Curriculum Vitae

Dr. Rui Xu

Professional Preparation

Date	Institution	Degree
2004	West Virginia University	Ph.D., Mathematics
1995	Shandong University, China	M.S., Mathematics
1992	Shandong University, China	B.S., Mathematics

Appointment

Date	Position	Institution
Jan. 2018-May 2020	Chair of Math Dept.	University of West Georgia
July 2017-Dec. 2017	Acting Chair of Math Dept.	University of West Georgia
March 2015-April 2015	Acting Chair of Math Dept.	University of West Georgia
2014-2016	Assistant Chair of Math Dept.	University of West Georgia
2009-2016	Director of Undergraduate Studies	University of West Georgia
2014-Present	Professor	University of West Georgia
2009-2014	Associate Professor	University of West Georgia
2004-2009	Assistant Professor	University of West Georgia
Oct. 1998-Dec.1998	Visiting Research Fellow	University College of the Cariboo, Canada

HONORS AND AWARDS

- College of Science and Mathematics Excellence in Research Award for 2013-2014
- 2011-2012 COSM Research Incentive Awards, University of West Georgia
- Outstanding Graduate Teaching Assistant for Eberly College of Arts and Sciences, 2002-2003, West Virginia University
- The HERF Supplemental Teaching Fellowships for excellent teaching assistants, 2002-2003, 2003-2004West Virginia University
- The Summer Research Fellowship, 2003, West Virginia University

SERVICE

Departmental Service, Department of Mathematics, University of West Georgia

- Chair of Math Dept., Jan. 2018-May 2020
- Acting Chair, March, 2015-April, 2015 and July 2017-Jan. 2018
- Assistant Chair, 2014-2016
- Director of Undergraduate Studies, 2009-Spring 2015 and Spring 2016
- Statistics Search Committee, Chair, 2016-2017
- Undergraduate Curriculum Committee, Chair, 2009-Spring 2015 and Spring 2016
- Undergraduate Curriculum Committee, 2023-2024
- Strategic Planning Committee, Chair, 2008-09, Member 2012-2013
- Discrete Math Search Committee, 2014-2015
- Tenure committee, 2009-present, Chair, 2011-2012
- Recruitment and Public Relations Committee, Chair 2005-2006

- Graduate Committee, 2006-2007, 2022-2023
- Faculty Evaluation Policies Committee, 2006-2010
- Promotion and Tenure Policy Committee, 2005-2006, 2011-2012
- Technology Committee, 2009-2010
- Statistics Search Committee, 2012-2013
- Instructor Search Committee, Spring 2013
- Search Committee (Limited term visiting positions), 2011-2012
- Math Search Committee, 2009-2009
- 5-year review committee, 2007-2008
- Equipment and Space Committee, 2005-2006
- Search Committee #3, 2005-2006
- Liaison to MAA, 2005-2006
- Liaison to Library, 2023-2024
- Web Site Committee, 2004-2005
- Math Day Committee, 2004-2005
- Ad-hoc Faculty Advisory Committee, 2022-2023

College / University Service

- College Executive Committee, Fall, 2023-2024
- UWG Spring Preview/Showcase day, April 30, 2022
- UWG Presidential Scholarship interviews (Math Representative), Feb 21, 2022
- College General Education Committee, Fall 2020-Spring 2022
- COSM Dean's Search Committee 2015
- COSM Vision Committee, Summer 2015
- Faculty Senate Representative, 2013- 2015
- Student Affairs Committee, 2013-2015
- Undergraduate Curriculum Committee (COSM) Spring 2013--2015
- Tenure and Promotion Committee (COSM), 2010-2011
- Tenure and Promotion Committee(COAS), 2009-2010
- Technology Planning Committee, 2008-2010
- Senate's Ad Hoc Rules Committee, 2008-2009
- Responsible Sexuality Committee, 2008-2010
- Parking Appeal Committee, Spring 2007
- Student Life Committee, 2006-2008
- Advising for transferring students, July 4, 2013
- Spring Preview Day (Math Dept representative), April 14, 2013
- Winter Preview Day (Math Dept representative), January 29, 2012
- Summer Orientation (Department advising session), August 18, 2011
- RPG summer orientation (Department advising session), June 27, 2010
- Advising for transferring students, January 5, 2010
- Advising for transferring students, July 20, 2009
- Spring Preview Day (Math Dept representative), April 6, 2008
- Mardi Gras of Majors (Math Dept representative), Feb. 20. 2007
- Advising for transferring students, Jan. 5, 2007
- In charge of The Math Problem Solving Competition, Spring 2006—2007
- UWG Preview Day Participant, 2006, 2007
- Summer Orientation freshmen and transfer advising, 2005
- Freshmen Orientation, Fall 2005
- Visitation Day Representative, Fall 2004

Other Service:

