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: Scrollar 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

Grader

- MA 661, Modern Algebra II	Spring 2018

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),	
	Vice President	**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-Febuary 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 SeminAUR	
	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