

Noelle Sawyer

Contact email: sawyern@southwestern.edu
website: noellesawyer.com

Employment **Southwestern University**, Georgetown, TX
Associate Professor of Mathematics July 2026 - Present
Genevieve & Thatcher Atkin Junior Professor August 2023 - June 2026
Assistant Professor of Mathematics August 2020 - June 2026

Education **Wesleyan University**, Middletown, CT
Ph.D. in Mathematics May 2020
Advisor: David Constantine
Thesis: Partial marked length spectrum rigidity of negatively curved surfaces

Vassar College, Poughkeepsie, NY
B.A. in Mathematics and History May 2014

Research Interests My research interests are in dynamics, geometry and topology. I am particularly interested in thermodynamic formalism, Riemannian geometry, and marked length spectrum rigidity.

Papers **Local product structure for equilibrium states of geodesic flows and applications.**
With Benjamin Call, David Constantine, Alena Erchenko, and Grace Work
Journal of Modern Dynamics, February 2026.
Unique equilibrium states for geodesic flows on flat surfaces with singularities.
With Benjamin Call, David Constantine, Alena Erchenko, and Grace Work
International Mathematics Research Notices, September 2022.
Phase transitions for the geodesic flow of a rank one surface with nonpositive curvature.
With Keith Burns, Jérôme Buzzi, and Todd Fisher
Dynamical Systems, June 2021.

Math Community **MAA-AWM Lecturer** Fall 2025 - Spring 2028
Infinite Possibilities Conference April 2025
Plenary Speaker.
Math for All: Austin April 2025
Plenary Speaker.
Big Ideas in Dynamics Spring 2023 - Spring 2025
An AIM Research Community.
Co-organized with Benjamin Call.
Big Ideas in Dynamics and Geometry September 2024
A hybrid conference at UIC.
Co-organized with Benjamin Call and Laura Schaposnik.

Mid-Atlantic Regional Math Alliance Conference Keynote Speaker.	April 2024
A Word Problem A special session at Science Writers, co-organized with Sam Hansen, Kenna Hughes-Castleberry, and Sadie Witkowski.	September 2023
Underrepresented Students in Topology and Algebra Research Symposium (USTARS) Keynote Speaker.	March 2023
Math Equity Forum University of Toronto.	October 2022
Austin Math Teachers' Circle University of Texas at Austin.	March 2022
Hidden Norms Webinar Semi-Norm Speaker (Breaking Norms)	February 2022
Black in Math Week Co-organized with Marissa Loving, Candice Price, Dwight Williams II, Michole Enjoli, and more.	November 2020
Midwest Dynamical Systems Early Career Conference Co-organized with Ben Call, Ivan Chio, and Kitty Yang	November 2020

Media

FOCUS Roundtable: On the Value of Inclusivity, Part II An MAA FOCUS article by Claudio Gómez-González and Stephen Kennedy	April 2026
FOCUS Roundtable: On the Value of Inclusivity, Part I An MAA FOCUS article by Claudio Gómez-González and Stephen Kennedy	December 2025
Focus on Diversity <i>A Conversation with Noelle Sawyer and Andrés Vindas Meleéndez</i> An MAA FOCUS Article by Alicia Prieto-Langarica.	August 2024
A Black Mathematical History A film review in <i>Nature</i> .	March 2024
Mathematically Gifted and Black Honoree A profile for Black History Month. Meet a Mathematician A video interview.	February 2024 December 2023
A Call to Defend Bodily Autonomy in the Math Community Letter to the Editor in the AMS Notices.	March 2023
Modern Mathematics Confronts its White, Patriarchal Past An article in <i>Scientific American</i> . Written By Rachel Crowell.	August 2021
Who Will Celebrate You? A blog post on the AMS inclusion/exclusion blog.	June 2021
The First Black in Math Twitter Event Appeared in MAA Math Values Blog and the NAM newsletter Authored with Omayra Ortega.	December 2020
#BlackInMathWeek An episode of the podcast Relatively Prime. Hosted with Michole Enjoli.	November 2020

Mentoring

EDGE Real Analysis Instructor.	June 2025/26
Roots of Unity Geometry/Topology Mentor.	June 2024
Honors Thesis Supervision	Fall 2022 - Spring 2023

Orbits on Translation Surfaces: Introducing Barriers and Game-Building

with Rowan Via.

