

# College of William & Mary

## Curriculum Vita Standard Format

Date: October 10, 2018

### **PERSONAL INFORMATION**

1. Name: Gexin Yu

Office Address: Jones Hall 127, College of William and Mary, Williamsburg, VA 23187

Phone: (757) 221-2040; Email: gyu@wm.edu

2. Current Position: Associate Professor, Department of Mathematics

### **EDUCATION:** Academic degrees, institutions and dates

Ph.D. in Mathematics, University of Illinois at Urbana-Champaign, USA, 2002-2006

M.S. in Mathematics, South China Normal University, China, 1997-2000

B.S. in Mathematics, South China Normal University, China, 1993-1997

### **ACADEMIC POSITIONS**

4. Teaching and research positions, including dates

– August 2013–:

Associate Professor, Department of Mathematics, College of William & Mary

– May 2014–April 2019:

Chu-Tian Distinguished Professor, School of Mathematics and Statistics, Huazhong Normal University

– September 2008 – July 2013:

Assistant Professor, Department of Mathematics, College of William & Mary

– May 2010–June 2010:

Visiting Scholar, Department of Mathematics, Nanjing Normal University

– September 2006–August 2008:

NTT Assistant Professor (postdoc), Department of Mathematics, Vanderbilt University

### **HONORS, PRIZES AND AWARDS**

Plumeri Award for Faculty Excellence, 2015, College of William & Mary

### **COURSES TAUGHT**

6a. Courses taught

College of William and Mary

– Math 111 (Calculus 1): Fall 2008, Fall 2009, Spring 2015, Fall 2015

– Math 112 (Calculus 2): Fall 2011 (two sections)

– Math 211 (Linear Algebra): Spring 2013, Spring 2016, Fall 2016, Fall 2018

- Math 214 (Foundations of Math): Spring 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Fall 2012, Fall 2014, Spring 2017, Fall 2017.
- Math 307 (Abstract Algebra): Spring 2011, Fall 2012, Spring 2013, Spring 2018
- Math 332 (Graph Theory and Its Applications): Spring 2017, Spring 2019
- Math 410/490 (Special topics: graph theory): Fall 2009, Spring 2015
- Math 410 (Special topics: data science seminar): Spring 2015, Spring 2016
- Math 412 (Introduction to Number Theory): Fall 2010, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018
- Math 432 (Combinatorics): Spring 2010, Spring 2016
- Math 400 (Mathematical Connections): Spring 2018, Spring 2019
- Math 495/496 (honor thesis): almost every year

#### Vanderbilt University

- Spring 2008: Math 175(Calculus III), Math 274(Combinatorics)
- Fall 2007: Math 155A(Calculus I)
- Spring 2007: Math 150B(Calculus II), Math 274(Combinatorics)
- Fall 2006: Math 150B(Calculus II)

#### 6b. Students supervised:

REU students supervised in College of William and Mary:  
(supported by my National Science Foundation grant and CSUMS grant)

- Eric Chai (2018-2019, Honor thesis)
- Junda An (Summer 2018, partially honor fellowship)
- Yingxu Mu (Summer 2018, EXTREEMS-QEDS)
- Hangwei Zhuang (honor thesis, Fall 2017-Spring 2018), finished with honors
- Emilee Cardin (Summer 2017, Monroe scholarship)
- Eric Chai (Summer 2017, EXTREME-QEDS, co-advised with Chi-Kwong Li)
- Joel Monroe (Summer 2017, EXTREME-QEDS)
- Santana Afton (Summer 2016, EXTREME-QEDS)
- Matthew Swartz (Summer 2016, EXTREME-QEDS)
- Fangyi Xu (Summer 2015-Spring 2016, honors fellowship), finished with honors
- Michael Kopreski (Summer 2015, EXTREME-QEDS, Spring 2016-Fall 2016 honors thesis), finished with honors
- Chris Dunn (Summer 2015, EXTREME-QEDS)
- Heather Hopkins (Summer 2014-Spring 2015, honors fellowship), finished with honors
- Chenyifu Chen (Fall 2014, Math 410)
- Siliang Chen (Summer 2013–Spring 2014, honors fellowship)
- Jiaqi Zong (Summer 2013)
- Allison Oldham (Summer 2012–Spring 2013, co-advised with R. Kincaid) finished with honors.
- Wei Xia (Summer 2012, co-supervised with Junping Shi)
- Owen Hill (Summer 2012–Spring 2013), finished with honors

