorics and Graph Theory*, June 2016 – May 2017, Co-PI (Huang (PI) and Yu (Co-PI)) \$17,800

**National Security Agency**, *Atlanta Lecture Series on Combinatorics and Graph Theory*, H98230-16-1-0319, September 2016 – August 2017, PI ( Co-PIs: Huang and Yu) \$24,400

**National Science Foundation**, DMS 1523127, *Atlanta Lecture Series on Combinatorics and Graph Theory*, June 2015 – September 2016, PI (Co-PIs: Gould and Yu) \$20,600

**National Science Foundation**, DMS 1400055, *Atlanta Lecture Series on Combinatorics and Graph Theory*, April 2014 – May 2015, Co-PI (Gould(Co-PI) and Yu(PI)) \$22,050

**National Science Foundation**, DMS 1331232 *Atlanta Lecture Series in Combinatorics and Graph Theory*, June 2013 – May 2015, PI, (Co-PIs Gould and Yu), \$22,050,

**National Science Foundation**, DMS 1001890 *Atlanta Lecture Series on Combinatorics and Graph Theory*, March 2010 – February 2012, Leading PI, (Gould(PI-Emory) and Yu(PI-Georgia Tech)) \$4,700 GSU part (\$22,050 total)

**National Security Agency**, H98230-10-1-0263, *Atlanta Lecture Series on Combinatorics and Graph Theory*, 2010-2013, Leading PI (Gould(PI-Emory) and Yu(PI-Georgia Tech)) \$25,800

**National Natural Science Foundation of China (NSFC)**, *Wuhan International Conference on Structure Graph Theory*, March 2005 - July 2005, PI (with Zhiquan Hu) (¥50,000)

**The Office of Naval Research**, *The 16th Cumberland Conference on Combinatorics, Graph Theory, and Computing*, Oct. 2002 - June 2003, (\$8,000)

## TEACHING GRANTS

**The American Short-term Study in China Initiative (ASSCI)**, *A joint course on topics in mathematics*, June 2022 – May 2023, PI-USA (Hu, PI-China), funded

## INTERNAL GRANTS

**GSU RPE**, *Bioinformatics*, August 2010 – date, Co-PI (with Irene Weber (PI), Robert Harrison(Co-PI), Yi Pan (Co-PI), (\$180,000 for first three years and \$60,000/year after)

**GSU RPE**, *Bioinformatics (Renewed)*, August 2007 – July 2010, Co-PI (with Irene Weber (PI), Robert Harrison(Co-PI), Yi Pan (Co-PI) (\$240,000)

**GSU RPE**, *Bioinformatics*, August 2005 – July 2007, Co-PI (with Irene Weber(PI), Robert Harrison(Co-PI), Y. Pan(Co-PI) (\$228,000)

**GSU Faculty Scholarship Mentoring Grant**, *Project Statistical Methods for Treatment Comparisons in Clinical Trials*, December 2005 – December 2006, as the Mentor(with Yichuan Zhao as the Mentee), (\$10,000)

**GSU Faculty Scholarship Mentoring Grant Pilot Project**, *Numerical Investigation of Inverse Problem in Optical Tomography*, December 2004 – December 2005, as Mentor (with Alexandra B. Smirnova as the Mentee), (\$6,000)

**P20 NIH grant – Georgia State University**, *Predicating Calcium-binding sites with graph theory algorithm II*, June 2005 – June 2006, PI, (with Jenny Yang) (\$15,000)

**P-20 NIH grant – Georgia State University**, *Predicating Calcium-binding Sites with Graph Theory Algorithms*, December 2004 – June 2005, PI, (with Jenny Yang) (\$15,000)

**Georgia State University**, *Purchasing Campus Wide Mathematics and Statistics Software Licenses*, July 2003 - June 2004, PI (\$58,002)

**The 1st Annual Bio-Medical Center Seed Grant**, *Efficient Graph Theoretical Algorithms for Modelling the Change of Main-Chains After Modification of Local Conformations*, 2003 -2004, PI (With Zhiren Liu) (\$9,908)

**Georgia State University Team Grant**, *High Speed Distributed Trigger Algorithm for the PHENIX/RHIC Experiment at GSU*, co-PI (with X. He, K. Blalakrishnan, and M. Weeks), 2000-2001, (\$15,000)

**Georgia State University Team Grant**, *Joint Development of Level-2 Trigger Algorithms for the PHENIX/RHIC Experiment at GSU*, PI (with Xiaochun He), 1999 – 2000 (\$9,000)

**North Dakota Experimental Program to Stimulate Competitive Research REU grant**, Summer 1995 (\$10,000)

**Georgia State University Initiation Grant**, *Hamiltonian Graphs and Graphic Ramsey Theory*, 1996 – 1997 (\$4,000)

## PUBLICATIONS

Appeared

**2023**

- [159]. *On the coequal values of total chromatic number and chromatic index*, **J. Combin. Theory Ser. B** (2023), 286-304 (with Yanli Hao)
- [158]. *On Gupta's co-density conjecture*, **SIAM J. Discrete Math**, (with Yan Cao, Guoli Ding, Guangming Jing, Wenan Zang)

[157]. *Local Dirac's condition on the existence of 2-factor*, **Discrete Mathematics** 346 (2023) 113436 (with Xiaodong Chen)

[156]. *Spanning trees with at most  $k$  leaves in 2-connected  $K_{1,r}$ -free graphs*, **Applied Mathematics and Computation** 445 (2023) 127842

## 2022

[155]. *Overfullness of critical class 2 graphs with small core degree*, **J. Combin. Theory Ser. B**, 156 (2022), 145-173. (with Yan Cao and Songling Shan)

[154]. *Double Vizing fans in critical class two graphs*, **J. Graph Theory**, <https://doi.org/10.1002/jgt.22903> (with Yan Cao and Xuli Qi)

[153]. *The overfullness of graphs with small minimum degree and large maximum degree* **SIAM J. Discrete Math.** 36 (2022), no. 3, 2258-2270. (with Yan Cao, Guantao Chen, and Guangming Jing)

[152]. *Multithreshold multipartite graphs*, **J. Graph Theory**, 100 (2022), no. 4, 727-732. (with Yanli Hao)

[151]. *Independence number of edgechromatic critical graphs*, **J. Graph Theory**, 101 (2022), no. 2, 288-310. (with Yan Cao, Guangming Jing, and Songling Shan)

[150]. *An improvement to the Hilton-Zhao vertex-splitting conjecture*, **Discrete Math.**, 345 (2022), no. 8, Paper No. 112902, 8 pp. (with Yan Cao and Songling Shan)

[149]. *A note on Goldberg's conjecture on total chromatic numbers*, **Journal of Graph Theory**, 100 (2022), no. 1, 182-188. (with Yan Cao and Guangming Jing)

## 2021

[148]. *Multiplicity of the second-largest eigenvalue of the adjacent matrix of a planar graph*, **Journal of Graph Theory**, 98 (2021), no. 3, 445-459 (with Yanli Hao)

[147]. *Laminar tight cuts in matching covered graphs*, **J. Combin. Theory Ser. B** 150 (2021), 177-194 (with Xing Feng, Fuliang Lu, Cláudio L. Lucchesi and Lianzhu Zhang)

[146]. *On the average degree of edge chromatic critical graphs*, **J. Combin. Theory Ser. B**, 147 (2021), 299 -338. (with Yan Cao)

[145]. *Improved bounds on the Ramsey number of fans*, **European Journal of Combinatorics**, 96 (2021), no. 4, 554-577 (with Xiaowei Yu and Yi Zhao)

[144]. *Conjunction of the linear arboricity conjecture and Lovász's path partition theorem*, **Discrete Math**, 344 (2021) 112434, <https://doi.org/10.1016/j.disc.2021.112434> (with Yanli Hao)

[143]. *The chromatic number of  $ISK_4$ , diamond, bowtie-free graphs*, **Journal of Graph Theory**, 96 (2021), no. 4, 554-577 (with Yuan Chen, Qing Cui, Xing Feng, Qinghai Liu)

