

Emille Davie Lawrence

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WEB

<http://www.emilledavielawrence.com>

https://en.wikipedia.org/wiki/Emille_D._Lawrence

RESEARCH INTERESTS

Spatial Graph Theory, Geometric Topology

EDUCATION

Doctor of Philosophy, Mathematics

University of Georgia, 2007

Advisors: Professor Will Kazez and Professor Emeritus Clint McCrory

Master of Arts, Mathematics

University of Georgia, 2004

Bachelor of Science, Mathematics

Spelman College, 2001

PROFESSIONAL APPOINTMENTS

Term Associate Professor and Department Chair

Department of Mathematics and Statistics

University of San Francisco

Summer 2020 – present

Term Associate Professor

Department of Mathematics and Statistics

University of San Francisco

Fall 2018 – present

Term Assistant Professor

Department of Mathematics and Statistics

University of San Francisco

Fall 2011 – Spring 2018

Assistant Professor

Department of Mathematics and Statistics

California State Polytechnic University, Pomona

2010–2011

Postdoctoral Fellow

Department of Mathematics

University of California, Santa Barbara

2007–2010

REFEREED PUBLICATIONS

E. D. Lawrence, R. Wilson, The structure of the Heawood graph. *Geombinatorics*. **30** (2021), no. 4, 169-176.

E. D. Lawrence, *What is a Tangle?*, in C. Adams, E. Flapan, A. Henrich, L. Kauffman, L. Ludwig, and S. Nelson, eds., *Encyclopedia of Knot Theory*, CRC Press, (2021).

E. D. Lawrence, *Rational and Nonrational Tangles.*, in C. Adams, E. Flapan, A. Henrich, L. Kauffman, L. Ludwig, and S. Nelson, eds., *Encyclopedia of Knot Theory*, CRC Press, (2021).

E. Flapan, E. D. Lawrence, R. T. Wilson, Topological symmetry groups of the Heawood graph, *Symmetry* Vol. 12, (2020) 546, 9 pages.

<https://doi.org/10.3390/sym12040546>

E. Flapan, E. D. Lawrence, Topological symmetry groups of Möbius ladders, *J. Knot Theory Ramifications* Vol. 23, No. 14 (2014), 1450077.

E. D. Lawrence, A new distinguished form for 3-braids, *Osaka J. Math.* **51** (2014), 537-543.

PUBLICATIONS IN
PRESS

D. Chambers, E. Flapan, D. Heath, E. D. Lawrence, C. Thatcher, R. Vanderpool
Topological symmetry groups of the Petersen graph.
Journal of Knot Theory and Its Ramifications.

PUBLICATIONS IN
PREPARATION

A. Álvarez, M. Hunnell, J. Hutchens, E. Flapan, E. Lawrence, P. Lewis, C. Price, R. Vanderpool
Topological symmetry groups of the Generalized Petersen Graphs

BOOKS AND
MONOGRAPHS

E. D. Lawrence, E. Goins, and O. Ortega, eds. *Proceedings of the Golden Anniversary Celebration of the National Association of Mathematicians.* Contemporary Mathematics Series (CONM), Volume 759 (2020).

<https://doi.org/10.1090/conm/759>

A. Henrich, E. D. Lawrence, M. Pons, D. Taylor, eds. *Living Proof: Stories of Resilience Along the Mathematical Journey.* AMS-MAA Press, 2019. Print.

E. Flapan, E. D. Lawrence, et. al. *Knots, molecules, and the universe: an introduction to topology.* American Mathematical Society, 2016. Print.

EXPOSITORY
PUBLICATIONS

E. D. Lawrence, Math Mamas: Navigating Mathematics and Motherhood, in: D. Dumbaugh, D. Haunsperger, eds. *Count Me In: Community and Belonging in Mathematics*, forthcoming.

E. D. Lawrence, Mathematics for Social Justice: A Book Review, *Notices of the American Mathematical Society*, April 2020, pp. 532-533.

E. D. Lawrence, A Dream Almost Deferred, *Living Proof: Stories of Resilience Along the Mathematical Journey*, AMS-MAA Press, 2019, pp. 104-105.

E. D. Lawrence, Power in Numbers: A Book Review, *Notices of the American Mathematical Society*, February 2019, pp. 251-253.