- Alex Valentin (Summer 2011-Spring 2012) finished with honors
- Jeff Soosiah (Summer 2010-Spring 2012) finished with honors
- Ari Cukierman (Summer 2010-Spring 2011) finished with honors
- Chase Albert (Summer 2010-Spring 2011) finished with Honors
- Lee Williams (Fall 2009 and Spring 2010) finished with Honors

## **FELLOWSHIPS AND GRANTS**

7a. All fellowships, grants, contracts awarded by outside agencies.

- *Some research on graph coloring*, National Science Foundation of China, Oversea Collaboration Grant, Jan. 2018-Dec. 2019, RMB 180,000. (PI: Gexin Yu, co-PI: Xiangwen Li)
- *Selected problems on coloring, covering, and packing of graphs*, National Security Agency, July 2016-April 2019, \$39,994. (PI: Gexin Yu)
- *EXTREEMS-QED: Computational and Statistical theory and techniques in the study of large data sets*, National Science Foundation, 2013-2018, \$879,498. (co-PI. PI: Junping Shi)
- *Graph linkage and packing problems*, National Security Agency, 2011-2014, \$39,882 (PI: Gexin Yu)
- *Collaborative research on degree conditions for packing and covering problems on graphs*, National Science Foundation, 2007-2011, \$80,423.00. (PI: Gexin Yu)
- *CSUMS: Theory, Techniques, and Research in Computational Mathematics* (group REU grant) National Science Foundation, 2007-2012, \$884,029. (senior personnel, PI: Chi-Kwong Li)

7b. All summer grants and Faculty Research Assignments received from William and Mary

- Summer research grant from College of William and Mary, \$4000, Summer 2015.
- Summer research grant from College of William and Mary, \$5000, Summer 2011.

## **RESEARCH**

8a. Refereed publications in periodicals, chapters in books, and conference proceedings (the names with a \* are undergraduate students, and the names with a \*\* are graduate students)

- [60] DP-3-coloring of planar graphs (with Runrun Liu, Sarah Loeb and Yuxue Yin), *Discrete Math.*, in press.
- [59] Strong choice number of subcubic graphs (with Tianjiao Dai, Guanghui Wang, Donglei Yang), *Discrete Math.*, 341 (2018), Issue 12, 3434–3440.
- [58] Strong chromatic index of graphs with maximum degree four (with Mingfang Huang and Mike Santana), *Electronic J. of Combinatorics*, 25 (3) (2018), P3.31.
- [57] Planar graphs without 4-cycles and close triangles are (2,0,0)-colorable, (with Heather Hoskins\*, Runrun Liu\*\*, Jennifer Vandenbussche), *J. of Comb. Optim.*, 36 (2018) 346–364.
- [56] On strong edge-coloring of graphs with maximum degree four (with Jian-Bo Lv\*\* and Xiangwen Li), *Discrete Applied Math.*, 235 (2018), 142–153.
- [55] Maximum average degree and relaxed coloring (with Michael Kopreski\*). *Discrete Math.* 340 (2017), no. 10, 2528-2530.
- [54] A note on chromatic number and induced odd cycles (with Baogang Xu and Xiaoya Zha), *Electronic J. of Combinatorics*, 24 (4) (2017), P4.32. (8 pages)