## 2020

[142]. *On the average degree of edge chromatic critical graphs II*, **J. Combin. Theory Ser. B** 145 (2020), 470486. (with Yan Cao)

[141]. *Ring graphs and Goldberg's bound on chromatic index*, **Journal of Graph Theory**, 93 (2020), no. 3, 440-449. (with Yan Cao, Shushan He and Guangming Jing)

- [140]. *Hamiltonicity of edge-chromatic critical graphs*, **Discrete Math**, 343 (2020), no. 7, 111881 (with Y. Cao, S. Jiang, H. Liu, and F. Lu)
- [139]. *Spanning bipartite graphs with high degree sum in graphs*, **Discrete Math**, 343 (2020), no. 2, 111663 (with Shuya Chiba, Ronald Gould, Xiaofeng Gu, Akira Saito, Masao Tsugaki, and Tomoki Yamashita)
- [138]. *The chromatic number of graphs with no induced subdivision of  $K_4$* , **Graphs and Combinatorics**, 36 (2020), 719-728 (with Yuan Chen, Qing Cui, Xing Feng, Qinghai Liu)

## 2019

- [137]. *Structural properties of edge-chromatic critical multigraphs*, **J. Combin. Theory Ser. B**, 139 (2019), 128-162 (with Guangming Jing)
- [136]. *Disjoint odd cycles in cubic solid bricks*, **SIAM J. Discrete Math.** 33 (2019), no. 1, 393-397 (with Xing Feng, Fuliang Lu, and Liangzhu Zhang)
- [135]. *Dirac's condition for spanning Halin subgraphs*, **SIAM J. Discrete Math.** 33 (2019), no. 4, 1197 -2022 (with Songling Shan)
- [134]. *Average degrees of edge-chromatic critical graphs* **Discrete Math.** 342 (2019), no. 6, 1613-1623 (with Yan Cao, Suyun Jiang, Huiqing Liu, and Fuliang Lu)
- [133]. *Graph Edge Coloring: A Survey*, **Graphs Combin.** 35 (2019), no. 1, 33 - 66 (with Yan Cao, Guangming Jing, Michael Stiebitz, and Bjarne Toft)
- [132]. *Extremal Union-Closed Set Families* , **Graphs Combin.** 35 (2019), no. 6, 1495 - 1502 (with Hein van der Holst, Alexandr Kostochka, and Nana Li )
- [131]. *Characterizing the Difference Between Graph Classes Defined by Forbidden Pairs Including the Claw*, **Graphs Combin.** 35 (2019), no. 6, 1459 - 1474 (with Michitaka Furuya, Songling Shan, Shoichi Tsuchiya, and Ping Yang)

## 2018

- [130]. *Chromatic index determined by fractional chromatic index*, **J. Combin. Theory Ser. B** 131 (2018), 85-108 (with Yuping Gao, Ringi. Kim, Luke Postle, and Songling Shan)
- [129]. *Cycles with chords in dense graphs*, **Discrete Math.**, 341 (2018), no. 8, 2131-2141 (with Ronald Gould, Xiaofeng Gu, and Akira Saito)

## 2017

- [128]. *Plane triangulations without a spanning Halin subgraph II*, **SIAM J. Discrete Math.** 32 (2017), no. 4, 2429-2439 (with Hikoe Enomoto, Kenta Ozki, and Shoichi Tshuchiya)
- [127]. *Hamiltonicity of edge chromatic critical graphs*, **Discrete Mathematics** 340 (2017), no. 12, 3011-3015 (with Xiangdong Chen and Yue Zhao)
- [126]. *Vizing's 2-factor conjecture involving large maximum degree* **J. of Graph Theory**, 86 (2017), no. 4, 422-438 (with S. Shan)
- [125]. *Nonempty intersection of longest paths in series parallel graphs*, **Discrete Math.** 340 (2017), no. 3, 287-304 (with Julian Ehremmuller, Christina Fernandes, Carl Georg, Songling Shan, Ping Yang, Amy Yates)



- [124]. *Forbidden pairs and the existence of a spanning Halin subgraph*, **Graphs Combin.** 33 (2017), no. 5, 1321-1345 (with Jie Han, Suil O, Songling Shan, Shoichi Tsuchiya)
- [123]. *Spanning trails with maximum degree at most 4 in  $2K_2$ -free graphs*, **Graphs Combin.** 33 (2017), no. 5, 1095-1101 (with Mark Ellingham, Akira Saito, Songling Shan)
- [122]. *Equitable vertex arboricity of 5-degenerate graphs*, **J. Comb. Optim.** 34 (2017), no. 2, 426-432 (with Yuping Gao, Songling Shan, Guanghui Wang, Jianliang Wu)

## 2016

- [121]. *Bayesian inference for functional dynamics exploring in fMRI data*, **Computational and Mathematical Methods in Medicine** (2016) Art. ID 3279050, 9 pp., (with Guo Xuan, Bing Liu, Le Chen, Yi Pan, and Jing Zhang)

## 2015

- [120]. *Plane triangulations without spanning Halin subgraphs : Counterexamples of Lovász-Plummer conjecture on Halin graphs* **SIAM J. Discrete Math** 29 (2015), no. 3, 1423-1426. (with H. Enomoto, K. Ozeki, and S. Tsuchiya)
- [119]. *Characterizing forbidden pairs for hamiltonian squares* **Graphs Combin.** 31 (2015), no. 6, 2113-2124 (with Songling Shan)
- [118]. *Disjoint chorded cycles of the same length* **SIAM J. Discrete Math.** 29 (2015), no. 2, 1030-1041 (with Ronald J. Gould, Kazuhide Hirohata, Katsuhiko Ota, and Songling Shan)
- [117]. *Hadwiger conjecture for degree sequences* **J. Combin. Theory Ser. B** 114 (2015), 247-249 (with Katsuhiko Ota)
- [116]. *An extension of the Chvátal-Erdős theorem: counting the number of maximum independent sets*, **Graphs and Combinatorics** 31 (2015), no. 4, 885-896 (with Yinkui Li, Haicheng Ma, Tingzeng Wu, and Liming Xiong)
- [115]. *Results and problems on saturation numbers for linear forests*, **Bull. Inst. Combin. Appl.** 75 (2015) 29-46 (with Jill Faudree, Ralph Faudree, Ronald Gould, Michael Jacobson, Colton Magnant)

## 2014

- [114]. *Degree conditions for spanning brooms*, **J. Graph Theory**, 77 (2014), no. 3, 237-250 (with Michael Ferrara, Zhiquan Hu, Michael Jacobson and Huiqing Liu)
- [113]. *Maximum cuts for connected digraphs*, **J. Graph Theory** 76 (2014), no. 1, 1-19 (with Manzang Gu, and Nana Li)
- [112]. *Spanning 3-ended trees in  $k$ -connected  $K_{1,4}$ -free graphs*, **Sci. China Math.** 57 (2014), no. 8, 1579-1586 (with Yuan Chen and Zhiquan Hu)

## 2013

- [111]. *The existence of a 2-factor in a graph satisfying the local Chvátal-Erdős condition*, **SIAM J. Discrete Math.** 27 (2013), no. 4, 1788-1799 (with A. Saito and S. Shan)
- [110]. *Homeomorphically Irreducible Spanning Trees*, **J. Combin. Theory Ser. B** 103 (2013), no. 4, 409-414 (with S. Shan)

## 2012

- [109]. *The circumference of a graph with no  $K_{3,t}$ -minor II*, **J. Combin. Theory B**, 102 (2012), no. 6, 1211-1240 (with X. Yu and W. Zang)

