

# Sophie Louise Larsen

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## Curriculum Vitæ

### EDUCATION

**Ph.D. student, Mathematics, University of Illinois at Urbana Champaign, IL, January 2021 - Present**

Advisor: Pamela Martinez. Part of the PaDAS lab (Pathogen Dynamics Across Scales). Current research focus is the relationship between inequity and COVID-19 transmission.

**Bachelor of Science, Mathematics, University of Washington, Seattle, WA (Sep. 2016 - Jun. 2020)**

Minors in Norwegian and the Comparative History of Ideas

### HONORS

**Barbara Sando Scholarship in Mathematics**, awarded for Winter/Spring 2020

**Phi Beta Kappa**, inducted Spring 2019

**Annual Dean's List**, University of Washington, 2016-17 and 2017-18

### INDEPENDENT STUDY

**Math Special Topics, University of Washington, Winter/Spring 2019**

- Completed an independent study of *Differential Topology* (Guillemin & Pollack) under the supervision of Dr. Lucas Braune
- Topics included immersions, submersions, transversality, homotopy, Sard's Theorem and Morse functions, manifolds with boundary, intersection theory mod 2, winding numbers, and the Jordan-Brouwer Separation Theorem

**Math Special Topics, University of Washington, Fall 2018**

- Completed an independent study of *An Illustrated Theory of Numbers* by Martin Weissman, under the supervision of Prof. Bianca Viray (Parts I and II, Ch. 0-8)

### RESEARCH EXPERIENCE

**Undergraduate Volunteer, Yager Group, University of Washington, Oct. 2017 - Dec. 2018**

- Developed a combinatorial model to better understand the biophysical chemistry of a diagnostic assay
- Ran DNA amplification reactions (PCR/iSDA) and used gel electrophoresis to visualize results

### TEACHING EXPERIENCE

**Teaching Assistant, University of Illinois at Urbana-Champaign, Jan. 2021 - Present**

- Fall 2020: two discussion sections of Calculus I (MATH 221). Grade worksheets and exams.
- Spring 2021: two discussion sections of Calculus for Business (MATH 234)

**Math Grader, University of Washington, Winter/Summer Quarters 2019, Summer Quarter 2020**

- Graded homework with feedback for one section of Introduction to Mathematical Reasoning (MATH 300) in Summer 2019, and again in Summer 2020
- Graded homework for one section of Linear Analysis (MATH 309) in Summer 2020

- Wrote homework keys and graded homework for two sections of Linear Analysis (MATH 309) in Winter 2019

#### **Volunteer Peer-Mentor, University of Washington, Spring/Fall 2018, Fall 2019**

- Trained in research-based pedagogical methods (Spring 2018)
- Facilitated problem-solving and study skill development in a weekly discussion workshop for General Chemistry (CHEM 142), under the supervision of a graduate teaching assistant (Fall 2018)
- Facilitated an additional workshop with a graduate student in Fall 2019
- Peer-mentors are part of the UW STEM-Dawgs program, whose purpose is to foster a sense of community within large undergraduate lecture courses, and address disparities in performance for women, underrepresented groups, and first-generation college students.

### **SERVICE**

#### **Undergraduate Affairs Committee, Fall 2021 - Spring 2022**

- Serve on the committee as the graduate representative
- Help make decisions about undergraduate curriculum and programs

#### **GEO Disability Caucus, 2021 - Present**

- Member of the Disability Caucus which advocates for disabled students and workers on campus
- Currently developing a workshop on disability and the accommodations process, aimed at math department teaching assistants, staff, and faculty

### **ADDITIONAL SKILLS**

**LaTeX**

**R and RStudio**

**Norwegian** - professional working proficiency (approximately B2 on the CEFR scale; writing sample available upon request)

### **PROFESSIONAL MEMBERSHIPS**

**Association for Women in Mathematics**