

# Joshua Miller

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## EDUCATION

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<b>Kansas State University</b> <i>Doctorate of Philosophy in Mathematics</i>	Manhattan, KS Aug 2016- July 2021
<b>Kansas State University</b> <i>Masters of Science in Mathematics</i>	Manhattan, KS Aug 2016 - Dec 2019
<b>Sam Houston State University</b> <i>Masters of Science in Mathematics</i>	Huntsville, TX Aug 2014 - May 2016
<b>Sam Houston State University</b> <i>Bachelors of Science in Mathematics (Minor in Music)</i>	Huntsville, TX Aug 2012 - May 2014

## POSITION

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<b>Georgia State University</b> <i>Visiting Lecturer</i>	Atlanta, GA Aug 2021-
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## COURSES TAUGHT

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<b>Georgia State University</b> <i>Visiting Lecturer</i>	Atlanta, GA Aug 2021 - Present
<ul style="list-style-type: none"><li>◦ <b>MATH 1001</b>: Quantitative Reasoning: F21 (Sec 26,34,38,40)</li><li>◦ <b>MATH 1113</b>: Precalculus: F21 (Sec 26, 002,004,006)</li></ul>	
<b>Kansas State University</b> <i>Graduate Teaching Assistant (Instructor)</i>	Manhattan, KS Aug 2016 - Aug 2021
<ul style="list-style-type: none"><li>◦ <b>MATH 100</b>: College Algebra: <b>SU17 (Sec A)</b>, SP18 (Sec 59,64,67), FA20 (Sec 68,72,79 )</li><li>◦ <b>MATH 100</b>: Studio College Algebra: F17 (Sec 05,09)</li><li>◦ <b>MATH 150</b>: Plane Trigonometry: SP17 (Sec A,E), <b>F19 (Sec ZA)</b>, SP20 (Sec F), <b>SU20 (Sec A)</b>, SP21 (Sec C,F)</li><li>◦ <b>MATH 205</b>: General Calculus I: <b>SU18 (Sec C)</b>, <b>SU19 (Sec ZA)</b>, <b>F19 (Sec ZA)</b>, <b>SP20 (Sec N)</b></li><li>◦ <b>MATH 220</b>: Calculus I: F16 (Sec V)</li></ul>	
<b>Sam Houston State University</b> <i>Graduate Teaching Assistant</i>	Huntsville, TX Aug 2014 - May 2016
<ul style="list-style-type: none"><li>◦ <b>MATH 170</b>: Instructor for Pre-Calculus Algebra: SP16 (Sec 13)</li><li>◦ <b>MATH 199</b>: Instructor for Mathematics for Managerial Decision Making: SP16 (Sec 03), FA15 (Sec 03)</li></ul>	

## RESEARCH INTERESTS

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- **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

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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

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- **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

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- **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.

## AWARDS AND HONORS

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- **Sam Houston State University:**
  - 2016 Outstanding Mathematics Graduate Student: only one graduate student is selected every year for outstanding achievement in teaching, research, and coursework.
  - 2016 Nominee for Outstanding Graduate Teaching Assistant: nominated by members of the Mathematics Department for a university-wide award.
  - 2013 President's List: For 4.0 GPA, university-wide recognition.
  - 2013 Von Neumann Scholarship (\$300): Selected by the SHSU Mathematics and Statistics faculty for mathematical merit.
  - 2012-2014 University Transfer Student GPA Scholarship (\$2000)
  - Dean's List: For 3.5 GPA or greater, university-wide recognition. (FA 2012, 2013 SP 2013)
- **Lone Star College System:**
  - President's List: For 3.3 GPA or higher, college-wide recognition (FA 2009, 2010, 2011, SP 2011, 2012)

## PROFESSIONAL ORGANIZATIONS

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- **Alpha Chi Honor Society:**
  - Membership based on being in the 10% at a Texas University
- **American Mathematical Society:**
  - Founding President for the Sam Houston State University chapter
  - Helped establish AMS as both a Sam Houston State University recognized and American Mathematical Society nationally recognized organization.
- **Phi Theta Kappa National Honor Society:**
  - International honor society of two-year colleges and academic programs
- **Pi Mu Epsilon Mathematical Honor Society:**
  - President January 2016-May 2016
  - Inducted as both Undergraduate and Graduate Student

## SERVICES TO DEPARTMENT AND UNIVERSITY

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- **Staff Writer:**
  - Contributed to the Viewpoints section of Sam Houston State University's newspaper, The Houstonian, Jan. 2016 - May 2016.
- **University Graduate Tutor:**
  - Employed by Sam Houston State University to be a tutor for all undergraduate course from MATH 031D to MATH 377, Aug. 2014 - Jan. 2015.