Daniel Paul Johnston

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PROFESSIONAL EXPERIENCE

2022 - 2025	Harold L. Dorwart Visiting Assistant Professor. Department of Mathematics, Trinity College.
2019 - 2022	Visiting Assistant Professor. Mathematics and Statistics Department, Skidmore College.
2017 - 2019	Visiting Assistant Professor. Department of Mathematics, Grand Valley State University.
2015 - 2017	Visiting Assistant Professor. Department of Mathematical Sciences, University of Montana.

EDUCATION

2015	Ph.D. in Mathematics, Western Michigan University. Area of Research: Combinatorics and Graph Theory Title of Doctoral Dissertation: *Edge Colorings of Graphs and Their Applications* Dissertation Advisor: Professor Ping Zhang
2007	B.A. in Liberal Arts, St. John's College, Santa Fe, NM.

RESEARCH PAPERS

Publications

- Lower bounds for rainbow Turán numbers of paths and other trees (with P. Rombach). *Australasian Journal of Combinatorics.* **78**(1) (2020), 61-72.
- On edge-colored saturation problems (with M. Ferrara, S. Loeb, F. Pfender, A. Schulte, H. Smith, E. Sullivan, M. Tait, C. Tompkins). *Journal of Combinatorics.* **11**(4) (2020) 639–655.
- On k-Ramsey numbers of unicyclic-star graphs (with C. Lumduanhom and P. Zhang). *Ars Combinatoria.* **137** (2018) 203-220.
- On k-Ramsey numbers of stripes (with E. Andrews, Z. Bi, C. Lumduanhom and P. Zhang). *Utilitas Mathematica.* **106** (2018) 223-249.
- Rainbow Turán problems for paths and forests of stars (with C. Palmer and A. Sarkar). *Electronic Journal of Combinatorics.* **24**(1) (2017) #P34
- Proper Ramsey numbers of graphs (with S. English, D. Olejniczak and P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **101** (2017) 281-299.
- A note on the 2-Ramsey numbers of 4-cycles (with P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **98** (2016) 271-279

- Color frames of stars and generalized matching numbers (with C. Lumduanhom and P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **98** (2016) 221-237
- On vertex-distinguishing edge colorings of graphs (with S. English, E. Laforge and P. Zhang). *Congressus Numerantium.* **225** (2015) 37-54
- On twin edge colorings in trees. (with E. Andrews and P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **94** (2015) 115-131
- On color frames of claws and matchings (with P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **93** (2015) 183-200.
- An upper bound for the twin chromatic index of a graph (with P. Zhang). *Congressus Numerantium.* **219** (2014) 175-182.
- On twin edge colorings of graphs (with E. Andrews, L. Helenius, J. VerWys and P. Zhang). *Discussiones Mathematicae Graph Theory.* **34** (2014) 613-627.
- A twin edge coloring conjecture (with E. Andrews and P. Zhang). *Bulletin of the Institute of Combinatorics and its Applications.* **70** (2014) 28-44.
- An edge bicoloring view of edge independence and edge domination (with B. Phinezy and P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **87** (2013) 115-136.
- On color frames of claws in graphs (with G. Chartrand and P. Zhang). *Journal of Combinatorial Mathematics and Combinatorial Computing.* **85** (2013) 13-31.

Submitted or In Preparation

- Rainbow saturation numbers (with N. Bushaw and P. Rombach). arXiv:2003.13200 [math.CO] (submitted).
- Derranged matchings (with L. Huang, M. Kayll and C. Palmer).
- Generalized rainbow Turán numbers (with C. Palmer and P. Rombach).
- The twin chromatic index of trees (with O. Khormali, N. Nguyen, and C. Palmer).