- [53] A relaxation of the strong Bordeaux Conjecture (with Ziwen Huang\*\* and Xiangwen Li), *J. of Graph Theory*, 88 (2018), no. 2, 237–254. (18 pages)
  - [52] An integer linear program for mixed-weight open locating-dominating sets, (with Robin Givens\*\*, Rex Kincaid, and Weizheng Mao), 52st Annual Conference on Information Systems and Sciences (CISS2018), March 21-22, 2018, Princeton University. <https://doi.org/10.1109/CISS.2018.8362259>. (Robin Givens is a Ph.D. student at CS department)
  - [51] Covering 2-connected 3-regular graphs with disjoint paths, *Journal of Graph Theory*, 88 (2018), no. 3, 385–401.
  - [50] The strong chromatic index of  $(3, \Delta)$ -bipartite graphs (with Minfang Huang and Xiangqian Zhou), *Discrete Math.*, 340 (2017), no. 5, 1143–1149.
  - [49] Every planar graph without 3-cycles adjacent to 4-cycles and without 6-cycles is  $(1,1,0)$ -colorable, (with Ying Bai\*\* and Xiangwen Li), *J. Comb. Optimization*, 33 (2017), 1354–1364.
  - [48] Mixed-Weight Open Locating-Dominating Sets (with Robin Givens\*\*, Rex Kincaid, and Weizheng Mao), 51st Annual Conference on Information Systems and Sciences (CISS2017), March 22-24, 2017, John Hopkins University. <https://doi.org/10.1109/CISS.2017.7926110>. (Robin Givens is a Ph.D. student at CS department)
  - [47] Extremal permutations in routing cycles (with Junhua He, Louis A. Valentin\* and Xiaoyan Yin), *Electronic Journal of Combinatorics*, Volume 23, Issue 3 (2016), Paper P3.47.
  - [46] An Upper Bound on the Number of Circular Transpositions to Sort a Permutation (with Anke van Zuylen, James Bieron\*, Frans Schalekamp), *Inform. Proc. Letter*, 116 (2016) 718–722.
  - [45] Planar graphs without 5-cycles and intersecting triangles are  $(1,1,0)$ -colorable (with Runrun Liu\*\* and Xiangwen Li). *Discrete Math.* 339 (2016), no. 2, 992–1003.
  - [44] Strong chromatic index of subcubic planar multigraphs (with A.V. Kostochka, X. Li, W. Ruk-sasakchai, M. Santana, T. Wang), *European J. Combin.* 51, (2016) 380–397.
  - [43] Optimal open-locating-dominating sets in infinite triangular grids (with Rex Kincaid, Allison Oldham\*), *Discrete Appl. Math.* 193 (2015), 139–144.
  - [42] A relaxation of the Bordeaux Conjecture (with Runrun Liu\*\* and Xiangwen Li), *European J. Combin.* 49 (2015), 240–249.
  - [41] Strong edge-colorings of  $k$ -degenerate graphs, *Graphs and Combin.*, 31 (2015), no. 5, 1815–1818.
  - [40] New Bounds on the Minimum Density of a Vertex Identifying Code for the Infinite Hexagonal Grid (with A. Cukierman\*), *Disc. App. Math.*, **161** (2013), no. 18, 2910–2924.
  - [39] Planar graphs without 4- or 5-cycles are  $(3,0,0)$ -colorable (with O. Hill\*, J. Xu, D. Smith, Y. Wang), *Discrete Math.*, **313** (2013), no. 20, 2312–2317.
  - [38] Toward Efficient Channel Hopping for Communication Rendezvous in Dynamic Spectrum Access Networks (with Y. Zhang\*\*, Q. Li, H. Wang, G. Zhu, and B. Wang), *IEEE/ACM Transactions on Networking* 22 (3), 889–902
  - [37] Linear colorings of subcubic graphs (with Chun-Hung Liu), *European J. of Combinatorics* **34** (2013) 1040-1050.
  - [36] Connectivities for  $k$ -knitted graphs and for minimal counterexamples to Hadwiger’s Conjecture (with K. Kawarabayashi) *J. Comb. Theory Ser. B*, **103** (2013), no. 3, 320–326.
  - [35] A relaxation of Steinberg’s Conjecture (with O. Hill\*), *SIAM J. of Discrete Math* **27** (2013) 584–596.
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- before tenured
- [34] Equitable defective coloring of sparse planar graphs (with Lee Williams\* and Jennifer Vandenburg), *Disc. Math* 312 (2012), no. 5, 957–962.
  - [33] An extremal problem on group connectivity (with R. Luo and R. Xu), *European J. Combinatorics*, 33 (2012) 6, 1078–1085. (8 pages)
  - [32] Permutations as Product of Parallel Transpositions (With C. Albert \*, G. Strang, and C.K. Li), *SIAM J. Discrete Math.* 25 (2012), 1412–1417. (6 pages)