Independent Study

Spring 2022

Math Communication

with Emily Thompson.

Mentor at Topology Students Workshop

July 2020

Georgia Institute of Technology

Directed Reading Program, Wesleyan University

Discrete Geometry

Spring 2019

Hyperbolic Geometry

Fall 2018

Invited Talks

Indiana MAA Section Meeting

April 2026

Plenary Speaker.

Texas MAA Section Meeting

March 2026

Plenary Speaker.

Trinity University Majors' Seminar

February 2026

Rice University Math Colloquium

September 2025

Modern Mathematics Workshop at SACNAS

October 2024

AIM invited speaker.

University of Texas at Austin Topology Seminar

April 2024

University of Wisconsin Madison Dynamics Seminar

Feb 2024

University of Illinois Chicago Dynamics Seminar

Feb 2024 **South Central**

Topology Conference

October 2023

Columbia University Geometry Seminar

April 2023

Columbia University Undergraduate Colloquium

April 2023

University of Houston Dynamics Seminar

March 2023

A Dynamical Weekend at Wesleyan

March 2023

Wesleyan University.

George Mason University Geometry Seminar

November 2022

Women in Groups, Geometry, and Dynamics

June 2022

Special Session. AWM Research Symposium.

University of Minnesota.

Smith College Brown Bag Series

April 2022.

The College of New Jersey Colloquium

March 2022

OURFA²M² Our Stories

December 2021

Wake Forest University Colloquium

November 2021

Rice University Topology Seminar

April 2021

Indiana University Geometry Seminar

March 2021

Bryn Mawr Distressing Math Collective

March 2021

University of Washington Rainwater Seminar

February 2021

Cal State East Bay Colloquium

January 2021

Women of Color in Topology and Algebra

January 2021

AMS-AWM Special Session. Joint Math Meetings.

Boston College Dynamics Seminar

October 2020

Graduate Student Online Anything Topology Seminar

April 2020

University of Virginia Geometry Seminar

February 2020

Fractal Geometry, Dynamics, and Applications

January 2020

AMS Special Session. Joint Math Meetings. Denver.

Ohio State University Topology Seminar

November 2019

Yale University Geometry and Topology Seminar

September 2019

Midwest Dynamical Systems Early Career Conference

May 2019

Ohio State University.

University of Hartford Undergraduate Colloquium

April 2019

Statistical and Geometrical Properties of Dynamical Systems October 2018
AMS Special Session San Francisco State University.

**Contributed
Talks**

Talk Math with Your Friends July 2020
Poster Presentations by Women Graduate Students January 2020
AWM Workshop. Joint Math Meetings. Denver.
**Graduate Student Conference in Algebra, Geometry
and Topology** June 2019
Temple University. Area and partial length spectrum data.
Graduate Student Topology and Geometry Conference March 2019
UIUC. Area and partial length spectrum data.
Graduate Student Seminar
Wesleyan University.
- Ends of groups. November 2019
- Building ε -dense closed geodesics. March 2019
- Fun with discrete geometry and polygonal curvature. September 2018
- Geodesic currents and the boundary at infinity. April 2018
- It's Chaotic: an introduction to topological entropy. October 2017
- Hadamard's Theorem. March 2017
- Power indices and the upcoming election. February 2016
Special Preliminary Examination. October 2017
Wesleyan University. The specification property and closed orbit measures.