- [108]. *Hamilton cycles will all small even chords*, **Discrete Mathematics**, 312 (2012), no. 6, 1226-1240 (with Katsuhiko Ota, Akira Saito, and Yi Zhao)
- [107]. *Homeomorphically Irreducible Spanning Trees in Locally Connected Graphs* **Combinatorics, Probability, and Computing** 21 (2012), no. 1-2, 107-111 (with H. Ren and S. Shan)
- [106]. *Forbidden pairs for  $k$ -connected Hamiltonian graphs*, **Discrete Math.** 312 (2012), no. 6, 1226-1240 (with Y. Egawa, R. Gould, A. Saito)
- [105]. *Endpoint extendible paths in dense graphs*, **Discrete Math**, 312 (2012), no. 17, 2584-2592 (with Z. Hu and H. Li)
- [104]. *Using a Resource Allocation Model to Better Guide Local Sexually Transmitted Diseases Control and Prevention Programs*, **Operations Research for Health Care** 1 (2012), Issues 2-3, 23-29 (with Thomas Gift, Guoyu Tao, and Kun Zhao)
- 2011**
- [103]. *Circumferences of  $k$ -connected Graphs Involving Independence Numbers*, **J. Graph Theory** 68 (2011), no. 1, 55-76 (with Z. Hu and Y. Wu)
- [102]. *Saturation numbers for families of Ramsey-minimal graphs*, **Journal of Combin.**, 2 (2011), no. 3, 435-455 (with M. Ferrara, R. Gould, C. Magnant, J. Schmitt)
- [101]. *Approximating the chromatic index of multigraphs* **J. Comb. Optim.** 21 (2011), no. 2, 219-246 (with X. Yu and W. Zang)
- [100]. *Toughness of  $K_{a,t}$ -minor-free graphs*, **Electron. J. Combin.** 18 (2011), no. 1, Paper 148, 6 pp (with Y. Egawa, K. Kawarabayashi, B. Mohar, and K. Ota)
- [99]. *Transforming Complete Coverage Algorithms to Partial Coverage Algorithms for Wireless Sensor Networks*, **IEEE Transactions on Distributed Systems**, 22(2011) no. 4, 695-703 (with Yingshu Li, Chinh Vu, Yi Zhao)
- 2010**
- [98]. *Tournament score sequences with  $k$ -transitive  $m$ -partitionable realizations* **J. Graph Theory** 64 (2010), no. 1, 52-62 (with A. Busch and M. Jacobson)
- [97]. *Path spectra for trees*, **Discrete Math** 310 (2010) 3455-3461 (with R. Faudree and L. Šoltés)
- [96]. *Optimization Model and Algorithm Help to Screen and Treat Sexually Transmitted Diseases* **Internat. J. Computational Models and Algorithms in Medicine** 1(2010), no. 4 1-18 (with T. Gift, G. Tao, and K. Zhao)
- [95]. *A Universal Framework for Partial Coverage in Wireless Sensor Networks* **Performance Computing and Communications Conference**, (IPCCC) 2009 IEEE 28th International, 1097-2641, 1-8 (with Y. Li, C. Vu, and Y. Zhao)
- [94]. *Efficient Parallel Algorithms for Maximum-Density Segment Problem*, **Parallel & Distributed Processing** – the 24th IEEE International Symposium, 1530-2075, 1-9 (with F. Qiu, S. Prasad, and X. Wang)
- [93]. *Integration of diverse research methods to analyze and engineer  $C_a^{2+}$ -binding proteins: From prediction to production*, **Curent Bioinformatics**, 5, no. 1 (2010) 68-80 (with M. Kirberger, S. Tang, X. Wang, J. Yang, K. Zhao)

- [92]. *Analysis and prediction of calcium binding pockets from apo-protein structures exhibiting calcium-induced localized conformational changes*, **Protein Science**, 19, no. 6, (2010) 1180-1190 (with M. Kirberger, X. Wang, H. Wong, J. Yang)

## 2009

- [91]. *Towards Predicting  $Ca^{2+}$  -binding Sites with Different Coordination Numbers in Proteins with Atomic Resolution*, **Proteins: Bioinformatics**, 75 (2009), no. 4, 787-98 (with M. Kirberger, F. Qiu, X. Wang, and J. Yang)
- [90]. *Toric geometry of series-parallel graphs*, **SIAM J. Discrete Math** 23 (2009), no. 2, 754-64 (with J. Brennan)

## 2008

- [89]. *Linked graphs with restricted lengths*, **J. Combin. Theory Ser. B**, 98 (2008), no. 4, 735-751 (with Y. Chen, S. Gao, and Z. Hu)
- [88]. *Gauss-Bonnet formula, finiteness condition, and characterizations of graphs embedded in surfaces*, **Graphs Combin.** 24 (2008), no. 3, 159-183 (with B. Chen)
- [87]. *Non-path spectrum sets*, **J. Graph Theory**, 58 (2008), no. 4, 329-350 (with R. Faudree, X. Li, and I. Schiermeyer)
- [86]. *Graphic sequences with a realization containing a complete multipartite subgraph*, **Discrete Math**, 308 (2008) 5712-21 (with M. Ferrara, R.J. Gould, J.R. Schmitt)
- [85]. *Statistical Analysis of Structural Characteristics of Protein  $Ca^{2+}$  binding sites*, **J. Biological Inorganic Chemistry**, 30 (2008), no. 29, 9260-7 (with H. Deng, M. Kirberger, X. Wang, J. Yang, and W. Yang)
- [84]. *Saturation Numbers of Books*, **Electron. J. Combin.** 15 (2008), no. 1, Research Paper 118, 12 pp. (with R.J. Faudree and R.J. Gould)

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- [83]. *The neighborhood union of independent sets and hamiltonicity of graphs*, **Discrete Math.** 307 (2007), no. 17-18, 2226-2234 (with X. Li, Z. Wu, and X. Xu)
- [82]. *Decomposition of bipartite graphs into special subgraphs*, **Discrete Applied Mathematics** 155 (2007), no. 3, 400-404 (with R. Schelp)
- [81]. *The Chvátal-Erdős condition and 2-Factors with a specified number of components*, **Discussiones Mathematicae Graph Theory** 27 (2007) no. 3, 401-407 (with R. Gould, K. Kawarabayashi, K. Ota, A. Saito, I. Schiermeyer)

## 2006

- [80]. *Cycle extendability of hamiltonian interval graphs*, **SIAM J. Discrete Math.**, 20 (2006), no. 3, 682-689 (with R. Faudree, R. Gould, and M. Jacobson)
- [79]. *Circumferences of graphs with no  $K_{3,t}$ -minors*, **J. Combin. Ser B**, Vol. 96 (2006), no. 6, 822-845 (with L. Sheppardson, X. Yu, and W. Zang)
- [78]. *Predicting Calcium Binding Sites in Proteins-A Graph Theory and Geometry Approach* **Proteins: Structure, Function, and Bioinformatics** 64 (2006) no. 1, 34-42 (with H. Deng, W. Yang, and J. Yang)

- [77]. *Hamiltonian graphs involving neighborhood unions*, **J. Graph Theory** 53 (2006), no. 2, 83-100 (with W. Shreve and B. Wei)
- [76]. *Approximating long cycles in graphs with bounded degrees*, **SIAM J. Comput.** 36 (2006), no. 3, 635–656 (with Z. Gao, W. Zang, and X. Yu)
- [75]. *Characterizations of  $[1,k]$ -Bar Visibility Trees*, **Electron. J. Combin.** 13 (2006), no. 1, Research Paper 90, 12 pp. (with J.P. Hutchison, K. Keating, J. Shen)
- [74]. *Cysteine separations profiles on protein secondary structure infer disulfide connectivity* **Proc. of IEEEGrC 2006**, Atlanta, GA, May, 2006 (with H. Deng, Y. Gui, Y. Pan, and X. Wang)

## 2005

- [73]. *Graph minors and linkages*, **J. of Graph Theory**, 49 (2005), no. 1, 75–91. (with R. Gould, K. Kawarabayashi, F. Pfender, B. Wei)
- [72]. *Approximating the Longest Cycle Problem on Graphs with Bounded Degree*, **Lecture Notes in Computer Science**, Vol. 3595/2005, 870–884. (with Z. Gao, X. Yu, and W. Zang)

