Dr. John Maharry

Assistant Dean of Academic Opportunities
Professor of Mathematics

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Education

Ohio State University, Columbus, Ohio USA

  Ph.D., Mathematics, 1996

  Dissertation Topic: "A Characterization of Graphs with No Cube Minor"

  Advisor: G. Neil Robertson

Grinnell College, Grinnell , Iowa USA

  B.S., Mathematics 1990

Appointments

2021-present   Assistant Dean of Academic Opportunities, Marion Campus, Ohio State University

2018-present   Professor, Department of Mathematics, Ohio State University

2010-2018   Associate Professor, Department of Mathematics, Ohio State University

2004-2010   Assistant Professor, Department of Mathematics, Ohio State University

2000-2004   Visiting Assistant Professor, Department of Mathematics, Ohio State University

1998-2000   Assistant Professor, Franklin College, Franklin, Indiana

1996–1998   Lecturer, Department of Mathematics, Ohio State University

Academic Leadership Experiences

- Assistant Dean for Academic Opportunities - Marion Campus, 2021-present

    - Oversee and promotes campus Honors and Undergraduate Research Program
      + Create and Award Davis Excellence Honors Scholarships
      + Implement marketing campaign with Enrollment office for Honors and Honors Scholarships
      + Update application process for campus honors program
      + Create and promote campus "Community of Scholars" research seminar for undergraduate researchers with Dr. Ruben Petreaca
      + Create Summer Research Assistantships program to hire student researchers for summer projects with Associate Dean Dr. Bishun Pandey
      + Award $85,000 in scholarships and travel grants to student researchers

- Support and promote campus 4-year major programs
  + Implement marketing campaign for campus 4-year major programs
  + Redesign campus web pages for 4-year majors programs
  + Initiate marketing campaign highlighting careers of Marion campus major alumni

- Partial list of committees:
  + Marion Campus Dean Director Advisory Council
  + Marion Campus Budget Committee
  + Marion Campus Retention Advisory Committee
  + Marion Campus Diversity, Equity and Inclusion Advisory Committee
  + University Honors Directors Committee
  + University Associate Deans of Research Committee

Leadership Experiences and Opportunities

- IETC Diversity, Equity and Inclusion Certificate 2022-2023

    Member of a cohort that wrote Inclusive Excellence Plan for the Marion campus and began implementation

- Leadership Marion! Cohort, Marion Chamber of Commerce 2021-2022

    Program with Marion County Chamber of Commerce to develop leaders in city of Marion. Co-lead on project to begin 'After Hours' equity center at underused school building in downtown Marion.

- Faculty Fellow for Marion Campus 2019-2020

    Tasked with promoting High Impact Practices and the 4-year major programs on the Marion campus

- Regional Campus Administrative Leadership Program 2018-2019

    9-month program on Administration of the Regional Campuses of Ohio State University. Mentored by Dean Bill McDonald, Dean of the Ohio State Newark

- President and Provost's Leadership Institute 2015-2016

    18-month long Leadership Institute run by the Women's Place of Ohio State University

- Marion Campus Reset Leadership Program 2016

    Year-long Leadership and Coaching program for campus supervisors and faculty leaders

- "Art of Hosting" workshop and training from the Women's Place of OSU 2014 Attended a series of workshops on group dynamics and 'conversations that matter' and coordinated a campus group that continued strategic conversations throughout 2014-2015

Marion Campus Service

Campus Committees

- Director of Honors and Undergraduate Research Opportunities, Marion Campus 2017-present

- Chair of Marion Campus Honors and Undergraduate Research Committee 2017-present

