

# Samantha C. Hill

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Department of Mathematics, University of Utah  
155 South 1400 East, Room 233  
Salt Lake City, UT 84112  
hill@math.utah.edu

<b>SUMMARY</b>	Mathematician with 4+ years experience conducting quantitative analysis of biological systems and communicating research methods and results. Leader, volunteer, and liaison with 3 years experience advocating for women in math.																												
<b>RESEARCH INTERESTS</b>	Applied mathematics, mathematical biology, mathematical ecology, optimal foraging theory, plant associational resistance.																												
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<b>COMPUTER SKILLS</b>	MATLAB • R • XPP/XPPAUT • L <sup>A</sup> T <sub>E</sub> X	
<b>AWARDS</b>	Outstanding Graduate Student Award, U of U Math Department	April 2019
	NSF Research Training Grant Fellowship RTG-1148230	Fall 2018 - Spring 2019
	Poster Award, SIAM Conference on the Life Sciences	August 2018
	Student Travel Award, SIAM Conference on the Life Sciences	August 2018
	Center for Quantitative Biology Poster Award, SMB Annual Meeting	July 2017
	RTG Lab Rotation, Plant-Soil Feedback (PI: Frederick R. Adler)	2016
	RTG Lab Rotation, Evolutionary Ecology Fly Laboratory (PI: Nitin Phadnis)	2015
	NSF Research Training Grant Fellowship RTG-1148230	Fall 2014 - Spring 2015
<b>TEACHING &amp; MENTORSHIP</b>	<b>Mathematical Biology Journal Club Co-Leader</b> (MATH 7875)	2018 - 2019
	Provided feedback and mentorship to early graduate students interested in mathematical biology, enhancing their critical thinking and presentation skills for math journal articles.	
	<b>Instructor of Record</b>	2015 - 2018
	Taught undergraduate math courses with full responsibility for lectures, assessments, and grades.	
	• <b>Accelerated Calculus II for Engineers</b> (MATH 1321)	Spring 2018
	• <b>Differential Equations and Linear Algebra for Engineers</b> (MATH 2250)	Fall 2017
	• <b>Trigonometry</b> (MATH 1060)	Fall 2015 - Spring 2017
	<b>Math Tutor for Undergraduates</b>	Fall 2015 - Spring 2017
	T. Benny Rushing Mathematics Center, University of Utah Salt Lake City, UT	
<b>ADDITIONAL TRAINING</b>	<b>MSRI Mathematical Analysis of Behavior Workshop</b>	June 2018
	Janelia Research Campus, Ashburn, VA	
	<b>IMA Workshop for Women in Mathematical Biology</b>	May 2018
	University of Minnesota, Minneapolis, MN	
	<b>Mathematical Problems in Industry Workshop</b>	June 2016
	Duke University, Durham, NC	
	<b>Graduate Student Mathematical Modeling Camp</b>	June 2016
	Rensselaer Polytechnic Institute, Troy, NY	
	<b>Department of Mathematics Teaching Workshop</b>	August 2014
	University of Utah, Salt Lake City, UT	
	<b>Enhancing Diversity in Graduate Education for Women</b>	Summer 2014
	Harvey Mudd College, Claremont, CA	
	<b>Summer Program for Women in Mathematics</b>	Summer 2013
	George Washington University, Washington, D.C.	

## SERVICE

### **Association for Women in Mathematics (AWM) Student Chapter, President** (August 2018 - Present)

- Bystander Intervention Training April 2019  
Organized workshop attended by forty students, faculty, and staff.
- Biannual Speaker Series Fall 2018 - Spring 2019  
Co-organized the invitations and visits of women mathematicians, including a research seminar and a career experiences colloquium.
- AWM and GSAC Teas with Faculty Candidates Fall 2018 - Spring 2019  
Hosted teas to introduce math faculty applicants to our AWM community, corresponding to the first year a woman in pure math accepted our job offer.
- Math Graduate Student Life Panel October 2018  
Organized a panel for graduate students to share experiences and answer questions for undergraduate students considering graduate programs in mathematics.
- Event Management Fall 2018 - Spring 2019  
Worked with AWM members on a climate survey, graduate-to-undergraduate student mentoring network, panel for graduate students to find a research advisor,  $\text{\LaTeX}$  workshop co-hosted by our SIAM student chapter, and social events. Liaised with math department for funding and support.