E. D. Lawrence, Geometry of Redistricting, *MAA Focus Magazine*, December 2017/January 2018, pp 22-25.

GRANTS AND
AWARDS

Karen EDGE Fellowship, 2021-2024
\$24,000 to support research in mathematics

Arthur I. Karshmer Award for Distinguished Service to Disability Issues,
2021
University of San Francisco

Association for Women in Mathematics Service Award, 2021

NSF INCLUDES “WATCH US” mini-grant, 2017
\$2000 to fund a “Women Do Math” Symposium at the University of San Francisco

Association for Women in Mathematics Mentoring Travel Grant, 2017
\$3912 to support travel to work with collaborator Erica Flapan

Cal Poly Pomona Provost’s Teacher Scholar Award, 2011
career development funds of \$5000 and \$6000 for Summer 2011 and 2012, respectively

Cal Poly Pomona ADVANCE Career Development Award, 2011
support for summer, travel, supplies, student asst. of up to \$10,000 for AY 2010-2011

UCSB Department of Mathematics Mochizuki Teaching Award, 2009

MEDIA

A Seat at the Table: Association for Women in Mathematics, The First 50 Years (2022)

A short video celebration of AWM by George Csicsery, Zala Films

Journeys of Black Mathematicians (working title)

A documentary series directed by George Csicsery, Zala Films

Sponsored by MSRI and scheduled for completion in January 2024

MASSOLIT

Mathematics Course Lecturer

Forthcoming 2022

Kids Math Talk Podcast

Episode 23: Math is Play - National Math Festival Preview

March 2021

“Math Mamas” AMS Blog

Editor-in-Chief

February 2019-present

“My Favorite Theorem” Podcast

Scientific American Blog

August 2017

INVITED
CONFERENCE
RESEARCH TALKS

MAA Intermountain Section Speaker

March 2022

MAA Golden Section Speaker

February 2022

Women in Mathematics in New England (WIMIN) 2020

Plenary Speaker

October 2020

Partisan Gerrymandering and the Efficiency Gap
AMS Special Session on The Mathematics of Social Justice
Joint Mathematics Meetings, January 2020

Topological symmetry groups of the Petersen graph.
AMS Special Session on Invariants of Knots and Spatial Graphs
Fall Western Sectional Meeting
University of California, Riverside, November 2019

Spatial Graph Theory: A Primer
Plenary Speaker
Unknot Conference IV
University of Washington, Bothell, July 2019

Topological Symmetry Groups of the Heawood Graph
AMS Special Session on Women in Topology
Joint Mathematics Meetings, January 2019

Partisan Gerrymandering and the Efficiency Gap
AMS Special Session on Social Change In and Through Mathematics and Education
AMS Fall Western Sectional Meeting
San Francisco State University, October 2018

Spatial Graphs
MAA Invited Paper Session on Spatial Graphs
MAA MathFest, July 2017

Topological Symmetry Groups of Graphs in S^3
AWM Research Symposium
University of California, Los Angeles, April 2017

Topological Symmetry Groups of Möbius Ladders
AMS Special Session on RE(UF)search on Graphs and Matrices
Joint Mathematics Meeting, January 2017

Topological Symmetry Groups of Möbius Ladders
Chico Topology Conference
California State University, Chico, May 2016

Topological symmetry groups of Möbius ladders
AMS Special Session on Spatial Graphs
AMS Fall Western Section Meeting
California State University, Fullerton, October 2015

Topological symmetry groups of Möbius ladders
Field of Dreams National Conference
Phoenix, AZ, November 2014

Topological symmetry groups of Möbius ladders
25th Annual Bay Area Discrete Math Day
St. Mary's College of California, November 2012

A new distinguished form for 3-braids and its application to the σ -order on B_3

AMS Special Session on Group Theory and Generalizations
Joint Mathematics Meetings, January 2012

The σ -order on B_n

Keynote Speaker

Underrepresented Students in Algebra and Topology Research Symposium (USTARS)
University of Iowa, April 2011

An introduction to right-angled Artin groups

Women in Math Symposium

Pomona College, November 2010

The Game of Nim

SACNAS National Conference

Anaheim, CA, Oct. 2010

Detecting right-veering homeomorphisms of the once-punctured torus

AMS Special Session on Knotting Around Dimension Three: A Special Session in
Memory of Xiao-Song Lin

AMS Fall Western Sectional Meeting

University of California, Riverside, November 2009

Detecting right-veering homeomorphisms of the once-punctured torus

SACNAS National Conference

Dallas, TX, Oct. 2009

Characterizing right-veering surface homeomorphism using the Burau representation

NAM Granville-Browne-Hayes Session

Joint Mathematics Meetings, January 2008

Right-veering diffeomorphisms of bordered surfaces and the Burau representation of B_3

AMS Special Session on Mapping Class Groups and Handlebodies

Joint Mathematics Meetings, January 2007

PROFESSIONAL
DEVELOPMENT

African Diaspora Joint Mathematics Workshop (ADJoint)

Mathematical Sciences Research Institute (remote due to pandemic)

June 21-July 2, 2021

African Diaspora Joint Mathematics Workshop (ADJoint)

Mathematical Sciences Research Institute

Berkeley, CA

July 8-19, 2019

Research Experience for Undergraduate Faculty Program

American Institute of Mathematics

San Jose, CA

June 11-15, 2018

Geometry of Redistricting Workshop

Educator Track Participant

Tufts University

Medford, MA
August 7-11, 2017

Mathematical Sciences Internship Workshop

Participant
IPAM - UCLA
September 2015

AIM SQuaRE

Visualizing Dessins d'Enfants
American Institute of Mathematics
Palo Alto, CA
March 17-21, 2014

