

# Angela Hanson

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## EDUCATION

**University of Kentucky**, Lexington, KY  
*Ph.D.*, Mathematics, “Surjectivity of the Wahl map,” Expected May 2023  
*Master of Arts*, Mathematics, December 2019

**Rose-Hulman Institute of Technology**, Terre Haute, IN  
*Bachelor of Science*, Mathematics, May 2017

## RESEARCH INTERESTS

Algebraic geometry, tropical geometry, combinatorial applications to algebra

## PUBLICATIONS

- “Implementing student-centered assessment: motivations, experiences, supports, and challenges” with Justin Barhite, Ben Braun, Courtney George, Hunter Lehmann, Camille Schuetz, and Chloe Wawrzyniak (In-progress)
- Internal Department of Defense Paper, Ft. Meade, Maryland, Aug. 2015

## HONORS

UK College of Arts & Sciences Outstanding TA Award	2021-22
Department of Mathematics Diversity, Equity, and Inclusion Award	2021-22
Emeritus Faculty Endowed Doctoral Fellow	2021-22
Ed Enochs Graduate Scholarship in Algebra	2020-21
Graduate Scholars in Mathematics Fellow	2018-20
Nominee for the Barry Goldwater Scholarship	2015-16
IP/ROP Best Student Project Travel Award	2014-15
CURM and MAA Research Funding	2014-15

## SERVICE AND OUTREACH

UK Math Lab, <i>Project Mentor</i>	2021-22
Ethics, Equity, Inclusion and Justice in the Mathematical Sciences, <i>Member</i>	2021-22
Graduate Student Council, <i>Officer for Mathematics</i>	2019-22
UK Appalachian Initiative in Mathematics, <i>Volunteer</i>	2019
Rose-Hulman Math Competition, <i>Grader and Proctor</i>	2014, 2017
MATHCOUNTS, <i>Proctor</i>	2013, 2017
Putnam Exam, <i>Participant</i>	2013, 2015
Actuarial Club, <i>Member</i>	2013-14
Rose-Hulman Freshmen Math Competition, <i>Participant</i>	2013

## CONFERENCES AND SUMMER SCHOOLS

MSRI Summer School on Tropical Geometry	Aug. 2022
EMS International School on Tropical Geometry	May 2022
Georgia Algebraic Geometry Symposium	Apr. 2022
American Mathematical Society Spring Eastern Sectional Meeting	Mar. 2022
EWM/EMS Mittag Leffler Summer School on Tropical Moduli Spaces	Jun. 2021
Moduli on Chesnut Hill	Mar. 2020
Rose-Hulman Institute of Technology Undergraduate Math Conference	Apr. 2017
Rose-Hulman Institute of Technology Undergraduate Math Conference	Apr. 2015
Center for Undergraduate Research in Math Student Research Conference	Mar. 2015
Joint Mathematics Meetings	Jan. 2015

## PRESENTATIONS

- “Surjectivity of the Wahl Map,” MSRI Summer School on Tropical Geometry - Mini-Talks  
*Moraga, California, Aug. 2022*
- “Surjectivity of the Wahl Map,” EMS International School on Tropical Geometry - Mini-Talks  
*Valladolid, Spain, Jun. 2022*
- “Application of Graph Theory to the Wahl Map,” AMS Spring Sectional Meeting, Invited Speaker  
*Boston, Massachusetts, Mar. 2022*

- “Chip Firing Game on Graphs,” UK Graduate Student Colloquium  
*Lexington, Kentucky, Feb. 2022*
- “Geometric Approach to Surjectivity of the Wahl Map,” UK Algebra Seminar  
*Lexington, Kentucky, Sep. 2021*
- “Surjectivity of the Wahl Map,” EWM/EMS Mittag Leffler Summer School on Tropical Moduli Spaces - Mini-Talks  
*Djursholm, Sweden, Jun. 2022*
- “Surjectivity of the Wahl Map,” UK Qualifying Oral Exam  
*Lexington, Kentucky, Mar. 2021*
- “An Introduction to Affine Geometry,” UK Graduate Student Colloquium  
*Lexington, Kentucky, Feb. 2020*
- “Tropicalization of the Max Noether Theorem,” UK Masters Oral Exam  
*Lexington, Kentucky, Oct. 2019*
- “Preventing Decreasing Subsequences in Stack Sorting Outputs,” RHIT Math Senior Thesis Poster Session  
*Terre Haute, Indiana, May 2017*
- “Preventing Decreasing Subsequences in Stack Sorting Outputs,” RHIT Undergraduate Math Conference  
*Terre Haute, Indiana, Apr. 2017*
- “Modeling the Relationship between Employment Levels and Gross Domestic Product Growth,” Center for Undergraduate Research in Math Student Research Conference  
*Provo, Utah, Mar. 2015*
- “Determining Optimal Level of Unemployment to Maximize Growth of Real GDP,” Joint Mathematics Meetings  
*San Antonio, Texas, Jan. 2015*

## COURSES TAUGHT

### Primary Instructor Positions at University of Kentucky

As primary instructor, I was responsible for my own course design including lectures, activities and assignments, and grading scheme. Average class size was 30 students, except for First Year Graduate Seminar which had 11 students.

- First Year Graduate Seminar for Mathematics Fall 2022
- Matrix Algebra Spring 2022
- Introduction to Contemporary Mathematics Fall 2021

### Recitation Leader Positions at University of Kentucky

As recitation leader, I was responsible for supplementary lessons and worksheet activities to partner with primary lectures. I also graded and provided general feedback for the students. Some recitations were as small as 8 students and others were as large as 35 students.

- Algebra & Trigonometry for Calculus Fall 2022
- Calculus I, MathExcel Fall 2020 and Spring 2021
- Calculus II with Life Science Applications Spring 2020
- Calculus I with Life Science Applications Fall 2019
- Calculus III Spring 2019
- Calculus I Fall 2018

### Primary Instructor Positions at Eastern Illinois University

As primary instructor, I was responsible for writing lectures, assignments, and exams under the supervision of a faculty member. Average class size was 20 students.

- College Algebra Fall 2017 and Spring 2018