- [31] Graphs containing every 2-factor (with A. Kostochka) *Graphs and Combinatorics*, **28** (2012) 687–716(29 pages)
- [30] Linkage for the diamond and the path with four vertices (with Mark Ellingham and Mike Plummer), *Journal of Graph Theory*, **70** (2012) 241–261. (19 pages)
- [29] Linear Choosability of Sparse Graphs (with Dan Cranston), *Discrete Math.* **311** (2011), 1910–1917. (17 pages)
- [28] ETCH: Efficient Channel Hopping for Communication Rendezvous in Dynamic Spectrum Access Networks (with Yifan Zhang, Qun Li, and Baosheng Wang), IEEE Infocom, Shanghai, China, April 10–15, 2011. (acceptance rate: 16%).
- [27] Injective colorings of graphs with low average degree (with Dan Cranston and Seog-Jin Kim), *Algorithmica*, **60** (2011), no. 3, 553–568. (16 pages)
- [26] Equitable coloring sparse planar graphs (with Rong Luo, Jean-Sebastien Sereni, and Chris Stephen), *SIAM J. Discrete Math.* **24** (2010), no. 4, 1572–1583 (12 pages)
- [25] Injective colorings of sparse graphs (with Dan Cranston and Seog-Jin Kim) **310** (2010), *Discrete Math.* No. 21, 2965–2973. (9 pages)
- [24] A new bound on the density of vertex identifying codes for the infinite hexagonal grid (with Dan Cranston) *Electronic Journal of Combinatorics*, **16** R113 (2009). (16 pages)
- [23] Extremal graph packing problems: Ore-type versus Dirac-type (with H. Kierstead and A. Kostochka), in London Mathematical Society Lecture Note Series, published by Cambridge University Press, (2009). (32 pages)
- [22] On the pagenumbr of k-trees (with J. Vandenbussche, D.B. West), *SIAM J. on Discrete Mathematics*, **23** (2009) No. 3, pp. 1455–1464. (9 pages)
- [21] M-degrees and  $C_4$ -free planar graphs (with O. Borodin, A Kostochka, and N. Sheikh), *J. Graph Theory* **60** (2009), no. 1, 80–85. (6 pages)
- [20] Ore-conditions implying 2-factors consisting of short cycles (with A. Kostochka), *Discrete Mathematics*, **309** (2009) 4762–4771. (10 pages)
- [19] Implications among linkage properties in graphs (with Q. Liu and D. West), *J. Graph Theory* **60** (2009), no. 4, 327–337. (11 pages)
- [18] Hamiltonian connectedness in 3-connected line graphs. (with H.-J. Lai, Y. Shao and M. Zhan), *Discrete Appl. Math.* **157** (2009), no. 5, 982–990. (8 pages)
- [17] On the minimum 2-wide widameter of Cylces with Chords (with B. Liu and X. Hou) *Operation Research Transactions* (Chinese) **13** (2009) 1–5. (5 pages)
- [16] Packing of graphs with small product of sizes (with A. Kostochka), *Journal of Combinatorial Theory, Series B*, **98** (2008) 1411–1415. (5 pages)
- [15] On a graph packing conjecture of Bollobás, Eldridge and Catlin (with H. Kaul, A. Kostochka), *Combinatorica*, **28** (2008) 469–485. (17 pages)
- [14] Ore-condition and  $Z_3$ -connectivity (with Rong Luo, Rui Xu and Jianhua Yin), *European J. of Combinatorics* **29** (2008) 1587–1595. (9 pages)
- [13] On Ore-type degree condition for a graph to be  $H$ -linked (with A. Kostochka), *J. Graph Theory*, **58** (2008) 14–26. (13 pages)
- [12] First-Fit chromatic numbers of planar and random graphs (with J. Balogh, S. Hartke, and Q. Liu), *SIAM J. on Discrete Mathematics* **22** (2008), 887–900. (14 pages)
- [11] Minimum degree conditions for  $H$ -linked graphs (with A. Kostochka), *Disc. Appl. Math* **156** (2008) 1542–1548. (7 pages)
- [10] Planar graphs with girth 9 can be edge-partitioned into a forest and a matching (with O. Borodin, A Kostochka, and N. Sheikh), *European J. of Combinatorics*, **29** (2008) 1235–1248. (14 pages)
- [9] An inequality for the group chromatic number of a graph (with Hong-Jian Lai and Xiangwen Li), *Discrete Mathematics*, **307** (2007) 3076–3080.