## 2004

- [71]. *Re-screening women who test positive for *C. trachomatis* infection: an integer programming to determine numbers of women cured under fixed program budgets*, **Health Care Management Science**, 7 (2004), 135-144 (with G. Tao, B. Abban, and T. Gift)
- [70]. *Circumference of graphs with bounded degree*, **SIAM J. Comput.** 33 (2004), no. 5, 1136-1170. (with J. Xu and X. Yu)
- [69]. *Vertex-disjoint cycles containing specified vertices in a bipartite graph*, **J. of Graph Theory**, 46 (2004), no. 3, 145-166. (with H. Enomoto, K. Kawarabayashi, K. Ota, D. Lou, and A. Saito)
- [68]. *Cycles in 4-connected planar graphs*, **European J. Combin.** 25 (2004), no. 6, 763-780. (with G. Fan and X. Yu)
- [67]. *New conditions for  $k$ -ordered Hamiltonian graphs*, **Ars Combin.**, 70 (2004), 245-255. (with G. Ronald and F. Pfender)
- [66]. *An interlacing result on normalized laplacians*, **SIAM J. Discrete Math.** 18 (2004), no. 2, 353–361. (with G. Davis, F. Hall, Z. Li, K. Patel, and M. Stewart)
- [65]. *Linear forests and ordered cycles*, **Discuss. Math. Graph Theory** 24 (2004), no. 3, 359–372. (with R. Faudree, R. Gould, M. Jacobson, L. Lesniak, and F. Pfender)

## 2003

- [64]. *Second neighborhood via first neighborhood in digraphs*, **Ann Comb.** 7 (2003), 15-20. (with J. Shen and R. Yuster)
- [63]. *Extremal graphs for intersecting cliques*, **J. Combin. Theory Ser. B**, 89 (2003), no. 2, 159-171. (with R.J. Gould, Florian Pfender, and Bing Wei)
- [62]. *Graph connectivity after path removal*, **Combinatorica**, 23 (2003), no. 2, 185-203. (with R.J. Gould and X. Yu)
- [61]. *On ranks of matrices associated with trees*, **Graphs Combin.**, 19 (2003), no. 3, 323–334. (with F. Hall, B. Wei, and Z. Li)

**2002**

- [60]. *A note on fragile graphs*, **Discrete Math**, 249 (2002), no. 1-3, 41-43. (with X. Yu)
- [59]. *The hamiltonicity of bipartite graphs involving neighborhood unions*, **Discrete Math**, 249 (2002), no. 1-3, 45-56 (with A. Saito, B. Wei, and X. Zhang)
- [58]. *Long cycles in 3-connected graphs*, **J. Combin. Theory Ser. B**, 86 (2002), no. 1, 80-99 (with X. Yu)
- [57]. *Fragile graphs with small independent cuts*, **J. Graph Theory**, 41 (2002), no. 4, 327-341 (With R. Faudree and M. Jacobson)

**2001**

- [56]. *Partitioning vertices of a tournament into independent cycles*, **J. Combin. Theory Ser. B**, 83 (2001), no. 2, 213-220 (with R. Gould and H. Li)
- [55]. *Degree-light-free graphs and Hamiltonian cycles*, **Graphs Combin.**, 17 (2001), no. 3, 409–434 (with B. Wei and X. Zhang)
- [54]. *Vertex-disjoint cycles containing specified edges in a bipartite graph*, **Australas. J. Combin.**, 23 (2001), 37-48. (with H. Enomoto, K. Kawarabayashi, K. Ota, D. Lou, and A. Saito)
- [53]. *Degree sequences with repeated values*, **Ars Combin.**, 59 (2001), 33-44. (with J. Hutchinson, W. Piotrowski, W. Shreve, B. Wei)
- [52]. *Weak clique-covering cycles and paths*, **Ars Combin.**, 58 (2001), 67-83. (with R. Faudree and W. Shreve)
- [51]. *Isomorphisms involving reversing arcs of digraphs*, **J. Combin. Math. Combin. Comput.**, 36 (2001), 155-160 (with F. Hall, A. Kezdy, Z. Li, and H. Zhou)
- [50]. *On a relationship between 2-dominating and 5-dominating sets in graphs*, **J. Combin. Math. Combin. Comput.**, 39 (2001), 139–145 (with M. Jacobson).

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- [48]. *Hamiltonian connected graphs involving forbidden subgraphs*, **Bull. Inst. Combin. Appl.**, 29 (2000), 25-32 (with R. Gould)
- [47]. *Cycles in 2-factors of balanced bipartite graphs*, **Graphs Combin.**, 16 (2000), 67-80 (with R. Faudree, R. Gould, M. Jacobson, and L. Lesniak)
- [46]. *2-factors in claw-free graphs*, **Discuss. Math. Graph Theory**, 20 (2000), no. 2, 165-172 (with J. Faudree, R. Gould, and A. Saito)

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- [44]. *On harmonious and related colorings of graphs*, **Paul Erdős and his mathematics** (Budapest, 1999), 50-53, János Bolyai Math. Soc., Budapest, 1999 (with G. Domke, J. Hattngh, R. Laskar)

- [43]. *On the upper line-distinguishing and upper harmonious chromatic numbers of a graph*, Papers in honour of Stephen T. Hedetniemi, **J. Combin. Math. Combin. Comput.**, 31 (1999), 227-239 (with G. Domke, J. Hattingh, and R. Laskar)

**1998**

- [42]. *Tough enough chordal graphs are hamiltonian*, **Networks**, 31 (1998), no. 1, 29-38 (with M. Jacobson, A. Kézdy, and J. Lehel)
- [41]. *Intersection of longest cycles in  $k$ -connected graphs*, **J. Combin. Theory Ser. B**, 72 (1998), no. 1, 143-149. (with R. Gould and R. Faudree)
- [40]. *Mixed Ramsey numbers: total chromatic numbers versus stars*, **Australas. J. Combin.**, 17 (1998), 157-168 (with N. Achuthan)
- [39]. *Note on Whitney's theorem for  $k$ -connected graphs*, **ARS Combin.**, 49 (1998), 33-40 (with R. Faudree and W. Warren)
- [38]. *Star-factors of tournaments*, **J. Graph Theory**, 28 (1998), no. 3, 141-145 (with X. Lu and D. West)
- [37]. *Note on graphs without repeated cycle lengths*, **J. Graph Theory**, 29 (1998), no. 1, 11-15 (with M. Jacobson, J. Lehel, and W. Shreve)
- [36]. *Vertex colorings with a distance restriction*, Graph Theory (Elgersburg, 1996), **Discrete Math**, 191 (1998), 65-82 (with A. Gyárfárs and R. Schelp)
- [35]. *Ramsey number for irregular graphs*, **Congr. Numer.**, 135 (1998), 139-145 (with P. Erdős and W. Shreve)

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- [34]. *Graphs with given odd sets*, **J. Graph Theory**, 24 (1997), no. 1, 69-80. (with R.H. Schelp, and L. Šolteés)
- [33]. *Special monochromatic trees in two-colored complete graphs*, **J. Graph Theory**, 24 (1997), no. 1, 59-67 (with R. Schelp, and L. Šolteés)
- [32]. *Degree conditions for 2-factors*, **J. Graph Theory**, 24 (1997), no. 2, 165-173 (with S. Brandt, R. Faudree, R. Gould, and L. Lesniak)
- [31]. *A new game chromatical numbers*, **European J. Combin.**, 18 (1997), no. 1, 1-9 (with R. Schelp and W. Shreve)
- [30]. *A result on  $C_4$ -star Ramsey numbers*, **Discrete Math**, 163 (1997), no. 1-3, 243-246
- [29]. *A class of edge critical 4-chromatic graphs*, **Graphs Combin.**, (1997) 13, no. 2, 139-146 (with A. Gyárfárs and R. Schelp)
- [28]. *A special  $k$ -coloring for a connected  $k$ -chromatic graph*, **Discrete math**, 170 (1997), no. 1-3, 231-236 (with R. Schelp and W. Shreve)
- [27]. *Can One Load a Set of Dice So That the Sum Is Uniformly Distributed?*, **Math. Mag.**, 70 (1997), no. 3, 204 -206 (with M. Rao and W. Shreve)
- [26]. *Hamiltonian graphs with large neighborhood unions*, **Ars Combin.**, 46 (1997), 227-238 (with Y. Liu)