SELECTED PRESENTATIONS

- **SIAM Conference on Discrete Mathematics**, Carnegie Mellon University, June 2022. *Rainbow Saturation.*
- **The 53rd Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2022. *Rainbow Saturation.*
- **Mathematics Seminar**, Trinity College, Connecticut, February 2022. *Rainbow Turán Numbers.*
- **The 51st Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2020. *Rainbow Turán Numbers.*
- **2020 Joint Mathematics Meetings**, Denver, CO, January 2020. *Rainbow Turán Numbers of Paths and Other Trees.*

- **The 33rd Midwest Conference on Combinatorics, Cryptography, and Computing**, Rochester Institute of Technology, October 2019. *Deranged Matchings in Graphs.*
- **Summer Combo in Vermont**, University of Vermont, July 2019. *Deranged Matchings.*
- **31st Cumberland Conference on Combinatorics, Graph Theory and Computing**, University of Central Florida, May 2019. *Deranged Matchings.*
- **Discrete Mathematics Seminar**, Virginia Commonwealth University, April 2019. *Rainbow Turán Numbers.*
- **The 50th Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2019. *Deranged Matchings.*
- **Mathematics Colloquium**, University of Vermont, May 2018. *Rainbow Turán Numbers.*
- **Graph Theory Seminar**, Western Michigan University, April 2018. *Rainbow Turán Numbers.*
- **Combinatorics and Graph Theory Seminar**, Michigan State University, April 2018. *Rainbow Turán Numbers.*
- **The 49th Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2018. *Rainbow Turán Numbers for Paths and Forests of Stars.*
- **MIGHTY LVIII**, Grand Valley State University, October 2017. *Rainbow Turán Numbers for Paths and Forests of Stars.*
- **Southern California Discrete Math Symposium 2017**, University of California, Los Angeles, May 2017. *Rainbow Turán Numbers for Paths and Forests of Stars.*
- **Mathematics Colloquium**, Western Washington University, November 2016. *Another Look at Ramsey Numbers.*
- **The 30th Midwest Conference on Combinatorics, Cryptography, and Computing**, Illinois State University, October 2016. *Twin Edge Colorings of Trees.*
- **2016 Joint Mathematics Meetings**, Seattle, WA, January 2016. *On k-Ramsey Numbers of Non-bipartite Graphs.*
- **Combinatorial Potlatch 2015**, University of British Columbia, November 2015. *On k-Ramsey Numbers of Graphs.*
- **The 46th Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2015. *On Sum-Defined Edge Colorings.*
- **2015 Joint Mathematics Meetings**, San Antonio, TX, January 2015. *Another Look at Ramsey Numbers.*
- **The 28th Midwest Conference on Combinatorics, Cryptography, and Computing**, University of Nevada, Las Vegas, October 2014. *Another Look at Ramsey Numbers.*
- **MIGHTY LVI**, Indiana University - Purdue University, Fort Wayne, October 2014. *A Bichromatic View of Matchings.*
- **The 45th Southeastern International Conference on Combinatorics, Graph Theory, and Computing**, Florida Atlantic University, March 2014. *Twin Edge Colorings of Graphs.*

COURSES TAUGHT

MATH 4400	Graphs and Mathematical Models, Western Michigan University.
MATH 325	Discrete Mathematics, University of Montana.
MATH 225	Introduction to Discrete Mathematics, University of Montana.
MATH 325	Discrete Structures: Computer Science II, Grand Valley State University.
MATH 225	Discrete Structures: Computer Science I, Grand Valley State University.
MATH 362/363	Linear Optimization/Lab, University of Montana.
MATH 221	Introduction to Linear Algebra, University of Montana.
MA 200	Linear Algebra, Skidmore College.
MA 303	Introduction to Analysis, Skidmore College.
MATH 273	Multivariable Calculus, University of Montana.
MA 211	Calculus III, Skidmore College.
MATH 203	Calculus III, Grand Valley State University.
MA 113	Calculus II, Skidmore College.
MATH 172	Calculus II, University of Montana.
MA 111	Calculus I, Skidmore College.
MATH 201	Calculus I, Grand Valley State University.
MATH 1220	Calculus I, Western Michigan University.
MATH 124	Precalculus: Functions and Models, Grand Valley State University.
MATH 1110	Algebra II, Western Michigan University.
MATH 1100	Algebra I, Western Michigan University.
MS 104	Introduction to Statistics, Skidmore College.
MATH 125	Survey of Calculus, Grand Valley State University.
MA 110	Mathematics Toolkit, Skidmore College.
MATH 1140	Excursions in Mathematics, Western Michigan University.

HONORS AND AWARDS

2015 All-University Graduate Research and Creative Scholar Award
Graduate College, Western Michigan University

2015 Graduate Research Scholar Award
Department of Mathematics, Western Michigan University

2014 Charles Butler Excellence in Teaching Award
Department of Mathematics, Western Michigan University.