- Marion Campus Scheduling Committee 2022-present

- Diversity, Equity and Inclusion Advisory Group 2020-present

- Academic Affairs Committee 2018-2020

- Co-Coordinator of Marion Math Faculty 2018-present

- Campus Retention Working Group 2017-present

- Chair of Marion Campus Faculty Assembly 2012-2014

- Campus Ombudsperson 2011-2020

- FEAC - Faculty Evaluation and Advisory Committee 2014-2018

- Dean and Director Advisory Committee 2013-present

- Dean's Budget Advisory Committee 2012 - present

- Strategic Planning Core Committee 2011-2015

- Academic Standards Committee 2014-present

- ITSP - Information Technology Strategic Planning 2011-2013

- Elections Committee Chair 2011-2013

- Evaluation of Non-Tenure Track Faculty Committee 2011-2013

- Campus Framework Planning Committee 2013

Search Committees

- Marion Campus Enrollment Director Search Committee, Member 2023

- Mathematics Instructor Search Committee, Co-Chair 2023

- Marion campus Coordinator of Recreation and Environmental Programming 2021

- Chemistry/Biochemistry Faculty Search Committee, Member 2018

- Campus Mental Health Counselor Search Committee, Member 2018

- Faculty Services Office Associate Search Committee, Chair 2018

- Mechanical Engineering Faculty Search Committee, Chair 2016

- Electrical Engineering Faculty Search Committee, Member 2015

- Computer Science Engineering Faculty Search Committee, Chair 2014

- Earth Science Faculty Search Committee, Member 2012

Other Marion Campus Involvement

- Coordinating committee for annual Welcome Day Convocation and Events 2018-present

- Coordinating committee for annual Academic Recognition Awards Ceremony 2016-present

- Captain of Team Marion Peloton in Pelotonia Fundraiser for Cancer Research at the Ohio State James Cancer Center 2014-present

- Planning Committee for annual Marion Campus High School Math Competition 2012-2022

- Planning Committee for annual Marion Campus Middle School Math Competition 2012-2022

- Presenter for annual Marion Campus Summer Engineering Institute 2013-2018

- Planning Committee for annual Marion Campus Summer Engineering Institute 2013-2015

- Planning Committee for annual Marion Campus Engineering Boot Camp 2013-2018

Mathematics Department Service

- Coordinator for College Algebra Course for all six campuses of Ohio State University 2013-2017

- Curriculum Development Committee for Quantitative Reasoning Course 2016-2017

- Department Representative to Ohio Strong Start to Finish 2018-2019

- Workshop on Calculus Reform - Washington DC 2014

- Textbook Search Committee for Math 1148 College Algebra 2016-2017

- Textbook Search Committee for Math 1148 College Algebra 2011-2012

- Ohio Math Initiative Conference at Columbus State CSCC 2016

- Dissertation Committee Member, Christian Altomare, Doctoral Student, Mathematics, Jan 2009. *Degree Sequences, Forcibly Choral Graphs and Combinatorial Proof Systems*.

- Dissertation Committee Member, Oguz Kurt, Doctoral Student, Mathematics, Jan 2009. *On the Edge-coloring of Graphs*.

University Service

- Member, Regional Campus Workgroup, 2023

- Member, University Honors Directors Committee, 2017-present

- Member, Arts & Sciences Honors Scholarship subcommittee, 2023-present

- Member, Associate Deans of Research Committee, 2022-present

- Member, General Education Assessment Committee for Math, Logic, Quantitative Reasoning Foundation 2022-2023

- Advisory Council for B.Sc. of Engineering Technology Major 2016-present

- Member, Faculty Affairs Network for Vice Provost for Academic Policy 2020-2022

- Member, Faculty Advisory Committee for Office of Student Academic Success 2020-2022

- Member, Curriculum Design Committee for B.Sc. of Engineering Technology 2016-2018

- University Senator, Marion Campus representative 2017-2020

- Member, Faculty Compensation and Benefits Committee, Ohio State University Faculty Senate, 2017-2020

- President and Provost Annual Teaching Summit 2015-2020

- Regional Campus Salary Caucus 2015-2016

- Diversity and Inclusion Seminar 2017

- Advocates and Allies Session 2016-2017

- Faculty Member of Search Committee for Provost 2016

- President and Provost's Teaching and Learning Institute Advisory Council 2015

- Regional Campus Cluster Annual Summit 2013-2017

- Ph.D. Defense Committee Member, Outside reviewer, four theses.

