Xiangqian Zhou, Ph.D

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Education

Doctor of Philosophy	Department of Mathematics the Ohio State University	2003
Bachelor of Science	Department of Mathematics University of Science and Technology of China	1998

Professional Experience

Associate Professor	Department of Mathematics and Statistics Wright State University	08/2013-present
Assistant Professor	Department of Mathematics and Statistics Wright State University	09/2008-07/2013
Assistant Professor	Department of Mathematics Marshall University	08/2007-08/2008
Visiting Professor	Department of Mathematics the University of Mississippi	08/2006-07/2007
Postdoctoral Fellow	Department of Mathematics Syracuse University	08/2005-05/2006
Postdoctoral Fellow	Dept of Combinatorics and Optimization University of Waterloo, Canada	07/2004-06/2005
Lecturer	Department of Mathematics the Ohio State University	01/2004-06/2004

Research Interest

- Discrete Mathematics, in particular, graph and matroid theory

Teaching

- Courses Taught at Wright State University

Course Number	**Course Title**	**Frequency**
MTH 129	Advanced College Algebra	6
MTH 130	Pre-calculus	1
MTH 131	Trigonometry	1
MTH 1350	Trigonometry	1
MTH 2300	Calculus I	5
MTH 230	Calculus II	8
MTH 231	Calculus III	2
MTH 2310	Calculus II	2
MTH 257	Discrete Mathematics for Computing	2
MTH 2570	Discrete Mathematics for Computing	1
MTH 2800	Writing Math Proofs	1
MTH 355/655	Advanced Linear Algebra	1

- Courses Taught at Other Institutions

  Before Joining Wright State University, Dr. Zhou taught classes at the Ohio State University, University of Waterloo (Canada), Syracuse University, the University of Mississippi, and Marshall University. The courses include College algebra, Pre-calculus, Calculus with Mathematica, Business Calculus, Advanced Calculus, Linear Algebra with Matlab, Advanced Linear Algebra, Discrete Mathematics, Differential Equations, Linear programming, and a graduate seminar class on Graph and matroid theory.

Academic Awards and Honors

- **NSF grant DMS 1562644**, the 57th Mighty Conference on Graph Theory, 2016.
- **Research Initiation Grant** Wright State University, 2009
- **Finalist of Department of Mathematics Graduate Teaching Excellence Award** the Ohio State University, 2003
- **Nominated for Department of Mathematics Graduate Teaching Excellence Award** the Ohio State University, 2001
- **Summer Fellowship** the Ohio State University, 1998, 1999 and 2001
- **Tsingxin Scholarship** University of Science and Technology of China, 1997
- **ChangZongzhi Scholarship** University of Science and Technology of China, 1994 and 1996
- **P&G Scholarship** University of Science and Technology of China, 1995

Publications Attributed to Wright State Univeristy

- Adam Gray, James Reid, and Xiangqian Zhou, *"Clones in matroids representable over a prime field"*, in preparation.
- Yuqing Chen,Tony Evans, Xiaoyu Liu, Daniel Slilaty, and Xiangqian Zhou, *"Representations of Signed Graphs"*, in preparation.
- Xiangqian Zhou, *"On Binary Matroids with an $M(K_{3,3})$-minor"*, in preparation.
- Mingfang Huang, Gexin Yu, and Xiangqian Zhou, *"Strong edge-coloring of bipartite graphs"*, accepted by Discrete Mathematics in October 2016.
- Kayla Harville, Talmage J. Reid, Haidong Wu, and Xiangqian Zhou, *"On binary matroids with an R_{10}-minor"*, submitted to Discrete Mathematics in 2016.
- Debra Chun, Tyler Moss, Daniel Slilaty and Xiangqian Zhou, *"Bicircular matroids representable over $GF(4)$ or $GF(5)$"*, Discrete Mathematics 339, (2016), 2239-2248.
- Daniel Slilaty, Jakayla Robbins, and Xiangqian Zhou, *"Clones in 3-connected frame matroids"*, Discrete Mathematics 339, (2016), 1329-1334.
- Jesse Williams and Xiangqian Zhou, *"A new proof for a result of Kingan and Lemos'"*, Graphs and Combinatorics Vol. 32, Issue 1, (2016), 403-417.
- Debra Chun, Tyler Moss, Daniel Slilaty and Xiangqian Zhou, *"Unavoidable minors in large 4-connected bicircular matroids"*, Annals of Combinatorics 19, (2015), 95-105.
- Daniel Slilaty and Xiangqian Zhou, *"Some minor-closed classes of signed graphs"*, Discrete Mathematics 313, Issue 4, 313-325 (2013).
- Xiangqian Zhou, *"Generating an internally 4-connected binary matroid from another"*, Discrete Mathematics 312, 2375 - 2387 (2012).
- Xue Li, Chi Zhou, Xiangqian Zhou, Zhiqiang Wu, and Bing Xie, *"Papa analysis for SOFDM and NC-SOFDM systems in cognitive radio"*, Lecture Notes in Computer Sciences 6221, 209-219 (WASA 2010).
- Talmage J. Reid, Jakayla Robbins, Haidong Wu and Xiangqian Zhou *"Clone sets in $GF(q)$-representable Matroids"*, Discrete Mathematics 310, 2389 - 2397 (2010).
- Lony Delaplane, Talmage J. Reid, Haidong Wu and Xiangqian Zhou *"On minor-minimally 3-connected binary matroids"*, Discrete Mathematics 309, 3249 - 3254 (2009).
- Hongxun Qin, Daniel Slilaty and Xiangqian Zhou, *"Regular signed-graphic matroids"*, Combinatorics, Probability, and Computing 18, 953-978 (2009).