- [8] An Ore-type analogue of the Sauer-Spencer Theorem (with A. Kostochka), *Graphs and Combinatorics* 23 (2007) no 4, 419–424.
- [7] On extremal matrices of second large exponent by boolean rank (with B. Liu and L. You), *Linear Algebra and Application* 422 (2007) 186–197.
- [6] Ore-type graph packing problems (with A. Kostochka), *Combinatorics, Probability and Computing* 16 (2007), 167–169.
- [5] A lower bound for minimum degree in  $H$ -linked graphs (with R. Gould, A. Kostochka), *SIAM J. on Discrete Math (SIDMA)* 20 (2006), 829–840.
- [4] On Degree Conditions for a Graph to be  $k$ -linked (with K. Kawarabayashi, A. Kostochka), *Combinatorics, Probability and Computing* 15 (2006), 685–694.
- [3] Nowhere-zero  $Z_3$ -flows through  $Z_3$ -connectivity (with M. DeVos, R. Xu), *Discrete Mathematics* 306 (2006), 26–30.
- [2] An extremal problem for  $H$ -linked graphs (with A. Kostochka), *J. Graph Theory* 50 (2005), 321–339.
- [1] On maximal  $(k, b)$ -free sets of integers and its spectrum (with B. Liu and L. You), *Austra.. J. Combin.* 23 (2001), 211–215.

8b. Work in progress or submitted

- [1] Planar graphs without 5-cycle and  $K_4^-$  are  $(2, 0, 0)$ -colorable (with Yuxue Yin and Xiangwen Li), in preparation.
- [2] Double-critical conjecture holds for claw-free graphs with independence number at least four (with Sarah Loeb and Martin Rolek), in preparation (revision before submission).
- [3] DP-3-coloring of planar graphs without  $\{4, 9\}$ -cycles and two other small cycles (with Runrun Liu, Sarah Loeb, Martin Rolek, Yuxue Yin), submitted.
- [4] DP-4-colorability of planar graphs without given two adjacent cycles (with Runrun Liu, Xiangwen Li, Kittikorn Nakprasit, Pongpat Sittitrai), submitted.
- [5] Planar graphs without cycles of lengths 4 and 5 and close triangles are DP-3-colorable (with Yuxue Yin), submitted.
- [6] Planar graphs without  $C_5$  and  $K_4^-$  and adjacent 4-cycles are  $(2, 0, 0)$ -colorable (with Xiangwen Li), submitted.
- [7] Planar graphs with girth at least 5 are  $(3, 4)$ -colorable (with Ilkyoo Choi and Xia Zhang), submitted.
- [8] Strong edge-coloring of planar graphs with large girth (With Lily Chen, Kecai Deng and Xiangqian Zhou), submitted.
- [9] Planar graphs without 4-cycles and intersecting triangles are  $(1, 1, 0)$ -colorable (with Runrun Liu and Xiangwen Li), submitted.
- [10] Perfect partition of some regular partite graphs, (with Jeff Soosiah\* and C.-K. Li), submitted.
- [11] A note on strong edge-coloring of 2-degenerate graphs (with R. Luo), <http://arxiv.org/abs/1212.6092>.

8d. Articles published in non-refereed conference proceedings

- Extremal problems on packing of graphs (extended abstract) (with A. Kostochka), *Oberwolfach Report* 1(2006), 63–64.
- On  $H$ -linked graphs (extended abstract) (with A. Kostochka), *Oberwolfach Report* 1(2004), 42–44.