- AMS Mathematical Reviews Reviewer
- Editor for *International J. of Applied Mathematics & Statistics*, 2008-2018

- Editor for *International Journal of Mathematics & Statistics,* 2009-2018

  Reviewer for *Journal of Graph Theory, Discrete Mathematics, Discrete Applied Mathematics, European Journal of Combinatorics, Graphs and Combinatorics, Ars Combinatoria, Utilitas Mathematica, Integers-Electronic Journal of Combinatorial Number Theory, Science in China and Frontiers of Mathematics in China*

- Organizing committee for *31st Midwest Conference on Combinatorics and Combinatorial Computing,* University of West Georgia, Oct. 20 – 22, 2017.
- Co-hosted *Integers Conference* 2005, 2007, 2011, 2013, 2016, University of West Georgia

Courses Taught

University of West Georgia
- College Algebra
- Elementary Statistics
- Precalculus
- Calculus I, Calculus II,
- Survey of Calculus
- Transition to Advanced Math
- Advanced Calculus
- Transition to Advanced Mathematics
- Trigonometry & Analytic Geometry
- College Geometry
- Combinatorics
- Graph Theory
- Combinatorial Analysis (graduate course)
- Theory of Graphs (graduate course)

West Virginia University
- Calculus I, Calculus II
- Business Calculus

Shandong University, China
- Calculus I, Calculus II
- Mathematical Model
- Mathematical Programming
- Linear Algebra
- Linear Programming
- Operational Research

PUBLICATIONS

32. Wang, X., Xu, R. and Ye, D., Cycle double covers and long circuits of graphs, *Journal of Combinatorics,* Volume 8, Number 2 (2017) 341-347.

*31.*Liang, Y., Lai, H., Luo, R. and Xu, R., Extendibility of contractible configurations for nowhere-zero flows and modulo orientations, *Graphs and Combinatorics,* 32(3) (2016) 1065-1075.

30. Luo, R., Miao Z. Xu, R and Zhang, C.-Q., Nowhere-zero 3-flows of graphs with prescribed sizes of odd edge cuts, *European Journal of Combinatorics,* 36 (2014) 7-16.

29. Xu, R., Strong 5-cycle double covers of graphs*, Graphs and Combinatorics,* 30(2) (2014) 495-499.

28. Xu, R., On the Second Neighborhood Conjecture, *Journal of Combinatorial Mathematics and Combinatorial Computing,* 88 (2014) 143-146.

27. Luo, R., Miao Z. and Xu, R., Nowhere-Zero 3-flows of graphs with independent number 2, *Graphs and Combinatorics*, 29(6) (2013) 1899-1907.

26. Xu, R., Two equivalent properties of Z3-connectivity, *Graphs and Combinatorics*, 29(6) (2013) 1983-1987.

25. Luo, R., Xu, R., and Yu, G., An extremal problem on group connectivity of graphs, *European Journal of Combinatorics*, 33(6) (2012) 1078-1085.

24. Zhang, X, Zhan M., Xu, R., Shao, Y., Li, X., and Lai, H.-J., Degree sum condition for Z3-connectivity in graphs, *Discrete Mathematics*, 310 (2010) 3390-3397.

23. Xu, R., Note on cycle double covers of graphs, *Discrete Mathematics*, 309 (2009) 1041-1042.

22. Fan, G., Lai, H.-J., Xu, R., Zhang, C.-Q. and Zhou, C., Nowhere-zero 3-flows in triangularly connected graphs, *Journal of Combinatorial Theory, Ser. B*, 98 (2008) 1325-1336.

21. Luo, R., Xu, R., Zang, W.-A. and Zhang, C.-Q., Realizing degree sequences with graphs having nowhere-zero 3-flows, *SIAM Journal on Discrete Mathematics*, 22 (2) (2008), 500–519.

20. Luo, R., Xu, R., Yin, J.-H. and Yu, G-X., Ore-condition and Z_3-connectivity, *European Journal of Combinatorics*, 29(7) (2008), 1587-1595

19. Lai, H.-J., Xu, R. and Zhou, J., On group connectivity of graphs, *Graphs and Combinatorics*, 24(2008), 195-203, 2008

18. Sun, Z. J., Xu, R. and Yin, J-H., Group connectivity of graphs satisfying Ore-condition, *Proceeding of the 2008 International Conference on Foundations of Computer Science* (ISBN:1-60132-066-3) CSREA Press (2008) 21-24.

17. Liu, G.Z., Qian, J.B, Sun, J. Z. and Xu, R., Bipartite toughness and k-factors in bipartite graphs, *International Journal of Mathematics and Mathematical Sciences,* (2008) Art. ID 597408, 8 pp.