Publications before joining Wright State Univeristy

- Talmage J. Reid and Xiangqian Zhou, *"On clone sets of GF(q)-representable matroids"*, Discrete Mathematics, Volume 309, Issue 6, 1740-1745 (2009).
- Talmage J. Reid, Haidong Wu and Xiangqian Zhou, *"On minimally k-Connected matroids"*, Journal of Combinatorics Theory Series B 98, 1311-1324 (2008).
- James F. Geelen and Xiangqian Zhou, *"Generating weakly 4-connected matroids"*, Journal of Combinatorial Theory, Series B, Volume 98, Issue 3, Pages 538-557 (2008).
- Xiangqian Zhou, *"A note on binary matroids with no $M(K_{3,3})$-minor"*, Journal of Combinatorial Theory, Series B, Volume 98, Issue 1, Pages 235-238 (2008).
- Mark E. Watkins and Xiangqian Zhou, *"Distinguishability of locally finite trees"*, the Electronic Journal of Combinatorics 14 (2007) #29.
- James F. Geelen and Xiangqian Zhou, *"A splitter theorem for internally 4-connected binary matroids"*, SIAM Journal on Discrete Mathematics, Volume 20, Issue 3, 578-587 (2006).
- Xiangqian Zhou, *"On internally 4-connected non-regular binary matroids"*, Journal of Combinatorial Theory, Series B Volume 91, Issue 2, 327-343 (2004).
- Hongxun Qin and Xiangqian Zhou, *"The class of binary matroids with No $M(K_{3,3})$-, $M(K_5)$-, $M^*(K_{3,3})$-, or $M^*(K_5)$-minor"*, Journal of Combinatorial Theory, Series B Volume 90, Issue 1, 173-184 (2004).

Grant Proposals

- Dr. Zhou was awarded a conference proposal by NSF, DMS 1562644, the 57th Mighty Conference on Graph Theory, $\$8,436$, 2016, co-PI Dr. Yuqing Chen.
- Dr. Zhou was awarded a "Research Initiation Grant" by the office of Research and Sponsored Programs, Wright State University in 2009, \$9650, co-PI Dr. Daniel Slilaty.
- Dr. Zhou has submitted seven external grant proposals since he joined Wright State University: two proposals were submitted in 2009, one to NSF and one to NSA; one proposal was submitted to NSA in 2010; one proposal was submitted to NSF in 2011; one proposal was submitted to NSA in 2013; and two proposals were submitted to Simons Foundation in 2014 and 2015.
- The ratings for the 2009 NSF proposal were great: one "Excellent" and two "Very Good", the panel placed it in the middle of the "fund if possible" category before they finally turned it down.

- The three proposals submitted to NSA also received very high ratings, either "very good" or "excellent". However, NSA still decided not to fund them.
- The proposals to Simons Foundation were rejected.
- Dr. Zhou submitted a research proposal to King Abdulaziz University at Saudi Arabia as a co-PI in January 2012. The title of the proposal is "Problems in Graph and Matroid Structure Theory and Graph Well-Quasi-Order". The principle investigator is Dr. Zhou's Ph.D advisor, Dr. Neil Robertson, of the Ohio State University. Other co-Pi's are Dr. Daniel Slilaty, Dr. John Maharry, Dr. Yared Nigussie, Dr. Oguz Kurt, and Vaidy Sivaraman. The proposal is rejected by KAU.

Departmental Service

- Dr. Zhou has served on the Colloquium Committee, the Calculus Committe, the instructor search committee (2013-2014) and (2014-2015), the promotion and tenure committee, and the steering committee (2014-2015).