8e. Invited scholarly papers and talks

- Colloquium talk, Yangsze University, Jingzhou, China, August 6, 2018

- Colloquium talk, Anhui University, Hefei, China, June 26, 2018.
- Colloquium talk, University of Science and Technology of China, Hefei, China, June 25, 2018.
- Colloquium talk, Huaqiao University, Fujian, China, June 22, 2018.
- Colloquium talk, Jiangsu University, Zhengjiang, China, June 5, 2018.
- Colloquium talk, Henan University, Kaifeng, China, May 30, 2018.
- Colloquium talk and seminar talk, Central Florida University, March 8-10, 2018.
- 2018 International Workshop on Graph Theory, Ewha Womans University, Seoul, Korea, Jan 4-7, 2018. (Invited)
- Seminar talk, Virginia Commonwealth University, Nov. 8, 2017.
- Colloquium talk, George State University, Oct. 27, 2017.
- AMS special session at University of Central Florida, FL, Sept. 23-24, 2017 (Invited, 30 minutes)
- AMS special session at SUNY Buffalo, NY, Sept. 16-17, 2017 (Invited, 30 minutes)
- AMS special session at College of Charleston, SC, March 10-12, 2017. (Invited, 30 minutes)
- AMS special session at North Carolina State University, Nov 13-14, 2016 (Invited, 30 minutes)
- Colloquium talk, Shandong University, June 28, 2016.
- Colloquium talk, Shangdong Normal University, June 29, 2016.
- Colloquium talk, Tianjin Normal University, June 27, 2016.
- Lecture series on graph coloring at Huazhong Normal University, Wuhan, China, May, 2016 (four 1.5 hour lectures)
- International workshop on combinatorics, Nankai University, May 13-14, 2016 (invited, 30 minutes)
- Southwest International Conference (Ron Gould's special session), Florida Atlantic University, March 7-11, 2016 (Invited, 30 minutes)
- AMS special session at Loyola University Chicago, October 2-4, 2015 (Invited, 25 minutes)
- Colloquium talk, Beijing University of Chemical Technology, Beijing, China, July 10, 2015.
- Colloquium talk, Nanjing Normal University, Nanjing, China, June 28, 2015.
- Colloquium talk, Chongqing University of Technology, Chongqing, China, June 9, 2015 (to a group of more than 500 undergraduate students)
- Colloquium talk, Chongqing University of Technology, Chongqing, China, June 7, 2015 (to Computer science faculty members)
- Colloquium talk, Jiangsu University, Jiangsu, China, May 18, 2015.
- International workshop on graph theory and combinatorics, Hefei, China, May 15-17, 2015 (Invited, 25 minutes)
- AMS special session at University of Nevada at Las Vegas, April 18-19 2015 (Invited, 25 minutes)
- AMS special session at University of Alabama at Huntsville, Mar. 27-29, 2015 (Invited, 25 minutes)
- AMS special session at University of North Carolina Greensboro, Nov 8-9, 2014 (Invited, 25 minutes)
- AMS special session at University of Winsconsin, Eau Claire, Sept 20-21, 2014 (Invited, 25 minutes)
- SIAM minisymposium on EXTREEMES-QEDS grant, Chicago, July 9, 2014 (Invited, 25 minutes)
- International Workshop on Graph Theory, Zhejiang Normal University, China, May 28-31, 2014 (Invited, one hour)
- Colloquium talk, Hubei University, Wuhan, China, May 26, 2014.
- Colloquium talk, Huazhong Normal University, Wuhan, China, April and May, 2014.