16. Lai, H.-J., Xu, R. and Zhang C.-Q., Note on circular flow numbers of graphs, *Combinatorica*, 27 (2007) 245-246.

15. Khodkar, A. and Xu, R. "More on even [a,b]-factors in graphs", *Discussiones Mathematicae Graph Theory*, 27 (1) (2007) 193-204.

14. DeVos, M., Xu, R. and Yu, G., Nowhere-zero Z3-flows through Z3-conncetivity, *Discrete mathematics* 306 (2006) 26-30.

13. Xu, R. and Zhang, C.-Q, On flows in bidirected graphs, *Discrete Mathematics* 299(2005) 335-343.

12. Xu, R., Note on acyclic colorings of graphs, *Ars Combinatoria* 72 (2004), 235-339.

11. Xu, R. and Yu, Q. L., Some conditions for graphs to be k-extendable, *Congressus Numerantium* 163 (2003), 189-195.

10. Xu, R. and Yu, Q. L., An Ore-type condition for the existence of k-factors with prescribed properties, *Congressus Numerantium* 162 (2003), 97-109.

9. Xu, R. and Zhang, C.-Q., Nowhere-zero 3-flows in squares of graphs, *Electronic Journal of Combinatorics* 10 (2003): R5.

8. Xu, R. and Yu, Q. L., Note on toughness and (k, r)-factor-critical graphs, *Bulletin of the Institute of Combinatorics and its Applications* 29 (2000): 85-87.

7. Xu, R., Some Ore-type conditions for the existence of connected [2, k]-factors in graphs, *Discrete Mathematics* 194 (1999), no. 1-3: 295-298.

6. Xu, R., Connected [1, k]-factors of balance bipartite graphs. *Systems Science and Mathematical S*ciences 12 (1999), no. 2: 149-153.

5. Xu, R. and Yu, Q. L., (4, k)-factor-critical graphs and toughness, *Advances in Mathematics (China)* 28 (1999), no. 6: 539-540.

4. Xu, R., A sufficient condition for graphs to have 2-connected [2, 4]-factors, *Advances in Mathematics (China)* 26 (1997), no. 4: 379-380.

3. Xu, R., The connectivity of adjacent tree graphs. *Shandong Daxue Xuebao Ziran Kexue Ban* 32 (1997), no. 4: 412-419.

2. Xu, R., [a, b]-factors in K1,n-free graphs, *Shandong Daxue Xuebao Ziran Kexue Ban* 31 (1996), no. 2: 173-177.

1. Xu, R., A lower bound on the connectivities of adjacent tree graphs. *Pure and Applied Mathematics* 10 (1994), Special Issue: 168-173.

PRESENTATIONS/CONFERNENCES

34. Atlanta Lecture Series XXVII (ALS 27) at Georgia State University, Nov 4-5, 2023. Conference attended.

33. "On Integer Flows of Graphs" 1-hour talk for REU students, University of West Georgia, Carrollton, GA, July 18, 2014, June 26, 2015 and July 8, 2016.

32 "On path decompositions of graphs", 1-hour seminar talk at UWG, October 9th, 2015

31. "Cycle double covers and long circuits of graphs", invited talk, the 1097th AMS Meeting Special Session on Graph Theory, University of Tennessee, Knoxville, TN, March 21st – March 23rd, 2014.

30. "On Integer flow and group connectivity of graphs", 1-hour invited talk on the COSM Dean's Research Seminar, University of West Georgia, April 5, 2013

29. "On modular-(2k+1) contractibility and extension consistency" invited talk, the 1087th AMS Meeting Special Session on Graph Theory, University of Mississippi, Oxford, MS, March 1st –March 3rd, 2013

28. "Nowhere-zero 3-flows of graphs with independence number 2", contributed talk, the 25th Annual Cumberland Conference on Graph Theory, Combinatorics, and Computing, East Tennessee State University, Johnson City, TN, May 10-12, 2012.

27. "Nowhere-zero 3-flows of graphs with prescribed size of odd edge cuts", contributed talk, the 24th Annual   Cumberland Conference on Graph Theory, Combinatorics, and Computing, University of Louisville, Louisville, KY, May 12-14, 2011.

26. "On group connectivity and average degree of graphs", contributed talk, the 23rd Annual   Cumberland Conference on Graph Theory, Combinatorics, and Computing, The University of Mississippi, Oxford, MS, May 20-22, 2010

25. "On group connectivity of graphs", invited 1-hour seminar talk, School of Mathematics, Georgia Institute of Technology, Atlanta, GA Feb. 26, 2010

24. "On flows of graphs", 1-hour talk for REU students, University of West Georgia, Carrollton, GA June 29, 2009

23. "On group connectivity of graphs", invited 1-hour colloquium talk, Middle Tennessee State University, Murfreesboro, TN March 16, 2009

22. "On 3-path decompositions of planar bipartite graphs", contributed talk, the 22nd Annual   Cumberland Conference on Graph Theory, Combinatorics, and Computing, Western Kentucky University, Bowling Green, KY, TN May 21-23, 2009

21. Xu, R. "Group connectivity of graphs satisfying Ore-condition", contributed talk, the 2008 International Conference on Foundations of Computer Science, Las Vegas, NV July 14-17, 2008.