Teaching

Southwestern University
Modern Calculus I
Topology
Introduction to Statistics
Real Analysis
New Experiences in Research Design
Algebraic Structures
First Year Seminar: If Board Games Could Talk
EQUIP 2022 and 2023

Instructor, Wesleyan University
Elements of Calculus Part I Fall 2019
Elements of Calculus Part II Spring 2018
Introductory Calculus II Spring 2017

Graduate Teaching Assistant, Wesleyan University
Discrete Math Spring 2020
Differential Equations Spring 2019
Math Workshop Fall 2018 and Spring 2016
Vectors and Matrices Fall 2017
Combinatorics Fall 2016
Calculus I, Part II Fall 2015
Calculus I, Part II Spring 2015
Multivariable Calculus Fall 2014

**Teaching Assistant,
Wesleyan Center for Prison Education**
Intermediate Algebra Fall 2016

Summer School Instructor,

St. John's College, New Providence, The Bahamas.
 Seventh Grade Math June 2014, 2013, 2011, and 2010

**Head Supplemental Instruction Leader,
 Quantitative Reasoning Center, Vassar College.**
 Single Variable Calculus II Spring 2014
 Single Variable Calculus I Fall 2013

**Supplemental Instruction Leader,
 Quantitative Reasoning Center, Vassar College**
 Single Variable Calculus II Spring 2013
 Single Variable Calculus I Fall 2012

Other Service

Committee on the Inclusivity Prize July 2026 - June 2029
 Mathematical Association of America.

Human Resources Board October 2023 - March 2026
 American Institute of Mathematics.

**2025 Mathematical Congress of the Americas
 Travel Grants Selection Committee** Sept 2024 - August 2025
 American Mathematical Society

Faculty Diversity, Equity, Inclusion and Belonging Fall 2021- Present
 Southwestern University.

Publicity and Publication Committee August 2019 - August 2021
 National Association of Mathematicians.

Directed Reading Program Committee September 2018 - May 2020
 Wesleyan University.

Co-founder and Vice President September 2018 - May 2020
 AWM Grad Student Chapter, Wesleyan University.

Co-organizer January 2019 - December 2019
 Graduate Student Seminar, Wesleyan University.

Vice President September 2017 - July 2019
 AMS Grad Student Chapter, Wesleyan University.

Career Panel April 2019
Beyond the Binary conference, University of Hartford.

Editorial Board June 2018 - January 2019
 MAD Pages, National Association of Mathematicians.

Graduate Life After Vassar Panel September 2018
 LAVA and AWM, Vassar College.

Graduate School Panel February 2018
 Physics and Math Club, Montclair State University.

Graduate School Panel October 2017
 McNair Program, Wesleyan University.

Graduate Student Working Group July 2016 - June 2017
 Wesleyan University.

Treasurer July 2015 - June 2016
 Graduate Student Association, Wesleyan University.

Speaker February 2016
Life After Vassar by LAVA and AWM, Vassar College.

Co-Chair Spring 2014
 Relay for Life Committee, Vassar College.

**Other
 Conferences
 & Workshops
 Attended**

MAA Mathfest August 2022
Flexibility and rigidity in dynamical systems March 2022
 Simons Center for Geometry and Physics. Stony Brook, New York.

MAA Mathfest	August 2021
Joint Math Meetings	January 2021
Paradigms: Diversity in Graduate Mathematical Sciences	November 2020
Mastery Grading Conference	June 2020
Joint Math Meetings	January 2020
Denver, Colorado.	
Workshop in Dynamical Systems and Related Topics	Sept 2019, Oct 2018
Pennsylvania State University.	
Women in Mathematics in New England	September 2017-2019
Smith College.	
AIM Workshop on Equilibrium States of Dynamical Systems Arising from Geometry.	July 2019
American Institute of Mathematics.	
Graduate Student Conference in Algebra, Geometry and Topology.	June 2017, 2019
Temple University.	
Midwest Dynamical Systems Early Career Conference	May 2019
Ohio State University.	
Graduate Student Topology and Geometry Conference	March 2019
University of Illinois at Urbana Champagne.	
Midwest/McGehee Dynamical Systems Conference	November 2018
University of Minnesota.	
AMS Fall Western Sectional Meeting	October 2018
San Francisco State University.	
Northeast Analysis Network Conference	September 2018
University at Albany SUNY.	
Topology Students Workshop	June 2018
Georgia Institute of Technology.	
Séminaire de Mathématiques Supérieures 2017	July 2017
Contemporary Dynamical Systems. Université de Montréal.	
Graduate Student Topology and Geometry Conference	April 2017
Michigan State University.	