- [25]. *Degree sum conditions for hamiltonicity on  $K$ -partite graphs*, **Graphs Combin.**, 13 (1997), 325-343 (with M. Jacobson)

**1996**

- [24]. *Proof of a conjecture of Bollobás on nested cycles*, **J. Combin. Theory Ser. B**, 66 (1996), no. 1, 38-43 (with P. Erdős and W. Staton)
- [23]. *A partition approach to Vizing's conjecture*, **J. Graph Theory**, 21 (1996), no. 1, 103-111 (with W. Piotrowski and W. Shreve)
- [22]. *Essential independent sets and hamiltonian cycles*, **J. Graph Theory**, 21 (1996), no. 2, 243-250 (with Y. Egawa, X. Liu, and A. Saito)

**1995**

- [21]. *The irredundant Ramsey number  $s(3,7)$* , **J. Graph Theory**, 19 (1995), no. 2, 263-270 (with C. Rousseau)
- [20]. *Vertex disjoint cycles for star free graphs*, **Australas. J. Combin.**, 11 (1995), 157-167. (with L. Markus and R. Schelp)
- [19]. *Degree sequences with single repetitions*, **Congr. Numer.**, 106 (1995), 27-32 (with W. Piotrowski and W. Shreve)
- [18]. *Clique partitions of split graphs*, **Combinatorics, graph theory, algorithms and applications** (Beijing, 1993), 21-30, World Sci. Publ., River Edge, NJ, 1994 (with P. Erdős and Ordman)
- [17]. *Hamiltonicity for  $K_{1,r}$ -free graphs*, **J. Graph Theory**, 20 (1995), no. 4, 423-439 (with R. Schelp)
- [16]. *Hamiltonicity in balanced  $k$ -partite graphs*, **Graphs Combin.**, 11(1995), 221-231 (with F. Faudree, R. Gould, M. Jacobson, and L. Lesniak)

**1994**

- [15]. *Graphs with a cycle of length divisible by three*, **J. Combin. Theory Ser B** 60 (1994), no. 2, 277-292 (with A. Saito)
- [14]. *Hamiltonian graphs with neighborhood intersections*, **J. Graph Theory**, 18 (1994), no. 5, 497-513. (with R. Schelp)
- [13]. *Neighborhood unions and the cycle cover number of a graph*, **J. Graph Theory** 18 (1994), no. 7, 663-672. (with R. Gould, M. Jacobson, and R. Schelp)

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- [12]. *Hamiltonian graphs involving neighborhood intersections*, **Discrete Math**, 112 (1993), no. 1-3, 253-257
- [11]. *Graphs with linear bounded Ramsey numbers*, **J. Combin. Theory Ser. B**, 57 (1993), 138-149 (with R. Schelp)
- [10]. *A generalization of Fan's Condition for hamiltonicity, pancyclicity, and Hamiltonian connectedness*, **Discrete Math**, 115 (1993), no. 1-3, 39-50 (with P. Bedrossian and R. Schelp)
- [9]. *Asymptotic bounds for irredundant and mixed Ramsey numbers*, **J. Graph Theory**, 17 (1993), 193-206. (with J. Hattingh and C. Rousseau)

- [8]. *Ramsey problems involving degrees in edge-colored complete graphs of vertices belonging to monochromatic subgraphs*, **European J. Combin.**, 14 (1993), no. 3, 183-189. (with P. Erdős, C. Rousseau, and R. Schelp)
- [7]. *Ramsey problems with bounded degree spread*, **Combin. Probab. Comput.**, 2 (1993), 263-269. (with R. Schelp)
- [6]. *Graphs with cycles 2 mod k*, **Congr. Numer.**, 93 (1993), 177-182. (with N. Dean and W. Shreve)

**1992**

- [5]. *Hamiltonian graphs involving distances*, **J. Graph Theory**, 16 (1992), no. 2, 121-129 (with R. Schelp)
- [4]. *On k-girth graphs*, **Congr. Numer.**, 89 (1992), 193-207 (with R. Schelp and W. Shreve)
- [3]. *A characterization of influence graphs of a prescribed graph*, **Vishwa Internat. J. Graph Theory**, 1 (1992), no. 1, 77-81. (with R. Gould, M. Jacobson, R. Schelp, and D. West)

**1991**

- [2]. *A degree condition for hamiltonian cycles in t-tough graphs with  $t > 1$* , **Advances in Graph Theory**, 19-32, Vishwa, Gulbarga, 1991 (with D. Bauer and L. Lasser)

**1990**

- [1]. *One sufficient condition for hamiltonian graphs*, **J. Graph Theory**, 14 (1990), no. 4, 501-508.

**Accepted**

- [1]. *Spanning trees with at most k leaves in 2-connected  $K_{1,r}$ -free graphs*, **Appl. Math. Comput.**, (with Yuan Chen, Zhiquan Hu, and Shunzhe Zhang)

**Submitted**

- [1]. *Proof of the Goldberg-Seymour conjecture on edge-coloring of multigraphs* (with G. Jing and W. Zang)
- [2]. *The core conjecture of Hilton and Zhao I: Pseudo-multigraph and Lollipop* (with Y. Cao, G. Jing, and S. Shan)
- [3]. *The core conjecture of Hilton and Zhao II: a Proof* (with Y. Cao, G. Jing, and S. Shan)
- [4]. *Linear arboricity conjecture for degenerate graphs*, (with Yanli Hao and Guoning Yu)
- [5]. *Precoloring extension of Vizing's theorem for multigraphs*, (with Yan Cao, Guangming Jing, Xuli Qi, and Songling Shan)
- [6]. *Decreasing the mean subtree order under k edges addition*, (with Yanli Hao and Nizamettin Toker)
- [7]. *Unions of Perfect Matchings in r-graphs*, (With Nizamettin Toker)
- [8]. *On Gupta's co-density conjecture* (with Y. Cao, G. Ding, G. Jing, and W. Zang )

**In preparation**



- [1]. *Proof of a conjecture of Jackson and Wormald on Circumferences of 3-connected graphs with bounded degrees* (with Z. Gao, S. Shan, X. Yu, and W. Zhan)
- [2]. *Graph knitting, connectivity and Hadwiger's conjecture I* (with Y. Cao, S. He, F. Song, and Z. Hu)
- [3]. *Graph knitting, connectivity and Hadwiger's conjecture II* (with Y. Cao, S. He, F. Song, and Z. Hu)
- [4]. *The Goldberg-Seymour conjecture on edge-coloring of weighted multigraphs graphs*, (with Yanli Hao)
- [5]. *Density and edge coloring for weighted graphs*, (with Guoning Yu)

## INVITED RESEARCH PRESENTATIONS AND COLLOQUIAL

2022 **Distinguished Lecture**, Eleventh Cargese Workshop on Combinatorial Optimization by Institut d'Etudes Scientifiques de Cargese, Corsica (France), a series of three talks, September

- Proof of the Goldberg-Seymour conjecture I* (90 minutes)
- Proof of the Goldberg-Seymour conjecture II*, (90 minutes)
- Proof of the Goldberg-Seymour conjecture III*, (60 minutes)

**Distinguished Lecture Series**, Beijing Jiaotong University (virtual) November

- Problems surrounding the Goldberg-Seymour Conjecture I*, (60 minutes)
- Problems surrounding the Goldberg-Seymour Conjecture II*, (60 minutes)
- Problems surrounding the Goldberg-Seymour Conjecture III*, (60 minutes)

**Distinguished Lecture Series**, Beijing Jiaotong University (virtual) July

- Optimization problems in Graph Edge Coloring*, Lectures I (60 minutes)
- Multiplicity of the second-largest eigenvalue of graphs*, Lectures II (60 minutes)
- Long cycles and spanning trees in planar graphs and beyond*, Lectures III (60 minutes)