20. Xu, R. "Realizing degree sequences with graphs having nowhere-zero 3-flows", invited

1-hour seminar talk, University of Southern Mississippi, Hattiesburg, MS May 30, 2008

19. Xu, R. "Degree sum condition and Z_3-connectivity", contributed talk, 21st Annual Cumberland Conference on Graph Theory, Combinatorics, and Computing, Vanderbilt University, Nashville, TN May 15-17, 2008.

18. Xu, R. "Ore-condition and Z_3-connectivity", contributed talk, MIGHTY XLXI, West Virginia University, Morgantown, WV April 26, 2008

17. Xu, R. "Degree Sequences and nowhere-zero 3-flows of graphs", primary presenter. 1-hour seminar talk at Georgia State University, Atlanta, GA September 11, 2007.

16. Xu, R. "All generalized Tutte-orientations and Z3-connectivity", contributed talk, 20th Annual Cumberland Conference on Graph Theory, Combinatorics, and Computing, Emory University, Atlanta, GA May 17-19, 2007.

15. Xu, R. "Realizing degree sequences with graphs having nowhere-zero 3-flows", contributed talk, AMS Sectional Meeting, University of Arizona, April 21-22, 2007

14. Xu, R. "Realizing degree sequences with graphs having 3-flows" primary presenter. 1-hour seminar talk at UWG, August 28, 2006

13. Xu, R., "Graphic Sequences and Nowhere-Zero 3-Flows of Graphs", contributed talk, Nineteenth Annual Cumberland Conference on Graph Theory, Combinatorics, and Computing, East Tennessee State University May 18-20, 2006

12. Xu, R.., "On integer flows of bidirected graphs," contributed talk, MIGHTY XLI, Middle Tennessee State University, Sep. 24, 2005

11. Xu, R. "Nowhere-zero Z-3-flows through Z-3-connectivity" primary presenter. 1-hour seminar talk at UWG, Nov. 28, 2005

10. Xu, R., "On integer flows of bidirected graphs," contributed talk, CombinaTexas 2005, Texas State University-San Marcos, February 25-26, 2005

9. Xu, R., "On integer of bidirected graphs," primary presenter. 1-hour seminar talk at UWG, Nov. 6, 2004

8. Xu, R., "On circular flows of graphs," contributed talk, Advances in Graph and Matroid Theory, Ohio State University, December 13-16, 2003

7. Xu, R., "On circular flows of graphs," contributed talk, 37th Midwest Graph Theory Conference, Valparaiso University, Valparaiso, IN, September 20th, 2003.

6. Xu, R., "Group connectivity of triangulated connected graphs," contributed talk, 15th Cumberland Conference on Combinatorics, Graph Theory, and Computing, Georgia State University, Atlanta, GA, May 17th, 2003.

5. Xu, R., "Group connectivity of squares of graphs," contributed talk, 35th Midwest Graph Theory Conference, Illinois State University, Normal, IL, September 28th, 2002

4. NSF-CBMS Regional Research Conference: Structure and Decomposition of Graphs. East Tennessee State University, Johnson City, TN, May 20th-May 24th 2002, conference attended.

3. Xu, R., "An Ore-type condition for the existence of k-factors with prescribed properties," contributed talk, 10th Chinese Conference on Graph Theory, Yantai, China, August 1999.

2. Xu, R., "An Ore-type condition for graphs to have 2-connected [2, 4]-factors," contributed talk, the Summer School and International Conference on Combinatorics"97, Hefei, China, June 1997.

1. Xu, R., "A lower bound on connectivities of adjacent tree graphs," contributed talk, 8th Chinese Conference on Graph Theory, Taiyuan, China, April 1994.

PROFESSIONAL MEMBERSHIP

Mathematical Association of America (MAA)

GRANT WORK

- Co-PI, NSF REU Site Proposal: "Combinatorics and Graph Theory", Aug. 2018, unfunded.

- Co-PI, NSF REU Site Proposal: "Combinatorics and Graph Theory", Aug. 2017, unfunded.

- PI, NSF Research Proposal: "The Structure of 5-edge connected graphs and its applications to flow and orientation problems", October 2013, unfunded.

- Attending the NSF Workshop, Georgia Southern University, April 27, 2006.

- PI, NSF Research Proposal: "Integer flows and some related problems", submitted, October 2, 2006 (Proposal No: 0700778), unfunded.

- PI, NSA Research Proposal: "Integer flows and some related problems", submitted. October, 2006, unfunded.