Research Presentations

- *Clones in Matroids Representable Over a Prime Field*, SIAM Conference on Discrete Mathematics, June 6-10, 2016, Georgia State University, Atlanta, GA.
- *Fundamental Graphs for Binary Matroids*, Recent Advances in Linear Algebra and Graph Theory March 5-6, 2016, Department of Mathematics, the University of Tennessee at Chattanooga.
- *Fundamental Graphs for Binary Matroids*, Combinatorics Seminar, Department of Mathematics, the University of Mississippi, September 2, 2015.
- *A Short Introduction to Matroid Theory*, Colloquium, School of Mathematics and Statistics,Jiangsu Normal University, China, June 25, 2015.
- *A Short Introduction to Matroid Theory*, Colloquium, School of Mathematics, Shandong University, China, June 23, 2015.
- *Clones in 3-Connected Frame Matroids*, the 46th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, March 2, 2015.
- *Fundamental Graphs for Binary Matroids*, MIGHTY LII, the 56th edition of the Midwestern Graph Theory Conference, Indiana University - Purdue University, Fort Wayne, IN, October 4, 2014.
- *On Fat Signed-graphs*, AMS special session on graph theory, University of Tennessee at Knoxville, March 21-23, 2014.
- *Unavoidable Minors in Large 4-Connected Bicircular Matroids*, MIGHTY LIV, the 54th edition of the Midwestern Graph Theory Conference, Miami University, April 6, 2013.

- *Clones in Bicircular Matroids*, AMS special session on matroid theory, the University of Mississippi, March 2, 2013.
- *Clones in Bicircular Matroids*, MIGHTY LII, the 52nd edition of the Midwestern Graph Theory Conference, Indiana State University, April 28, 2012.
- *On Minor-minimally k-Connected Matroids*, AMS special session on matroid theory, the George Washington University, March 18, 2012.
- *Clones and Matroid Representability*, Colloquium, Department of Mathematics and Statistics, Wright State University, November 4, 2011.
- *Fat Signed Graphs and Their Matroids*, Combinatorics seminar, Department of Mathematics, the Ohio State University, April 22, 2011.
- *Signed graphs and their matroids*, Discrete CATS seminar, Department of Mathematics, University of Kentucky, March 2, 2011.
- *Minor-minimally 3-connected Graphs and Matroids*, the 49th Midwest Graph Theory Conference, University of Detroit Mercy, April 17, 2010.
- *On Clone Sets in GF(q)-representable Matroids*, AMS special session on matroid theory, University of Kentucky, March 28, 2010.
- *On Minimally k-Connected Matroids*, Combinatorics Seminar, Department of Mathematics, Louisiana State University, October 2009.
- *Clone Sets in GF(q)-representable Matroids*, Combinatorics Seminar, Department of Mathematics, the University of Mississippi, October 2009.
- *Clone sets in Matroids Representable over a Finite Field*, Colloquium, Department of Mathematics, West Virginia University, March 2009.
- *Signed Graphs and Their matroids*, Combinatorics Seminar, Department of Mathematics, the University of Mississippi, December 2008.
- *On k-Splitting Families*, the 29th OSU-Denison Conference on Group Theory, Combinatorics, and Ring Theory, May 2008.
- *Inductions for "4-connected Graphs and Matroids*, AMS Spring Southeastern Meeting, Louisiana State University, March 2008.
- *On Minimally k-Connected Matroids*, AMS Fall Southeastern Sectional Meeting, Middle Tennessee State University, November 2007.
- *Signed Graphs and Their Matroids*, Colloquium, Department of Mathematics, Marshall University, April 2007.
- *Signed Graphs and Their Matroids*, Colloquium, Department of Mathematics, University of Louisville, February 2007.
- *Distinguishablity of Locally Finite Trees*, AMS National Meeting, New Orleans Louisiana, January 2003.

- *Chain Theorems in Graphs and Matroids*, Colloquium, Department of Mathematics, Syracuse University, February 2005.
- *Induction on Highly Connected Matroids*, Colloquium, Department of Mathematics, Wright State University, January 2006.
- *On Matroid 4-Connectivity*, Tutte Seminar, Department of Combinatorics and Optimization, University of Waterloo, April 2005.
- *Binary Matroid Decomposition*, Advances in Graph and Matroid Theory Conference, Ohio State University, December 2004.
- *Decomposition of a Class of Binary Matroids*, Combinatorics Seminar, School of Mathematics, Georgia Institute of Technology, November 2003.
- *Binary Matroids with no $M(K_{3,3})$-, $M(K_5)$-, $M^*(K_{3,3})$-, or $M^*(K_5)$-Minor*, AMS Spring Southeastern Sectional Meeting, Louisiana State University, March 2003.