Professional Service

- Co-Organizer of 62nd Midwest Graph Theory Conference (MIGHTY LXII) The Ohio State University, Marion Campus, October 18–19, 2019

- Co-organizer Special Session on Graph Theory, AMS Midwestern Section Meeting, Columbus OH, March 17–18, 2018

- Organizer of 42nd Midwest Graph Theory Conference (MIGHTY XLII) The Ohio State University, Marion Campus, April 28–29, 2006

- Organizer of Mini-symposium on Graph Minors at SIAM Conference on Discrete Math June 13-16, 2004 Vanderbilt University

- Co-Organizer of Advances in Graph and Matroid Theory: A Conference in honour of Neil Robertson's 65th birthday, The Ohio State University, December 13–16, 2003.

- Referee for Journal of Combinatorial Theory, Ser. B, Journal of Graph Theory, Electronic Journal of Combinatorics, Discrete Math, Combinatorics, SIAM Journal of Discrete Mathematics and others

- Grant Reviewer for NSA and NSF

Undergraduate Teaching

Math 1075	Precollege Math II
Math 1116	Excursions in Mathematics, Quantitative Reasoning
Math 1135	Number and Operations for Teachers
Math 1136	Measurement and Geometry for Teachers
Math 1148	College Algebra
Math 1149	Trigonometry
Math 1151	Calculus I
Math 1172	Calculus II for Engineers
Math 3345	Foundations in Mathematics
Math 4516	Discrete Math Modeling - Columbus Campus
Arts&Sciences 1101.1H	Regional Honors Seminar
Arts&Sciences 1101.2H	Introduction to Research
Gen Ed 1201	General Education Launch Seminar

Research Interests

Combinatorics, Structural Graph Theory, Graph Minors, Graph Embeddings, Topological Graph Theory, Graph Coloring

Publications

[1] J. Maharry, D. Slilaty, Projective-planar graphs with no $K_{3,4}$-minor, II., J. Graph Theory, 86 (2017) no. 1, 92–103.

[2] J. Maharry, N. Robertson, V. Sivaraman, D. Slilaty, Flexibility of projective planar embeddings, J. Combin. Theory, Ser. B 122 (2017) 241-300.

[3] J. Maharry, N. Robertson, The structure of graphs not topologically containing the Wagner graph, J. Comb. Theory, Ser. B 121 (2016) 398–420.

[4] G. Ding, C. Lewchalermvongs, J. Maharry, Graphs with no $\bar{P}_7$-minor, The Electronic Journal of Combinatorics 23(2) (2016) #P2.12

[5] K. Kawarabayashi, J. Maharry, Minors in large almost-5-connected non-planar graphs, J. Graph Theory 71 (2012) no.2, 128–141.

[6] J. Maharry, D. Slilaty, Projective-planar graphs with no $K_{3,4}$-minor, J. Graph Theory 70 (2012) no.2, 121–134.

[7] T. Böhme, K. Kawarabayashi, J. Maharry, B. Mohar, Linear connectivity forces large complete bipartite minors, J. Comb. Theory, Ser. B. 99 (2009), no.3, 557–583.

[8] J. Maharry, An excluded minor theorem for the octahedron plus an edge, J. Graph Theory 57 (2008), no. 2, 124-130.

[9] E. de Klerk, J. Maharry, D. Pasechnik, B. Richter, G. Salazar, Improved bounds for the crossing numbers of $K_{m,n}$ and K_n, SIAM J. Discrete Math. 20 (2006), no.1, 189–202.

[10] T. Böhme, J. Maharry, B. Mohar, $K_{a,k}$-minors in graphs of bounded tree-width, J. Comb. Theory, Ser. B. 86, (2002), 133–147.

[11] J. Maharry, D.P. Sanders, Simultaneous colorings of graphs embedded on surfaces, Discrete Math. 224, (2000), 207–214.

[12] J. Maharry, A characterization of graphs with no cube minor, J. Comb. Theory, Ser. B 80, (2000), 179–201.