Research Experience for Undergraduate Faculty Program

Institute for Computational and Experimental Research in Mathematics
Providence, RI
June 4-8, 2012

Park City Mathematics Institute Undergraduate Faculty Program

Elementary Topology in the Undergraduate Curriculum
Park City Mathematics Institute
Park City, UT
July 3-23, 2011

SERVICE TO THE
PROFESSION

Mathematical Association of America Board of Directors

Officer-at-Large
February 2021-January 2024

Joint Mathematics Meetings Program Committee

Member at Large
November 1, 2020-January 31, 2022

Editorial Board of La Matematica

February 2021-present

Mathematical Association of America Congress

Representative for Minority Interests
January 2018 - present

Associate Editor for College Mathematics Journal

Associate Editor
January 2019-present

Association for Women in Mathematics

50th Anniversary Committee Chair
August 2019-present

Mathematical Association of America

Committee on Undergraduate Students
January 2018 - present

Association for Women in Mathematics

Mentor Network Committee Chair

August 2017 - present
committee member since August 2016

Association for Women in Mathematics

Programs Committee member
January 2018-present

National Association for Mathematicians

Golden Anniversary Capital Campaign Committee Member
June 2017-June 2019

SERVICE TO THE **Mathematics and Statistics Department Chair**
UNIVERSITY OF SAN FRANCISCO June 2020 - present

USF Black Scholars Program Director

August 2021 - present

COSEC Chair

August 2021 - present

USF Policy Board Science Representative

Fall 2019 - Fall 2021

USF Diversity in STEM Council Member

Fall 2019 - present

Core Advisory Committee

Core B Chair
Academic Year 2020-2021

Black Scholars Program Selection Committee Member

Spring 2021 and Spring 2020

Environmental Science Tenure Track Search External Member

Fall 2017

Student Chapter of the Association for Women in Mathematics

Founding advisor
Summer 2017 -present

Service Task Force member

Sciences representative
Summer 2017-Fall 2017

African American Studies Program Advisory Board Member

Fall 2012 - present

Black Community Council Marketing committee chair

Fall 2015 - Fall 2017

Teaching Preview

USF Students of Color Overnight Experience
April 2016, April 2017

USF Upward Bound Math Circle guest speaker

December 2012

OUTREACH

My Journey in STEM: Interactive Panel for Young Women in Math

Virtual panel discussion sponsored by the MAA

August 2021

National Math Festival Lecturer

“Math is Play”

Walter E. Washington Convention Center, Washington D.C.

April 2021 (remote due to pandemic)

Panel to the People

Advancing Mathematics Communication

Virtual panel discussion

August 2020

Math is Play

National Girls Collaborative Project Webinar

April 2020

A Conversation about *Living Proof*

Pacific Math Alliance Conference

California State University, East Bay

October 2019

National Research Experience for Undergraduates Program Mini-Conference

Guest speaker

MAA Carriage House

November 2018

Visions of Success for High School Students

Workshop leader

University of San Francisco

November 2018

Joint EDGE-MOCA Speaker Series (JEMMS)

Guest speaker

Iowa State University

October 2017

Enhancing Diversity in Graduate Education Program

Abstract Algebra Instructor

Mills College

June 19-30, 2017

National Math Festival Lecturer

“How Does Google Do It? The PageRank Algorithm”

Walter E. Washington Convention Center

Washington, D.C.

April 22, 2017

Summer Math and Science Honors (SMASH) Academy

“Meet the Doctors” panelist

February 2017

MSRI Undergraduate Program

Colloquium speaker

June 2016, June 2010

Sofia Kovalevskaya Day

Guest speaker

University of Wisconsin-Eau Claire

March 2016

Celebration of Mind

Presenter

Mathematical Sciences Research Institute

October 2015

AGEP PRiME

Guest speaker

Purdue University

June 2011

CONFERENCES,
SPECIAL SESSIONS,
AND EVENTS
ORGANIZED

AMS Department Chairs Workshop

Co-organizer

Joint Mathematics Meetings

2022 - 2024

We Speak: Inspiring Women in Mathematics Speaker Series

Co-organizer

Monthly events in celebration of the 50th anniversary of AWM

AMS Special Session on Women of Color in Topology and Algebra

Co-organizer

Joint Mathematics Meetings

January 2021

AWM Through the Decades Panel Discussion

Co-organizer

Joint Mathematics Meetings

January 2021

Geometry of Redistricting Regional Workshop

Co-organizer

University of San Francisco

March 15-18, 2018

Infinite Possibilities Conference for Minority Women in Mathematics

Steering Committee Member

2015, 2010

PROFESSIONAL
MEMBERSHIPS

American Mathematical Society

Association for Women in Mathematics

Mathematical Association of America

National Association of Mathematicians