**Proof of Goldberg-Seymour Conjecture**, 45 minutes lecture, The 9th International Congress of Chinese Mathematicians, originally scheduled June 27 – July 2 (due to Covid 19 pandemic regulation oversee speakers' talks rescheduled to July, 2023)

**The Goldberg-Seymour conjecture and its applications**, Colloquium, West Virginia University, Morgantown, November

**Multiplicity of the second-largest eigenvalue of graphs**, 2022 AMS Fall Southeastern Sectional Meeting, University of Tennessee at Chattanooga, October

**Optimization problems in graph edge coloring**, Colloquium, Henan Normal University (virtual), October

**Multiplicity of the second-largest eigenvalue of graphs**, International Conference on Graph theory and Its Applications, Shandong Normal University (virtual), January

**Multiplicity of the second-largest eigenvalue of graphs**, Colloquium, University of Central Florida (virtual), February

**Multiplicity of the second-largest eigenvalue of graphs**, Colloquium, Fuzhou University (virtual), February

**Multiplicity of the second-largest eigenvalue of graphs**, Mini-conference on graph theory and combinatorics, Georgia Institute of Technology (virtual), March

**Multiplicity of the second-largest eigenvalue of graphs**, Colloquium, Huaqiao University (virtual), March

**On the linear arboricity conjecture**, Seminar, West Virginia University (virtual), April

**Long cycles and spanning trees in planar graphs and beyond**, Colloquium, Shandong University (virtual), April

2021 **The graph edge coloring**, Colloquium, Nankai University (virtual), January

**The graph edge coloring**, Colloquium, Shandong Normal University (virtual), February

**On the linear arboricity conjecture**, AMS Spring Southeastern Section Meeting, Georgia Institute of Technology (virtual), March

**The graph edge coloring**, Colloquium, Nanjing University of Aeronautics and Astronautics (virtual), March

**The graph edge coloring**, Colloquium, Hubei University (virtual), May

**Optimization problems in Graph edge coloring**, 2021 Lanzhou International Workshop on Optimization Methods and Combinatorial Algorithms, Lanzhou (virtual), China, May

**On the Goldberg-Seymour conjecture and related graph edge coloring problems**, Colloquium, Nanjing Normal University, Nanjing (virtual), China, May

**On the Goldberg-Seymour conjecture**, Colloquium, Jiangxi University of Science and Technology, Jiangxi (virtual), China, May

**On the Goldberg-Seymour conjecture and surrounding edge-coloring problems**, Plenary talk, 5th Xi'an International Workshop on Graph Theory and Combinatorics, Xi'an (virtual), China, June

**Graph Edge Coloring**, Colloquium, Qufu Normal University, Qufu (virtual), China, July

**Multiplicity of the second-largest eigenvalue of graphs**, Colloquium, East China Normal University, Shanghai (virtual), China, November

- 2020 **The graph edge coloring**, The 17th Invited Lecture (1.5 hour talk) of Operations Research Society of China, August
- Critical edge chromatic graphs**, Colloquium, Center for Discrete Mathematics and Theoretic Computer Science (DIMACS), Fuzhou University, August 28
- Ramsey number for Fans**, AMS Fall Southeastern Section Meeting (2020), Virtual Program, October
- Laminar tight cuts in matching covered graphs**, AMS Spring Southeastern Section Meeting, University of Virginia, March (cancelled due to COVID-19 pandemic)
- Generalizations of Vizing's adjacency lemma for simple graphs**, SIAM Conference on Discrete Mathematics (2020), Spokane, Washington, June (cancelled due to COVID-19 pandemic)
- The graph edge coloring**, Colloquium, Center of Mathematics Fudan University (virtual), December
- 2019 **The proof of Goldberg-Seymour conjecture**, one-hour talk, The 10th Conference of Tsinghua Sanya International Mathematics Forum, Sanya, China, December
- The proof of Goldberg-Seymour conjecture**, Colloquium, Fuzhou University, December
- The Goldberg-Seymour conjecture**, Erdős Lecture Series, University of Memphis, October
- The Goldberg-Seymour conjecture**, Seminar, University of Mississippi, October
- The Goldberg-Seymour Conjecture**, Colloquium, University of Central Florida, Orlando, FL, March
- The Goldberg-Seymour Conjecture**, AMS 2019 Spring Southeastern Sectional Meeting, Auburn, AL, March
- Graph knitting**, AMS 2019 Spring Central and Western Joint Sectional Meeting, Honolulu, HI, March
- The Goldberg-Seymour Conjecture**, Colloquium, University of Notre Dame, IN, April
- The Goldberg-Seymour Conjecture**, Workshop on Structural Graph Theory and Graph Colorings, The Tsinghua Sanya International Mathematics Forum (TSIMF) in Sanya, China, April-May
- The Goldberg-Seymour Conjecture**, Keynote Speaker, The Ninth Xian Conference on Graph Theory and Combinatorics, Xian, China, May

- 2018 **Vizing's Average Degree Conjecture on Edge Chromatic Critical Graphs**, AMS 2018 Spring Southeastern Section Meeting, Nashville, FL, April
- On Goldberg's Conjecture and Tashkinov Trees**, SIAM Conference on Discrete Mathematics, Denver, June
- Goldberg's Conjecture and Tashkinov Trees**, East China Normal University, May
- Graph Edge Coloring** – A series of six one-hour talks, Central China Normal University, May
- Progress on Goldberg's conjecture**, International Graph Theory and Network Workshop, Xining, July
- Progress on Goldberg's conjecture**, Hubei University, Wuhan, December
- 2017 **Cyles in edge chromatic critical graphs**, AMS 2017 Joint Mathematics Meeting, Atlanta, GA, January
- Linkage and Hadwiger's conjecture**, AMS 2017 Spring Southeastern Section Meeting, Charleston, SC, March
- On Goldberg's conjecture and Tashkinov trees**, Central China Normal University, Wuhan, May
- On Goldberg's conjecture and Tashkinov trees**, The 6th biennial Canadian Discrete and Algorithmic Conference (CanaDAM 2017), Toronto, Canada, June
- Average degrees in edge-chromatic critical graphs**, AMS 2017 Fall Eastern Sectional Meeting, Buffalo, NY, September
- On Goldberg's conjecture and Tashkinov trees**, AMS 2017 Fall Southeastern Section Meeting, Orlando, FL, September
- On Goldberg's conjecture**, Central China Normal University, Wuhan, December
- On Goldberg's conjecture**, Hubei University, Wuhan, December
- 2016 **A degree condition for knitted graphs**, AMS Spring Southeastern Section Meeting, Athens, GA, March
- Lovasz-Plummer Conjecture on spanning Halin subgraphs**, Graph Theory Conference, Fuzhou, China, April
- A degree condition for knitted graphs**, AMS Spring Central Sectional Meeting, Fargo, ND, April
- On Goldberg's conjecture**, International Conference on Discrete Mathematics and Optimization, Fuzhou, China, June
- Graph edge coloring**, Greater Yangzhi Delta Conference on Combinatorial Optimization (1 hour plenary talk), Shanghai, China, June
- On Goldberg's conjecture**, Central Normal University, Wuhan, China, June
- Graph edge coloring** (a series of 8 two-hour lectures), Central China Normal University, China, December