- Colloquium talk, South China Normal University, Guangzhou, China, May 9, 2014.
- Colloquium talk, University of Electronic Science and Technology of China, Chengdu, China, May 28, 2014
- AMS special session at University of Knoxville, Knoxville, Mar 22-23, 2014 (invited, 25 minutes)
- Colloquium talk, University of West Georgia, Nov. 1, 2013.
- AMS special session at University of Louisville, Oct. 4-6, 2013. (Invited, 25 minutes)
- Seminar talk, Wright State University, Oct. 1, 2013.
- Colloquium talk, Wright State University, Sept. 27, 2013.
- Seminar talk at Virginia Commonwealth University, Sept. 24, 2013.
- Colloquium talk, Tongji University, August 26, 2013.
- Combinatorics Workshop at South China Normal University (in celebration of its 30th year of graduate program and 60th anniversary), July 5, 2013 (Invited, one hour).
- International Workshop on graph theory and combinatorics, Anhui University, Anhui, China, June 21-23, 2013. (Invited, 20 minutes).
- Colloquium talk, Tsinghua University, Beijing, China, June 13, 2013.
- Colloquium talk, University of Science and Technology of China, Hefei, Anhui, China, May 30, 2013.
- 2013 Summer workshop on graph theory, Jinhua, Zhejiang, China, May 26-27, 2013. (Invited, one hour).
- Seminar talk at Central China Normal University, Wuhan, Hubei, China, May 23, 2013.
- SIAM-SEAS Minisymposium at Knoxville, Mar. 22-24, 2013. (Invited, 25 minutes)
- AMS special session at University of Mississippi, March 02-03 2013. (Invited, 25 minutes)
- Colloquium talk, University of South Florida, Feb. 22, 2013.
- AMS special session at Akron, OH, Oct 19-21, 2012. (invited, 25 minutes)
- International conference on cycles in graphs, in conjunction with the 27th Annual Shanks Lecture, Vanderbilt University, May 30-June 2, 2012 (invited, 25 minutes)
- Colloquium talk, University of West Georgia, April 17, 2012.
- PME induction talk, March 30, 2012, College of William & Mary
- CSUMS lecture at William & Mary, March 28, 2012
- AMS special session at University of South Florida, Tampa, FL, March 10-11, 2012. (Invited, 25 minutes)
- SIAM SEAS conference at Huntsville, AL March 24-25, 2012 (Invited, 25 minutes)
- University of Illinois, Urbana, Feb 14, 2012
- Virginia Commonwealth University, Feb 23, 2012
- AMS special session at Winston-Salem, NC, Sept 24-25, 2011. (Invited, 25 minutes)
- SIAM Minisymposium on Graph Theory, April 16-17, Charlotte, NC, 2011. (Invited, 25 minutes).
- Central Florida University, March 4, 2011.
- Atlanta Lecture Series in Combinatorics and Graph Theory II, Feb 26-27, 2011 (Invited, 30 minutes).
- George Washington University, Oct 28, 2010
- South China Normal University, Guangzhou, China. May 25, 2010
- Central China Normal University, Wuhan, China, June 22, 2010
- University of Science and Technology of China, Hefei, China. June 12, 2010
- Workshop in Combinatorics and Graph Theory at University of Science and Technology of China, Hefei, China, May 28-30, 2010 (Invited, 30 minutes)



- Tongji University, Shanghai China, June 2, 2010
- Nanjing Normal University, May 20, and June 5, 2010 (two talks)
- University of West Georgia, April 25, 2010.
- AMS Southeastern Meeting in Boca Raton, FL, October 29-November 1, 2009 (Invited, 25 minutes)
- SIAM Minisymposium on Structure Graph Theory, Denver, July 7-11, 2009 (Invited, 25 minutes)
- AMS Central Meeting at University of Illinois at Urbana-Champaign, March 27-29, 2009 (Invited, 25 minutes)
- West Virginia University, February 19, 2009.
- SIAM Minisymposium on Graph Theory during Annual Joint Meeting, DC, January 6-7, 2009. (Invited, 25 minutes)
- AMS Sectional Meetings Western Michigan University, October 17-19, 2008
- Sixth Shanghai Conference on Combinatorics, Shanghai Jiaotong University, May 24-28, 2008
- The 32nd SIAM Southeastern-Atlantic Section Conference (SIAM-SEAS 2008), University of Central Florida, March 15-16, 2008.
- Research Seminar at Middle Tennessee State University, Feb 27, 2008
- AMS Special session at Middle Tennessee State University, Nov. 2007
- AMS Special session at DePaul University, Chicago, Oct. 2007
- SIAM Student Chapter Seminar at Emory University, Jan. 2007
- SIAM mini-symposium in New Orleans, Jan. 2007
- Research Seminar at Middle Tennessee State University, Oct. 2006
- Graph Theory Seminar at Georgia Institute of Technology, Nov. 2005
- Discrete Math Seminar at Arizona State University, Mar. 2004

