

# SUSAN ROGOWSKI

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## EDUCATION

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### PhD Candidate in Biomathematics

August 2019 - Present

Florida State University

Research Advisors: Dr. Nick Cogan & Dr. Aseel Farhat

Expected Graduation: May 2024

### M.A. Mathematics

August 2017 - May 2019

Wake Forest University

Research Advisor: Dr. Sarah Raynor

### B.S. Mathematics

August 2011 - May 2015

James Madison University

Second Major: B.S. in Media, Arts, & Design with a concentration in Web Design

## RESEARCH INTERESTS

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Mathematical Modeling of Biological processes: I am interested in using Mathematics to answer Biological questions. In particular, my research has focused on developing algorithms for parameter estimation techniques for biological models such as bacteria and SIR-type models.

## ACADEMIC AWARDS AND HONORS

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Bettina Zoeller Richmond Endowed Fund

April 2023

Betty Anne Busbee Case Graduate Fellowship

April 2022

Clara Kibler Davis Scholarship, Florida State University

April 2021 & April 2022

Graduate Ambassadorship, Women and Math Program at the Institute for Advanced Study

August 2018

Summer Research Award, Wake Forest University

March 2018

## JOURNAL ARTICLES

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1. Luo, R., Herrera-Reyes, A. D., Kim, Y, **Rogowski, S.**, Smirnova, A, and White, D. (2023). Parameter Estimation for COVID-19 SVIRD Model Using Predictor-Corrector Algorithm. *[Submitted to Springer Contributed Book "Mathematical Modeling for Women's Health - Collaborative Workshop for Women in Mathematical Biology"]*
2. **Rogowski, S.**, Farhat, A., Cogan, N., Martinez, V. (2023). Recovering the Growth Rate of a Population from a Nonlinear System Using Partial and Noisy Observations. *[In Preperation]*

## PROGRAMMING LANGUAGES & SOFTWARE

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MatLab, LaTeX

Proficient

XPPAUT, SAS, Python

Intermediate Proficiency

Mathematica

Beginner Proficiency

## SELECTED PRESENTATIONS & WORKSHOPS

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*Parameter Estimation for COVID-19 Model Using Predictor-Corrector Algorithm* July 2023  
Society for Mathematical Biology (SMB) Annual Meeting  
The Ohio State University

*Parameter Estimation for COVID-19 Model Using Predictor-Corrector Algorithm* May 2023  
Biology and Medicine through Mathematics (BAMM)  
Virginia Commonwealth University

*Recovering the Growth Rate of Bacteria using Data Assimilation* February 2023  
Math for All Conference  
Tulane University

*Parameter Estimation Using Nudging on the Logistic Growth Equation* July 2022  
AWM Poster Session at the SIAM Annual Conference  
Pittsburgh, PA

*On Stable Estimation of Disease Parameters and Forecasting in Epidemiology* June 2022  
Collaborative Workshop for Women in Mathematical Biology:  
Mathematical Approaches to Support Womens Health  
Institute for Mathematics and it's Applications

*Parameter Estimation Using Nudging on the Logistic Growth Equation* May 2022  
BAMM Conference Poster Session  
Virginia Commonwealth University

*An Introduction to Modeling Biofilm-Mediated Bacteria in a Water Supply Network* April 2021  
HIGSA Talks  
Florida State University

*Modeling the Effects of Carboplatin & Taxol on Breast Cancer Cells* March 2020  
Math for All Conference  
Tulane University

Presented *Modeling DNA Replication using the sine-Gordon Equation* at:

Conference on Quantitative Approaches in Biology Poster Session September 2019  
NSF-Simmons Center for Quantitative Biology

Graduate Student & Postdoc Research Day Poster Session April 2019  
Wake Forest University

Piedmont-Triad Association for Women in Mathematics (AWM) Conference March 2019  
Wake Forest University

## TEACHING EXPERIENCE

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**Instructor of Record**, Florida State University August 2021 - Present  
**Subject:** Pre-Calculus, Calculus I, Calculus II

**Teaching Assistant**, Florida State University August 2019 - Present  
**Subjects:** Discrete Math, Ordinary Differential Equations, Pre-Calculus, College Algebra, Business Calculus, Math for Liberal Arts

**Mathematics Instructor**, Governor's School of North Carolina June - July 2019

**Math Tutoring Center Teaching Assistant**, Wake Forest University August 2018 - May 2019

**Teaching Assistant**, Wake Forest University June 2018 - May 2019  
**Subjects:** Linear Algebra, Real Analysis

**Mathematics Tutor**, Math Tutoring Center, Wake Forest University August 2017 - May 2019  
**Subjects:** Pre-Calculus, Calculus I - III, Linear Algebra, Real Analysis

**Private Mathematics Tutor** Nov 2017 - Present  
**Subjects:** High School Algebra, Calculus I-III, Partial Differential Equations, Ordinary Differential Equations

## SERVICE

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### Volunteering:

- Association for Women in Math (AWM) Campus Chapter Mentor Jan 2018 - Present
- Florida State University Math Fun Day Feb 2021 & March 2023
- Heart Math Tutoring Jan 2021 - May 2021
- Co-Organizer for AWM Piedmont-Triad Conference March 2019
- Wake Forest Math Counts program Feb 2019

### Leadership:

- Florida State AWM Campus Chapter President August 2023 - Present
- Congress of Graduate Students Speaker July 2023 - Present
- Congress of Graduate Students Deputy Speaker for Finance September 2022 - May 2023
- Florida State AWM Campus Chapter Treasurer Aug 2021 - August 2023
- Hispanic Graduate Student Association Treasurer & Vice President Aug 2021 - May 2022
- Wake Forest AWM Campus Chapter President Aug 2018 - May 2019