- 2015 **Forbidden pairs for spanning Halin subgraphs**, AMS Spring Southeastern Sectional Meeting (1109), Huntsville, AL, March
- Who wants to be a mathematicians**, Atlanta Science Fair, Atlanta, GA, March
- Forbidden pairs for spanning Halin subgraphs**, University of West Virginia, Morgantown, WV, March
- Lovász-Plummer conjecture on spanning Halin subgraphs**, Graph Theory Workshop , Fuzhou, China, April
- Long cycles and spanning trees in planar graphs and beyond**, Auburn University, Auburn, AL, May
- On extremal combinatorics**, A series of 5 talks, East China University of Science and Technology, Shanghai, China, May-June
- Lovász-Plummer conjecture on spanning Halin subgraphs**, Central China Normal University, Wuhan, China, June
- Linkage and Hadwiger's conjecture**, AMS Central Fall Central Section Meeting, Chicago, IL, October
- On Goldberg's conjecture**, Middle Tennessee State University, Murfreesboro, TN, October
- On Goldberg's conjecture**, AMS Fall Southeastern Section Meeting, Memphis, TN, October
- On Goldberg's conjecture**, University of West Georgia, Carrollton, GA, October
- On graph edge coloring**, Central China Normal University, Wuhan, China, December
- 2014 **Spanning trees and spanning Halin graphs**, AMS Southeastern Spring Sectional Meeting (1097), Knoxville, TN, March
- Long cycles in graphs with bounded degrees**, SIAM Discrete Math 14, Minneapolis, MN, May
- Vizing's 2-factor conjecture involving large maximum degree** Workshop in Combinatorics and Graph Theory, Changsha, China, May
- Long cycles and spanning trees in planar graphs and beyond**, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China, July
- Hadwiger conjecture for degree sequence**, DIMACS, Fuzhou University, Fuzhou, China, July
- Long cycles and spanning trees in planar graphs and beyond**, East China University of Science and Technology, Shanghai, China, July
- On Hadwiger conjecture** , Central China Normal University, Wuhan, China, August
- Vizing 2-factor conjecture with large maximum degree**, AMS Central Fall Section Meeting (1102), Eau Claire, WI, September
- Lovász-Plummer conjecture on Spanning Halin subgraphs and Beyond**, Central China Normal University, Wuhan, China, December

- 2013 **Hadwiger conjecture for degree sequences**, AMS Spring Southeastern Sectional Meeting (1087), Oxford, MS, March
- Phase transition of dense graphs**, EXCILL2: Extremal Combinatorics at Illinois, Urbana-Champaign, IL, March
- Finding long cycles and large trees in graphs**, National Institute of Standards and Technology, Maryland, May
- Circumferences in graphs** (one hour plenary talk), The 2013 Graph Theory and Combinatorial Optimization Workshop, Xinjiang, China, June
- Circumferences in graphs** (one hour plenary talk), The 2013 Graph and Combinatorics Conference, Hefei, China, June
- Long cycles and special spanning trees** (colloquium), Department of Mathematics, Zhejiang Normal University, Jinhua, Chian, May
- Hadwiger conjecture for degree sequences** (colloquium), Discrete Mathematics Center, Fuzhou University, Fuzhou, China, June
- Spanning Halin subgraphs**, Faculty of Mathematics and Computer Science, Hubei University, Wuhan, China, June
- Hadwiger conjecture for degree sequences** (colloquium), Faculty of Mathematics and Statistics, Central China Normal University, Wuhan, China, June
- Triangulations on the plane without spanning Halin subgraph**, AMS Fall Southeastern Sectional Meeting (1092), Louisville, KY, October
- 2012 **Homeomorphically irreducible spanning trees**, 2012 SIAM Conference on Discrete Mathematics, Dalhousie University, Halifax, Canada, June
- Homeomorphically irreducible spanning trees**, International Conference on Cycles in Graphs, Vanderbilt University, Nashville, TN, June
- Claw-free graphs**, Central China Normal University, Wuhan, China, June
- Homeomorphically irreducible spanning trees**, Hubei University, Wuhan, China, June
- Phase transitions in highly edge-connected graphs**, AMS 2012 Spring Southeastern Meeting, Tampa, FL, March
- Homeomorphically irreducible spanning trees**, AMS 2012 Spring Eastern Sectional Meeting, Washington DC, March
- On Maximum Edge Cuts of Connected Digraphs**, 36th Annual SIAM Southeastern Atlantic Section Conference, Huntsville, AL, March

- 2011 **Graphs with linear Ramsey numbers**, Erdős Lecture Series, Memphis, TN, May
- A few problems surrounding spanning trees**, Wuhan Graph Theory Workshop, Wuhan, China, June
- Homeomorphically irreducible spanning trees in locally connected graphs**, International Symposium on Graph Theory and Combinatorial Algorithms (GTCA'2011), Beijing, China, July
- Homeomorphically Irreducible Spanning Trees in Locally Connected Graphs**, East China Normal University, Shanghai, China, July
- Long cycles in 3-connected graphs**, East China University of Science and Technology, China, July
- Finding long cycles**, Yale University, New Haven, CT, September
- Graphs containing homeomorphically irreducible spanning Trees**, AMS Fall Southeastern Meeting (1073), Wake Forest University, NC, September
- 2010 **Chromatic index of multiple graphs**, College of William and Mary, VA, February
- The Fouquet-Jolivet conjecture on the circumference of a k-connected graphs**, 8th French Combinatorial Conference, Orsay, June
- Cycles in Digraphs**, Central Normal University, Wuhan, China, July
- Hamiltonian graphs involving degrees, neighborhood unions, and neighborhood intersections**, International Symposium on Graph Theory and Combinatorial Algorithms (GTCA'2010), Beijing, China, August
- The Fouquet-Jolivet conjecture on the circumference of a k-connected**, Hubei University, Wuhan, China, July
- Long cycles in 3-connected graphs with bounded degrees**, Georgia Institute of Technology, Atlanta, GA, October
- Circumferences of graphs**, University of Mississippi, MS, October
- Long cycles in 3-connected graphs with bounded degrees**, University of Memphis, Memphis, TN, October
- The Fouquet-Jolivet conjecture on the circumference of a k-connected**, AMS 2010 Southeastern Section Meeting, Richmond, VA, November
- 2009 **On the even hamiltonian square graphs**, 2009 AMS Spring Central Section Meeting, Urbana, IL, March
- On the even hamiltonian square graphs** 33rd SIAM Southeastern-Atlantic Section Conference, Columbia, SC, April
- Path Spectra**, 22nd Cumberland Conference on Combinatorics, Graph Theory and Computing, Bowling Green, May

**On hamiltonian square graphs** Hubei University, Wuhan, China, June

**Topics in graph theory and its applications – Five 3-hour series talks**, The 2009 Shanghai Summer Graduate Students Workshop on Operations Research, Shanghai, China, July

**Graph edge coloring involving edge density**, 2009 AMS Fall Southeastern Section Meeting, Baco Raton, FL, November

**Graph edge coloring**, Hubei University, Wuhan, China, December,

**Graph edge coloring**, Discrete Mathematics Center, Fuzhou University, China, December

2008 **Small 3-connected dominating sets in a 3-connected graph**, 32nd SIAM Southeastern-Atlantic Section Conference, Orlando, FL, March

**Polynomial algorithms for graphs with bounded parameter-tree-width**, 21st Cumberland Conference on Graph Theory, Combinatorics, and Computing - In Honor of Mike Plummer's 70th Birthday, Nashville, TN, May

**Polynomial algorithms for graphs with bounded parameter-tree-width**, International Conference on Interdisciplinary Mathematical and Statistical Techniques - IMST 2008 / FIM XVI, Memphis, TN, May

**Long cycles in 4-connected graphs**, 2008 Fall Southeastern Meeting, Huntsville, AL, October

**Problems on Tournaments**, Central China Normal University, Wuhan, China, June

2007 **Circumferences of 3-connected graphs without  $K_{3,t}$ -minor**, The Joint Mathematics Meetings(AMS 113), New Orleans, LA, January

**Minimal generators of cut-ideals of graphs without  $K_4$ -minors**, AMS Spring Central Section Meeting (AMS 1025), Oxford, OH, March

**Toric Cut Ideals of Graphs with Forbidden Minors**, Middle Tennessee State University, Murfreesboro, TN, April

**Minimal generators of cut-ideals of graphs without  $K_4$ -minors**, International Symposium on Graph Theory and Combinatorial Algorithms, Beijing, China, July

**Finding long cycles in 3-connected graphs**, Hubei University, Wuhan, China. May

**Circumferences of 3-connected graphs**, China Three Gorges University, Yichang, China, July

**Partitioning tournaments into two transitive subtournaments**, AMS Fall Southeastern Meeting (AMS 1033), Murfreesboro, TN, November