[13] J. Maharry, A characterization of graphs with no octahedron minor, J. Graph Theory 31, no.2, (1999), 95–100.

[14] J. Maharry, A splitter for graphs with no Petersen family minor, J. Comb. Theory, Ser. B 72, no.1, (1998), 136–139.

Papers under review

[1] T. Böhme, K. Kawarabayashi, J. Maharry, B. Mohar, $K_{3,k}$ minors in large 7-connected graphs, submitted to J. Comb. Theory, Ser. B.

Papers in preparation

[1] J. Maharry, D. Slilaty, An analogue of Hall's Theorem for the Projective Plane (in preparation)

[2] J. Maharry, X. Zha, 4-representative embeddings on the Klein Bottle are unique (in preparation)

[3] Z. Gaslowitz, J. Maharry, E. Marshall, I. Ypremyan, Excluding a DW_6-minor in Planar graphs (in preparation)

Invited Presentations

[1] *Excluded Minors and Graph Structures* AMS Sectional Meeting, Special Session on Structural Graph Theory, Vanderbilt University, April 2018

[2] *Uniqueness of Embeddings on the Klein Bottle* AMS Sectional Meeting, Special Session on Structural Graph Theory, University of Central Florida, September 2017

[3] *Flexibility of Embeddings of Graphs in Surfaces* Graph Theory Colloquium, Middle Tennessee State University, March 2017

[4] *Graph Structures, Graph Inclusions and Well-Quasi Ordering* Invitations to Mathematics Series, Ohio State University, November 2013

[5] *Robertson's Excluded Minor Theorem for* V_8, 26th Cumberland Conference on Combinatorics, Graph Theory & Computing, Middle Tennessee State University, May 2013

[6] *Topological Embeddings and Well Quasi Orders*, AMS Spring Southeastern Section Meeting, University of South Florida, Tampa, Florida, March 10–11, 2012

[7] *Flexibility of Embeddings on the Projective Plane*, Atlanta Lecture Series in Combinatorics and Graph Theory II, Georgia State University, February 25–27, 2011

[8] *Projective-Planar Graphs with no* $K_{3,4}$-*minor*, AMS 2009 Fall Southeastern Meeting, Florida Atlantic University, October 30 – November 1, 2009

[9] *Unavoidable Minor Structures in Large Graphs*, MIGHTY XLVII Illinois Institute of Technology, Chicago, Illinois, November 8, 2008

[10] *Minors in Large Highly-Connected Graphs*, 21st Cumberland Conference on Graph Theory, Combinatorics, and Computing —In Honor of Mike Plummer's 70th Birthday, Vanderbilt University, May 15–17, 2008

[11] *The Structure of* $K_{3,4}$-*Free Projective Planar Graphs*, AMS Meeting 1038, Special Sessions on Graph Theory and Topological Combinatorics, Indiana University, Apr 5–6, 2008

[12] *Graph Structures and Excluded Minors* SIAM Conference on Discrete Mathematics, University of Victoria, June 25–28, 2006

[13] *Graph Minors and Graph Structures* Seminar at REU Program SUNY Potsdam, July 2, 2005

[14] *Improved bounds for the crossing numbers of* $K_{m,n}$ *and* K_n MIGHTY XL at Saginaw Valley State University, April 15–16, 2005

[15] *Forcing Large Minors, I* SIAM Conference on Discrete Math, Vanderbily University, June 13, 2004

[16] *Minor Structure Theory* The XXVIIth Ohio State-Denison Mathematics Conference, June 11, 2004

[17] $K_{a,k}$ *Minors in Unimaginably Large Graphs* Advances in Graph and Matroid Theory, Ohio State University, Dec 13, 2003

[18] *Unavoidable* $K_{3,k}$-*Minors in Large* 7-*Connected Graphs.* MATROID STRUCTURE THEORY, In Honour of W.T. Tutte, 1917-2002, The Ohio State University, July 1, 2002 July 1-5, 2002

Grants