

Joshua Miller

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EDUCATION

Kansas State University

Doctorate of Philosophy in Mathematics

Manhattan, KS

Aug 2016- July 2021

Kansas State University

Masters of Science in Mathematics

Manhattan, KS

Aug 2016 - Dec 2019

Sam Houston State University

Masters of Science in Mathematics

Huntsville, TX

Aug 2014 - May 2016

Sam Houston State University

Bachelors of Science in Mathematics (Minor in Music)

Huntsville, TX

Aug 2012 - May 2014

POSITION

Georgia State University

Visiting Lecturer

Atlanta, GA

Aug 2021-Present

COURSES TAUGHT

Georgia State University

Visiting Lecturer

Atlanta, GA

Aug 2021 - Present

- **MATH 1001:** Quantitative Reasoning: F21 (Sec 26, 34, 38, 40), SP22 (Sec 006, 016, 042, 044), SP23 (Sec 006)
- **MATH 1113:** Precalculus: F21 (Sec 26, 002, 004, 006)
- **MATH 1401:** Elementary Statistics: SU22 (Sec 014)
- **MATH 2211:** Calculus I: SP23 (Sec 008, 010, 012, 014, 016, 018)
- **MATH 2212:** Calculus II: FA22 (Sec 008, 010, 012, 016, 018, 020)
- **MATH 2420:** Discrete Mathematics: FA22 (Sec 020)
- **MATH 2641:** Linear Algebra: SU22 (Sec 010)

Kansas State University

Graduate Teaching Assistant (Instructor on Record)

Manhattan, KS

Aug 2016 - Aug 2021

- **MATH 100:** College Algebra: **SU17 (Sec A)**, SP18 (Sec 59,64,67), FA20 (Sec 68,72,79)
- **MATH 100:** Studio College Algebra: F17 (Sec 05,09)
- **MATH 150:** Plane Trigonometry: SP17 (Sec A,E), **F19 (Sec ZA)**, SP20 (Sec F), **SU20 (Sec A)**, SP21 (Sec C,F)
- **MATH 205:** General Calculus I: **SU18 (Sec C)**, **SU19 (Sec ZA)**, **F19 (Sec ZA)**, **SP20 (Sec N)**
- **MATH 220:** Calculus I: F16 (Sec V)

Sam Houston State University

Graduate Teaching Assistant

Huntsville, TX

Aug 2014 - May 2016

- **MATH 170:** Instructor for Pre-Calculus Algebra: SP16 (Sec 13)
- **MATH 199:** Instructor for Mathematics for Managerial Decision Making: SP16 (Sec 03), FA15 (Sec 03)

RESEARCH INTERESTS

- **Algebraic Combinatorics:** Sandpile Groups, Hyperplane Arrangements, Whitney Numbers in Relation to Posets, and Tutte Polynomials of Hyperplane Arrangements
- **Graph Theory:** Problems relating to colorings, chromatic numbers, and the Erdős-Faber-Lovász conjecture

PUBLICATIONS

1. M. Mazin, **J. Miller**, Pak-Stanley Labeling for Central Graphical Arrangements, arXiv:1811.11924
2. **J. Miller**, On the Abelian Sandpile Model for Thick Cycle Graphs, in preparation.

SELECTED TALKS AND PRESENTATIONS

- **Great Plains Combinatorics Conference 2018:** Pak-Stanley Labeling for Central Graphical Arrangements
 - Poster presented April 2018 at Kansas State University
- **K-State Combinatorics Seminar:** On the Abelian Sandpile Model for Thick Cycle Graphs
 - Seminar talk given April 2017 at Kansas State University
- **Sam Houston Graduate Research Colloquia:** On the Abelian Sandpile Model for Thick Cycle Graphs
 - Colloquia talk given April 2016 in Sam Houston State University
- **Graduate Research Symposium:** On Ventricular Septal Defects Pre/Post Birth
 - Presentation given at the annual symposium in April 2014 at Sam Houston State University

PROFESSIONAL DEVELOPMENT

- **Graduate Student in Combinatorics Conference 2021:**
 - University of Minnesota, Minneapolis, MN.
- **Graduate Research Workshop in Combinatorics 2019:**
 - Worked on Whitney duals of posets and tutte polynomials of hyperplane arrangements. University of Kansas, Lawrence, KS.
- **Graduate Student in Combinatorics Conference 2019:**
 - University of Pennsylvania, Philadelphia, PA.
- **Great Plains Combinatorics Conference 2018: Local Organizer**
 - Kansas State University, Manhattan, KS.
- **Graduate Student in Combinatorics Conference 2018:**
 - University of Texas- Dallas, Dallas, TX.
- **Graduate Student in Combinatorics Conference 2017:**
 - University of Kansas, Lawrence, KS.
- **Underrepresented Students in Topology and Algebra Research 2016:**
 - Sam Houston State University, Huntsville, TX.
- **Southwest Local Algebra Meeting 2016:**
 - Texas State University, San Marcos, TX.

CONFERENCES ORGANIZED

- **AMS 2023 Southeastern Sectional Meeting Special Session:**
 - Helped organize the special session on Undergraduate Mathematics and Statistics Research that will take place March 17-18, 2023 with Asma Azizi, Tsz Chan, Mark Grinsphon, and Leslie Meadows.
- **GSU Annual Undergraduate Mathematics and Statistics Research:**
 - Helped organize and host the inaugural conference that took place June 9, 2022 with Andrew Fanoë, Mark Grinsphon, Leslie Meadows, Brian Pidgeon, Kelvin Rozier, and Sutandra Sarkar.
- **Great Plains Combinatorics Conference:**
 - Served as a local organizer for the third conference that took place April 28-29, 2018 at Kansas State University with Luke Langston, Mikhail Mazin, and Gabe Necoechea,

SERVICES TO DEPARTMENT AND UNIVERSITY

- **Math and Stats Club Faculty Advisory Board:**
 - Served on the faculty advisory board for the club.
- **High School Internship Advisory Committee:**
 - Served on the faculty advisory board for the committee.

PROFESSIONAL ORGANIZATIONS

- **Alpha Chi Honor Society:**
- **American Mathematical Society:**
- **Phi Theta Kappa National Honor Society:**
- **Pi Mu Epsilon Mathematical Honor Society:**