#### 8f. Contributed scholarly papers and talks

- Cumberland Conference May 2011 (Louisville), May 2007 (Emory), May 2002 (Mississippi)
- Graph Theory and Combinatorics Seminar at Vanderbilt University Sept. 2007, Jan. 2007, Oct. 2006.
- Combinatorics Seminar at UIUC Mar. 2006, Nov. 2005, Mar. 2005, Feb. 2004, Nov. 2003, Dec. 2002
- MIGHTY conferences Nov. 2006 (Fort Wayne), Sept. 2005 (MTSU), Nov. 2004 (BSU), Sept. 2003 (Valparaiso), Oct. 2001 (Oakland)
- 19th Midwest Conference on Combinatorics, Cryptography and Computing (MCCCC), Rochester Institute of Technology, Oct. 2005
- Graph Theory with Altitude (on the Occasion of Joan Hutchinson's 60th Birthday), May 2005

#### 8g. Reviews of books, software, etc.

Reviewer (2011) for “Mathematical Proofs—A Transition to Advanced Mathematics by Gary Chartrand, Albert D. Polilmeni, and Ping Zhang. ISBN-13: 978-0-321-39053-0.”

### **PROFESSIONAL SERVICE**

#### 9a. College committee service

- International Studies Advisory Committee (ISAC) of the College, (elected, 2015-2017)
- Nomination and Election Committee of Arts & Sciences (elected, 2016-2018)

- E-learning committee of the College (2016-2018)
- Undergraduate Curriculum Committee (2015-present)
- Goldwater scholarship committee of the College (2014-present)
- Personnel Committee of Mathematics (elected, 2016-2017)
- Merit Evaluation Committee of Mathematics (elected, 2010, 2011, 2012, 2013, 2015, 2017, 2018)
- Mathematics Colloquium Committee, 2012-2013, 2018-2019 (chair)
- Affirmative Action Committee of Arts & Sciences, in 2012-13
- Freshman advising (2009-present)
- Charles Center summer scholarship committee (2012)
- Committee to judge graduate research symposium awards (2010)
- Math Contest Committee, PI Mu Epsilon Committee (2008 to present)

9b. Other professional service not included in item 5 above

- Co-organizer of 32nd Cumberland Conference on Combinatorics, Graph Theory, and Computing, Williamsburg, William & Mary, May 2020.
- Co-organizer of EXCILL 3, Chicago, August 8-10, 2016.
- Organizer of the mini-workshop on combinatorics at Wuhan, July 1-14, 2016.
- Co-organized (with Xiangwen Li) of the International Workshop on Combinatorics at Huazhong Normal University, May 30-June 1, 2015.
- Co-organizer of special session on graph theory at AMS Las Vegas, April 2015.
- Co-organizer of special session on graph theory at AMS-MAA Joint Meetings at Baltimore, Jan. 2014.
- Co-organizer of special session on graph theory at AMS regional conference at Washington D.C., March 2012.
- Co-organizer of special session on graph theory at AMS regional conference at Richmond, Nov 2010.
- Co-organizer of 21st Cumberland Conference on Graph Theory, Combinatorics and Computing, Vanderbilt University, May 17-19, 2008.
- Reviewer for Math Reviews.
- Refereeing for

J. of Combinatorial Theory, Series B; J. of Graph Theory; SIAM J. on Discrete Mathematics; Graphs and Combinatorics; Discrete Mathematics; Discrete Applied Math; European J. of Combinatorics; Linear Algebra and Applications; Proceedings of AMS; Arabian Journal for Science and Engineering (Saudi Arabia); Ars Combinatoria; Global Journal of Pure and Applied Mathematics (India); Bulletin of the ICA (Canada); Utility Math; Applied Math Letters; Computers and Mathematics with Applications; Discussiones Mathematicae Graph Theory.

- Professional membership:  
American Mathematical Society, SIAM.