

Samantha L. Molnar

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RESEARCH INTERESTS	I am interested in characterizing blackouts in power systems using complex network science. In particular, I want to quantify the inertial response of traditional and non-traditional generation sources under various disturbances.	
EDUCATION	<i>PhD Student</i> , Computer Science University of Colorado Boulder, Boulder, CO, expected May 2020 GPA 3.9 <i>Bachelor of Science</i> , Physics University of Denver, Denver, CO, 2015	
HONORS	<i>University of Colorado Boulder</i>	2015-Present
	<ul style="list-style-type: none">• Outstanding Teaching Assistant, Outstanding Service Award	
	<i>University of Denver</i>	2013-2015
	<ul style="list-style-type: none">• Chancellors Scholarship, David and Betty Hess Scholar, Gladys Johnson Scholar, Edgar Everhart Endowment, Theresa James Scholarship	
PUBLICATIONS	<ol style="list-style-type: none">1. Nicole Sanderson, Elliott Shugerman, Samantha Molnar, James D. Meiss, and Elizabeth Bradley. <i>Computational Topology Techniques for Characterizing Time-Series Data</i>. The Sixteenth International Symposium on Intelligent Data Analysis, 2017.2. Joshua M. Vann, Samantha L. Molnar and M. Mercedes Calbi. <i>Equilibration processes during gas uptake inside narrow pores</i>. Phys. Chem. Chem. Phys., 2015, 17.	
EXPERIENCE	<i>Research Assistant - National Renewable Energy Lab</i>	Summer 2017
	<ul style="list-style-type: none">• Developed novel visualization techniques for networked time-series data.• Created visualizations that illustrate how the August 21st eclipse would affect solar generation in the Western United States.	
	<i>Consultant - NCWiT EngageCSEdu</i>	Summer 2016
	<ul style="list-style-type: none">• Performed quality assurance on resources based on my background in teaching and Computer Science.• Helped outline future goals and practices for site resources.	
	<i>Graduate Instructor - University of Colorado Boulder</i>	Summer 2016
	<ul style="list-style-type: none">• Taught Introduction to Data Structures.• Planned lessons, assignments, and recitations.• Managed teaching assistants.	
	<i>Lead Teaching Assistant - University of Colorado Boulder</i>	2016-Present
	<ul style="list-style-type: none">• Consulted on best teaching practices in the Computer Science classroom.	

- Managed orientation of over 30 new TA's, many of which were international students with little teaching experience.
- Organized Engineering college and Computer Science department orientation for incoming teaching assistants.
- Completed the Graduate Teacher Program Spring Intensive teaching workshops.

Teaching Assistant - University of Colorado Boulder Fall 2015 - Spring 2016

- Received departmental award for Outstanding Teaching Assistant.
- Taught recitations and guest lectures for Introduction to Computing and Discrete Structures.
- Developed materials for lectures and recitations.
- Created solutions for programming and written assignments.

Teaching Assistant - University of Denver 2014-2015

- Answered students physics-related questions.
- Clarified concepts for University and Modern Physics courses.

Research Assistant - University of Denver 2014 - 2015

- Built a magneto-optic kerr effect (MOKE) setup.
- Utilized MOKE to perform experiments and record measurements to study magnetic materials.
- Developed LabView code to run and collect data for laser experiment.
- Wrote successful funding proposal for Partners in Scholarship research grant through University of Denver to build MOKE setup.

Research Assistant - University of Colorado Boulder Summer 2014

- Developed Mathematica code to simulate two-dimensional double layers in plasmas.
- Compiled findings as well as wrote and presented paper for Research Experience for Undergrads community at end of program.

Research Assistant - University of Denver 2012 - 2014

- Developed and utilized Fortran computer code to simulate gas uptake and transport inside a nanopore.
- Presented research findings at American Physical Society meeting in Denver, CO in March 2014.
- Presented a poster at Colorado School of Mines Undergraduate Women in Physics Conference in Golden, CO in January 2014.

COMMUNITY SERVICE

University of Colorado Boulder Computer Science Recruitment February 2016

- Helped plan and carry out the Computer Science PhD recruitment weekend, with a particular focus on female applicants.

Society of Physics Students Outreach Chair - University of Denver 2014 - 2015

- Developed, implemented, and evaluated volunteer events to spread love of science to Colorado youth and throughout Denver community.

Volunteer at Summer Link to College - University of Denver Summer 2013

- Participated in teaching a weeklong summer workshop on "The Physics of Renewable Energy" as part of University of Denver's program "Summer Link to College," which encourages high school students from socio-economically disadvantaged groups to finish high school and pursue higher education.