

# Curriculum Vitae

Dr. Rui Xu (Math. Dept.)

## EDUCATION

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

## TEACHING EXPERIENCE

Date	Position	Institution
2004-present	Assistant Professor	University of West Georgia
2000-2004	Graduate Teaching Assistant	West Virginia University
1997-2000	Assistant Professor	Shandong University, China
1995-1997	Lecturer	Shandong University, China
Oct. 1998-Dec.1998	Visiting Research Fellow	University college of the Carribo, CA

## Courses Taught

### *University of West Georgia*

- College Algebra
- Precalculus
- Calculus I, Calculus II,
- Survey of Calculus
- Advanced Calculus
- Trigonometry & Analytic Geometry
- College Geometry
- Combinatorics
- Graph Theory

### *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

### *Recent papers:*

7. "Note on  $Z_3$ -connectivity of graphs", in preparation.
6. "Realizing degree sequences with  $A$ -connected graphs", in preparation.
5. "Graph decomposition problems", in preparation.
4. "Degree sum and  $Z_3$ -connectivity", completed.
3. "On Potentially  $W_4$ - graphic Sequences", completed.
2. "Bipartite toughness and  $k$ -factors in bipartite graphs", submitted.
1. " $Z_4$ -connected graphs satisfying degree sum condition", submitted.

### *Published papers:*

22. 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.
21. 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*, in Press, Available online 8 April 2008.
20. 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.
19. 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
18. Lai, H.-J., Xu, R. and Zhou, J., On group connectivity of graphs, *Graphs and Combinatorics*, 24(2008), 195-203, 2008
17. Xu, R., Note on cycle double covers of graphs, *Discrete Mathematics*, accepted, 2007
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  $Z_3$ -flows through  $Z_3$ -connctivity, *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 Sciences* 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  $K_{1,n}$ -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

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  $Z_3$ -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.

### **HONORS AND AWARDS**

- \* 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, West Virginia University
- \* The HERF Supplemental Teaching Fellowships for excellent teaching assistants, 2003-2004, West Virginia University
- \* The Summer Research Fellowship, 2003, West Virginia University
- \* The William E. Vehse Endowment for Graduate Student Travel, 2003, West Virginia University

### **SERVICE**

*Departmental Service, Department of Mathematics, University of West Georgia*

- 5-year review committee, 2007-2008
- Faculty Evaluation Policies Committee, 2006-2008
- Graduate Committee, 2006-2008
- Undergraduate Curriculum Committee, 2006-2008
- Recruitment and Public Relations Committee, Chair 2005-2006
- Equipment and Space Committee, 2005-2006
- Promotion and Tenure Policies Committee, 2005-2006
- Search Committee #3, 2005-2006
- Liaison to MAA, 2005-present
- Web Site Committee, 2004-2005
- Math Day Committee, 2004-2005

*College Service, College of Arts and Sciences, University of West Georgia*

- Technology Planning Committee, spring 2009-2010
- Senate's Ad Hoc Rules Committee, 2008-present
- Responsible Sexuality Committee, 2008-present
- Parking Appeal Committee, Spring 2007
- Student Life Committee, 2006-2008
- 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—present
- UWG Preview Day Participant, 2006, 2007
- Summer Orientation freshmen and transfer advising, 2005
- Freshmen Orientation, Fall 2005
- Visitation Day Representative, Fall 2004
- Marching in Graduation Ceremony (Spring 2005, Summer 2005, Spring 2006, Summer 2006, Spring 2007, Fall 2008)

*Other Service:*

- Editor for *International J. of Applied Mathematics & Statistics*, 2008-present
- Reviewer for *Journal of Graph Theory*, *Discrete Mathematics*, *Discrete Applied Mathematics*, *Ars Combinatoria*, *Integers-Electronic Journal of Combinatorial Number Theory*, and *Science in China*
- Co-hosted *Integers Conference* 2005, 2007, University of West Georgia

**PROFESSIONAL MEMBERSHIP**

Mathematical Association of America (MAA)

**GRANT WORK**

- Attending the NSF Workshop, Georgia Southern University, April 27, 2006.
- NSF Research Proposal: “Integer flows and some related problems”, submitted, October 2, 2006 (Proposal No: 0700778), unfunded.
- NSA Research Proposal: “Integer flows and some related problems”, submitted. October, 2006, unfunded.