

# Ariel Keller

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## RESEARCH INTERESTS

Extremal Graph Theory, Structural Graph Theory

## EDUCATION

**2013-2018: Emory University**, Atlanta, Georgia, USA

- Ph.D. in Mathematics (expected graduation date: May 2018)
- Advisor: Ronald J. Gould

**2009-2013: University of Tennessee, Chattanooga**

- Bachelor of Science in Applied Mathematics, Minor in Economics, May 2013
- Summa Cum Laude

## PUBLICATIONS

*On Vertex-Disjoint Cycles and Degree Sum Conditions*; with Ronald J. Gould and Kazuhide Hirohata, *Discrete Math.*, 341 (1) (2018), pp. 203-212, <https://doi.org/10.1016/j.disc.2017.08.030>.

## SUBMITTED PAPERS

*The Zero Forcing Polynomial of a Graph*; with Kirk Boyer, Boris Brimkov, Sean English, Daniela Ferrero, Rachel Kirsch, Michael Phillips, and Carolyn Reinhart, submitted. arXiv:1801.08910

## PAPERS IN PROGRESS

*On Chorded Cycles and Degree Sum Conditions*; with Ronald J. Gould and Kazuhide Hirohata, in progress.

## INVITED TALKS

“On Cycles, Chorded Cycles, and Degree Conditions” Discrete Mathematics Seminar, University of Delaware, April 2018

“On Graphs, Degree Conditions, and Cycles” Mathematics Department Colloquium, Spelman College, November 2017.

“Degree Sum Conditions to Imply Cycles” Graduate Research Workshop in Combinatorics, University of Denver, July 2017.

“On Disjoint Cycles and Degree Conditions” Discrete Mathematics Seminar, Kennesaw State University, February 2017.

## CONTRIBUTED TALKS

“Zero Forcing Polynomial for Cycles and Singly-chorded Cycles” Forty-ninth South-eastern Int’l Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, March 2018.

“Zero Forcing Polynomial for Cycles and Singly-chorded Cycles” Joint Mathematics Meetings, Special Session on Research from the Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics, January 2018.

“On Disjoint Cycles and Degree Conditions” 31st Midwestern Conference on Combinatorics and Combinatorial Computing, University of West Georgia, October 2017.

“On Disjoint Cycles and Degree Conditions” Fourty-eighth Southeastern Int’l Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, March 2017.

“On Disjoint Cycles and Degree Conditions” Recent Advances in Linear Algebra and Graph Theory, University of Tennessee, Chattanooga, March 2016.

## TEACHING

**Emory University** **Fall 2013 - Spring 2017**

- Instructor of Record for Calculus II
- Instructor of Record for Calculus I
- Lab Instructor for Calculus I with Lab
- Teaching Assistant for Life Sciences Calculus I & II
- Teaching Assistant for Numerical Analysis
- Grader for Real Analysis
- Calculus Help Tutor

**University of Tennessee, Chattanooga** **Fall 2011**

- Supplemental Instruction Leader for Macroeconomics

**Chattanooga State Technical Community College** **Fall 2008-Spring 2009**

- Tutor at Math Center

## WORKSHOPS

- Graduate Research Workshop in Combinatorics at University of Denver and University of Colorado Denver, Summer 2017
- Jones Program in Ethics Women in Science Workshop at Emory University, Spring 2017
- TATTO “Teaching Assistant Training and Teaching Opportunity program” Teaching Workshop at Emory University, Summer 2014
- Summer REU in Biomedical Informatics at the University of Tennessee, Chattanooga under the supervision of Dr. Yu Cao: Smartphone-Based Fall Detection, Summer 2012

## SERVICE & VOLUNTEER WORK

- Organized a weekly “Paper Triage” informal seminar for combinatorics students at Emory, Fall 2017
- Assisted with hosting the Atlanta Lecture Series in Combinatorics and Graph Theory XVIII & XIII at Emory University, Oct. 2016 & Nov. 2014
- SIAM Conference Volunteer, SIAM Conference on Discrete Mathematics, June 2016
- Vice President & Treasurer for the Graduate Computer Science & Math Society at Emory, Fall 2015-Spring 2016
- Organized UTC’s annual Pi Mu Epsilon Sudoku Competition, Fall 2012
- Assisted the UTC Mathematics Department with Freshman Friday, Fall 2012

**AWARDS &  
MEMBERSHIPS**

- Teaching Apple award, given annually by Emory sororities, Spring 2017
- American Mathematical Society, 2013-present
- Pi Mu Epsilon, 2011-present
- Ruth Clark Perry Memorial Mathematics Award, April 2013  
Presented annually by UTC Math Department “For outstanding academic performance as an upper class woman majoring in Mathematics.”
- Chancellor’s Scholarship, 2009-2013

**PROGRAMMING  
SKILLS**

- Java
- C++
- Objective-C