

Kalila Joelle Sawyer

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EMPLOYMENT

Postdoctoral Teaching Fellow August 2020-Present
Colorado School of Mines, Colorado, USA

EDUCATION

University of Kentucky, Kentucky, USA
Ph.D. in Mathematics May 2020
- Thesis Topic: Scollar Invariants on Tropical Chains of Loops
- Advisor: [David Jensen](#)
M.A. in Mathematics May 2017
University of Alaska Anchorage, Alaska, USA
B.S., Magna Cum Laude, in Mathematics May 2015

TEACHING

EXPERIENCE

Colorado School of Mines

Primary Instructor

- MATH 111, Calculus I	Fall 2020, 2021
- MATH 112, Calculus II	Spring 2022
- MATH 201, Probability and Statistics	Summer 2021
- MATH 213, Calculus III	Spring 2021
- MATH 301, Introduction to Analysis	Spring 2021
- MATH 332, Linear Algebra	Spring 2022
- MATH 458, Abstract Algebra	Fall 2021

University of Kentucky

Primary Instructor

- MA 109, College Algebra	Summer 2019
- MA 111, Intro to Contemporary Math	Fall 2019
- MA 201, Math for Elementary School Teachers	Fall 2017

MathExcel Workshop Leader

- MA 113, Calculus I	Fall 2018
- MA 114, Calculus II	Spring 2019

Lead TA

- MA 123, Elementary Calculus and its Applications	Spring 2018
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Grader

- MA 661, Modern Algebra II	Spring 2018
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Recitation Leader

- MA 113, Calculus I	Fall 2015
- MA 123, Elementary Calculus and its Applications	Spring 2016
- MA 137, Calculus I with Life Science Applications	Fall 2016
- MA 162, Finite Math and its Applications	Spring 2017

Other

- Algebra Prelim Exam Review Session Leader Spring 2018, 2019
- Undergraduate Peer Tutor August 2014-May 2015

PUBLICATIONS AND PREPRINTS

- 1 *Scrollar Invariants of Tropical Curves*
with D. Jensen, submitted, [preprint arXiv:2001.02710](#).
- 2 *The AWM at the University of Kentucky*
with K. Ponto, C. Slone, to appear in *Fifty Years of Women in Mathematics: Reminiscences, History, and Visions for the Future of AWM*. Edited by J. Beery, S. Greenwald, and C. Kessel. Springer, 2022.

HONORS AND AWARDS

- [Project NExT](#) Fellow August 2021-2022
- Wimberly C. Royster Outstanding Teaching Assistant Award May 2018
- Daniel R. Reedy Quality Achievement Award August 2015–May 2017
- [Graduate Scholars in Mathematics](#) Fellowship August 2015-May 2017
- Merit-Based Tuition Waivers August 2013-May 2015

TALKS AND PRESENTA- TIONS

- Where Did You Come From, Where Did You Go: My Mathematical Life Story*
Math Club, Colorado School of Mines March 2021
- Life Isn't Fair, and Neither is Voting Theory*
Graduate Student Colloquium, University of Kentucky September 2019
- Calculating Tropical Scrollar Invariants on k -gonal Chains of Loops*
Midwest Algebraic Geometry Graduate Conference March 2019
- Scrollar Invariants are *Always* Fun*
Algebra Seminar, University of Kentucky December 2018
- Calculating Scrollar Invariants Via Young Tableaux (Poster)*
AGNES September 2018
- Stacks of Boxes are Better Than Chains of Loops*
Graduate Student Colloquium, University of Kentucky September 2018
- The Truth About Lie Groups*
Topology Seminar, University of Kentucky April 2018
- Setting Up Finite Geometry*
Graduate Student Colloquium, University of Kentucky March 2018
- The Maroni Invariant of Trigonal Chains of Loops (Qualifying Exam)*
Algebra Seminar, University of Kentucky February 2018
- The Grassmannian is Always Greener*
Topology Seminar, University of Kentucky October 2017
- Mathematicians Have Always Been...Interesting*
Graduate Student Colloquium, University of Kentucky September 2017
- Special Divisors on Marked Chains of Cycles (Master's Exam)*
Algebra Seminar, University of Kentucky April 2017
- Geometric Multiplicity and Geršgorin Discs*
Graduate Student Colloquium, University of Kentucky November 2015

SERVICE	Society for Women in Mathematics at CSM, Leadership team	August 2021-Present
	Association for Women in Mathematics (UKY Chapter), Officer	July 2019-June 2020
	Consortium for Mathematics and its Applications (COMAP) Interdisciplinary Contest in Modeling, Triage Judge	February 2019
	UK Mathematics Graduate Student Council, Co-Chair	May 2017– May 2018
	First Year Peer Mentor	August 2017-May 2019
	Julia Robinson Mathematics Festival, Graduate Assistant	November 2017
	Central Kentucky High School Math Circles, Graduate Assistant and Session Leader	September 2016-February 2019
	UK High School Math Day for Women, Graduate Assistant	November 2015
CONFERENCES AND WORKSHOPS	Joint Mathematics Meetings 2022/ Project NExT	
	Seattle, WA	January 2022
	Mathfest 2021/Project NExT	
	Zoom	August 2021
	CSM Training: Accessibility Course for Education	
	Colorado School of Mines	June 2021
	CSM Training: Facilitating Online Learning	
	Colorado School of Mines	March 2021
	BAD Math Day Fall 2020	
	University of California, Davis [on Zoom]	November 2020
	STAGOSAUR: Summer Tropical Algebraic Geometry Online Seminar	
	Zoom	June-July 2020
	ALCoVE: an Algebraic Combinatorics Virtual Expedition	
	Zoom	June 2020
	Joint Mathematics Meetings 2020	
	Denver, CO	January 2020
	STEM Faculty Launch Workshop	
	Worcester Polytechnic Institute, Massachusetts	October 2019
	WARTHOG: Workshop on Algebra and Representation Theory Held on Oregonian Grounds	
	University of Oregon, Eugene	July 2019
	MSRI Summer School: Commutative Algebra and its Interaction with Algebraic Geometry	
	University of Notre Dame, Indiana	June 2019
	GATTACA: Georgia Tech Tropical, Arithmetic and Combinatorial Algebraic-geometry	
	Georgia Tech, Atlanta	April 2019
	SAGE Days 98: Women in Sage	
	Archanes, Crete	April 2019
	MAGGC: Midwest Algebraic Geometry Graduate Conference	
	University of Illinois at Chicago	March 2019
	KY-WV LSAMP Research Symposium	
	Marshall University, Huntington, West Virginia	March 2019
	AGNES: Algebraic Geometry Northeastern Series	
		Fall 2017, 2018
	AMS Spring Central Sectional Meeting	
	The Ohio State University, Columbus	March 2018

GAGS: The Georgia Algebraic Geometry Symposium
Georgia Tech, Atlanta

February 2018

Mathfest 2017

Chicago, Illinois

July 2017

KYMAA Annual Meeting

Spring 2016, 2017