Sophie Louise Larsen

(they/them)
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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 social inequity and COVID-19 transmission by implementing mechanistic models. This project is in collaboration with Prof. Ayesha S. Mahmud at UC Berkeley and Prof. Marc Lipsitch at the Harvard T.H. Chan School of Public Health.

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

RESEARCH EXPERIENCE

PhD Student, PaDAS Lab, University of Illinois at Urbana-Champaign, Jun. 2021 - present

- Advised by Prof. Pamela Martinez
- Modelling social inequity and COVID-19 transmission

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

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)

TEACHING EXPERIENCE

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

- Fall 2021: 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