**A web-based customizable decision-making tool to optimize health resources: the example of screening and treating asymptomatic women for sexually transmitted diseases**, Social and Behavioral Science Symposium(CDC and GSU), Atlanta, November



- 2006 **Linkages with Modulo Constrains**, AMS Annual Meeting at San Antonio – SIAM Minisymposium on Graph Drawing, Texas, January
- Finding long cycles in 3-connected graphs**, Clemson, February
- The El-Zahar Conjecture and the Surrounding Problems**, University of Mississippi, Oxford, MS, March
- Finding long cycles in 3-connected graphs**, Central China Normal University, Wuhan, China, July
- Circumferences of 3-connected graphs**, East China Normal University, Shanghai, China
- Finding Long Cycles in 3-connected Graphs**, Workshop Cycles and Colourings'06, Tatransk Štrba, Slovakia, September, Plenary Speaker
- Finding Long Cycles in 3-connected Graphs**, University Of Central Florida, Orlando, FL, October
- Linkages with Modulo Constraints**, EXCILL: Extremal Combinatorics at Illinois, Urbana, IL, November
- 2005 **Hamiltonian Cycles with Small Even Chords**. The Joint Mathematics Meetings(AMS 111), Atlanta, GA, January
- Characterizations of  $[1,k]$ -Bar Visibility Trees**, Graph Theory with Altitude Conference – in Honor of Joan P Hutchinson on the Occasion of her 60th Birthday, Denver, CO, May
- The El-Zahar Conjecture and the Surrounding Problems** (one hour plenary talk), Japan Workshop on Graph Theory and Combinatorics 2005 – in honor of Hikoe Enomoto's 60th birthday, Yokohama, Japan, June
- Problems in Graph Theory**, The Mathematics and system Science Institute, Chinese Academy of Sciences, Beijing, China, July
- The El-Zahar Conjecture and the Surrounding Problems**, East China Normal University, China, August
- 2004 **Plane graphs with positive curvatures**, Department of Mathematics, University of Mississippi, MS, April
- Graphs with positive curvatures**, Seventeenth Cumberland Conference on Combinatorics, Graph Theory, and Computing, Murfreesboro, TN, May
- Problems on cycles and paths in graph theory**, SIAM conference on Discrete Mathematics, Nashville, TN, June
- Graphs with positive curvatures**, 10th Anniversary of the Institute of Mathematics, East China Normal University, Shanghai, China, June

- Finding long cycles in 3-connected graphs**, Nanjing Normal University, Nanjing, China, June
- Long cycles in 3-connected graphs**, Huazhong Normal University, Wuhan, China, July
- Finding long cycles**, The first Chinese Graph Theory and Combinatorics Conference, Xinjiang, China, August
- Finding long cycles in special graphs**, The 19th Clemson Mini-Conference on Combinatorial Optimization, Clemson, October
- An interlacing result on normalized Laplacians**, AMS 2004 Fall Southeastern Section Meeting, AMS 999, Nashville, TN, October
- Long cycles in special graphs**, University of Colorado at Denver, CO, October
- 2003 **Long cycles in graphs without  $K_{3,t}$ -minors**, School of Mathematics, Georgia Institute of Technology, GA, February
- Circumference of 3-connected graphs**, SIAM/MAA at Clemson, Clemson University, SC, March
- Longest cycles in 3-connected graph without  $K_{3,t}$ -minor**, AMS 2003 Spring Central Section Meeting, AMS 985, Bloomington, IN, April
- Cycle extendabilities for special graphs**, AMS 2003 Joint Central and Western Section Meeting Boulder, AMS 989, CO, October
- 2002 **Graph minors and linkages**, Fifteenth Cumberland Conference on Combinatorics, Graph Theory, and Computing, Oxford, MS, May
- Cycles in digraphs**, AMS 2002 Fall Southeastern Section Meeting, AMS 982, Orlando, FL, November
- Long cycles in 3-connected graphs**, VIGRE Seminar, Department of Mathematics, University of Georgia, Athens, GA, October
- Circumferences of 3-connected graphs**, Department of Mathematics, Middle Tennessee State University, Murfreesboro, TN, November
- 2001 **Monochromatic coloring via total multicoloring of trees**, Fourteenth Cumberland Conference on Combinatorics, Graph Theory, and Computing, Memphis, TN, May
- Toughness and hamiltonicity**, The CAS International Conference on Graph Theory and Combinatorics, Kuming, China, June
- The circumferences of 3-connected graphs**, Huazhong Normal University, Wuhan, China, July
- Hamiltonian graphs**, Nanjing Normal University, Nanjing, China, July
- Extremal graphs for intersecting cliques**, 2001 Fall AMS Southeastern Section Meeting 970, Chattanooga, TN, October
- Longest cycles in 3-connected graphs**, Clemson University, SC, November

- 2000 **Longest cycles in  $k$ -connected graphs**, Graph Theory 2000, Nanjing, China, June  
**Fragile graphs**, First AMS-Hong Kong Mathematics Society Joint Conference, Hong Kong, December  
**Cycles in  $k$ -connected graphs**, University of Memphis, Memphis, TN, October  
**Fragile graphs**, Tsinghua University, Beijing, China, December
- 1999 **Longest cycles in planar graphs**, West Virginia University, WV, April  
**Longest cycles in 3-connected graphs**, 12th Cumberland Conference on Graph Theory, Combinatorics, and Computing, University of Louisville, Louisville, KY, May  
**Long cycles in planar graphs**, Institute of Systems Science, Chinese Academy of Sciences, Beijing, China, July  
**Longest cycles in planar graphs**, Keio University, Tokyo, Japan, August
- 1998 **Partitioning tournaments into cycles**, 937th AMS Meeting, Louisville, KY, May  
**Extreme graph theory**, 4 hour plenary lectures, 98 Graph Theory Symposium, Nanjing, China, April  
**Intersections of longest cycles**, Institute of Systems Science, Chinese Academy of Sciences, Beijing, China, June  
**Regularity Lemma and its applications**, A three-day series lecture, Huazhong Normal University, Wuhan, China, June  
**Connectivities after path removal**, Workshop on paths and cycles, DIMACS, New Jersey, July  
**Hamiltonian graphs**, Clemson mini-conference, Clemson, NC, September  
**Hamiltonian graphs and forbidden subgraphs**, ACCOTA 98 (Combinatorial and Computational Aspects of Optimization, Topology and Algebra), Oaxaca, Oaxaca., Mexico, December
- 1997 **Cliques covering the edges of a locally cobipartite graph**, 919th AMS meeting, Memphis, TN, April  
**Cliques covering edges**, North Dakota State University, Fargo, ND, April  
**Intersections of longest cycles in connected graphs**, 10th Cumberland Conference on Graph Theory and Computing, Emory University, Atlanta, GA, May  
**Tough enough chordal graphs are hamiltonian**, Laboratoire de Recherche en Informatique, Université Paris-Sud, Orsay, France, July
- 1996 **Hamiltonicity of bipartite graphs**, 9th Cumberland Conference on Graph Theory and Computing, University of Mississippi, Oxford, MS, May  
**Hamiltonicity for  $k$ -partite Graphs**, INFOR 96, Vancouver, BC, Canada, June
- 1995 **Proof of a conjecture of Bollobás on nested cycles**, 8th Cumberland Conference on Graph Theory and Computing, Vanderbilt University, Nashville, TN, May

- 1993 **Longest cycles involving cliques**, 6th Cumberland Conference on Graph Theory and Computing, Rhodes College, Memphis, Tennessee, May
- Mixed Ramsey numbers involving total chromatic numbers and stars**, 881st Amer. Math. Soc. Meeting Washington, D.C. April
- On hamiltonian graphs**, University of Louisville, Louisville, KY, September
- Hamiltonicity for claw-free graphs**, West Virginia University, Morgantown, WV, December
- Hamiltonicity involving stars**, University of Mississippi, University, MS, December
- 1991 **Ramsey numbers for planar graphs**, Dimacs Planar Graph Workshop, Rutgers Univ. New Jersey, November