### **Treasurer** (August 2016 - July 2018)

- Organized a faculty research panel, lunch discussion on the benefits of programs aimed at the recruitment and retention of women in math, and Hidden Figures movie night. Volunteered for after-school K-8 Girls Math Night at Zaniac.

**Graduate Student Advisory Committee, Active member** 2016 - Present  
Answering questions and offering advice to prospective and incoming students, as the Mathematical Biology student contact.

**U of U AWM Mentoring Network, Mentor to an undergraduate woman math major** September 2018 - Present  
Meeting monthly to discuss classes, community, pitfalls, and advice. Serving as a friendly face in the department and a resource.

**Kenneth Cooke Summer Research Fellowship, Committee Member** April 2018, 2019  
Read and evaluated applications for a Pomona College Math Department undergraduate fellowship.

**Expanding Your Horizons, Salt Lake Community College, Volunteer** March 2019  
Taught 30 girls, grades 6-10, how to fold Schwarz lanterns, introduced ideas of approximation and surface area, and talked about college and graduate school in math.

**Hands-on Math Workshop at Bryant Middle School, Volunteer** December 2018  
Taught 90 middle school students how to fold Schwarz lanterns, introduced ideas of approximation and surface area, and talked about college and graduate school in math.

**Nebraska Conference for Undergraduate Women in Mathematics, Invited Graduate Student** January 2018  
Served as a panelist, co-lead a breakout session, hosted a table at a networking dinner, and moderated an undergraduate research talk session, as one of six invited graduate students. Roughly 250 undergraduate women attended.

**AWM and USAC Graduate School Panel, Panelist** November 2017  
Shared experiences and answered questions for undergraduate students who are considering graduate programs in mathematics.

**Society for Mathematical Biology Conference, Volunteer** July 2017  
Moderated contributed talk sessions, worked at registration, helped set up poster session, led a field trip, and prepared name tags and bags of conference information.

**Graduate Student Recruitment, Volunteer** March 2016 - 2019  
Served as a host for prospective students, and presented research within a series of graduate student talks.

**OUTREACH  
TALKS**

*Information, Foraging Behavior, and Environment* March 2019  
Graduate Student Recruitment, University of Utah Department of Mathematics  
Salt Lake City, UT

*Adventures in Optimal Foraging* (Interactive Workshop) November 2018  
Science Day for grades 9-12, University of Utah  
Salt Lake City, UT

*Should I Stay or Should I Go?* April 2018  
Graduate Student Colloquium Micro-talks, University of Utah  
Salt Lake City, UT

*Won't You Be My Neighbor?* March 2018  
Graduate Student Recruitment, University of Utah Department of Mathematics  
Salt Lake City, UT

*Associational Resistance and Optimal Foraging* (poster) October 2017  
Society for Advancement of Chicanos/Hispanics and Native Americans in Science Conference  
Salt Lake City, UT

*Modeling Plants with Math: Neighbors Matter* March 2017  
The Leonardo Science Museum  
Salt Lake City, UT

*Bridging 6th Street: Math and the Humanities* February 2014  
with Dr. Johanna Hardin and Dr. Gizem Karaali  
Phi Beta Kappa Lectures 2013-2014, Pomona College  
Claremont, CA

**PROFESSIONAL AFFILIATIONS** Association for Women in Mathematics  
Society for Industrial and Applied Mathematics  
Society for Mathematical Biology

**RELEVANT COURSES** Bifurcation Theory Spring 2017  
Advanced Statistical Modeling for Biologists Fall 2016  
Applied Complex Variables and Asymptotic Methods Spring 2016  
Asymptotic and Perturbation Methods Fall 2015  
Applied Linear Operator and Spectral Methods Fall 2015  
Partial Differential Equations Spring 2015

Analysis of Numerical Methods II Spring 2015  
Ordinary Differential Equations Fall 2014  
Analysis of Numerical Methods I Fall 2014  
Plant Ecology Fall 2014  
Mathematical Biology 2014-2016

- Stochastic Processes in Cell Biology (Spring 2016), Systems Physiology (Spring 2015), Cellular Physiology (Fall 2014)

**EXTRA** *Building Community Over Lunch* March 2019  
by Samantha C. Hill and Anna Macquarie Romanov  
Published in *AWM Newsletter*: March-April, Vol. 49 No. 2, p.32

*A Dance, told by Math* (poem) Fall 2016  
Published in *The Sponge*: “Invisible Worlds” edition  
University of Utah science and engineering literary magazine, student publication

**REFERENCES** Dr. Frederick R. Adler  
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