

Katherine Mohr

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Education

Stanford University

Stanford, CA

PhD in Computer Science, advised by Fred Kjolstad and Keith Winstein (GPA: 4.03/4.0) Sept 2025 - Jun 2030 (expected)

- **Relevant Coursework:** Programming Languages, Formal Methods for Computer Systems, Efficient ML Inference
- **Awards:** EDGE Fellowship, CS PhD Fellowship

Massachusetts Institute of Technology

Cambridge, MA

M.Eng. & S.B. in Electrical Engineering and Computer Science (GPA: 5.0/5.0) Sept 2019 - Aug 2024

- **Teaching:** Programming Language Design, Dynamic Computer Language Eng, Graphics, Differential Equations
- **Awards:** 2023 SuperUROP Outstanding Research Award

Research Experience

Stanford Systems and Networking Research (SNR) Group & Compilers Group

Advisors: Keith Winstein & Fred Kjolstad

PhD Student Researcher

Sept 2025 - Present

- Developed and evaluated novel scheduling optimizations for Arca [1], an operating system for serverless compute that uses continuations as its isolation primitive

Stanford Information Networks Group (SING)

Advisor: Phil Levis

Rotation Student

Apr 2026 - June 2026

- Wrote a Linux kernel patch to migrate pages to “LtRAM”, RAM with asymmetric read/write latency [2]

Compilers at MIT (COMMIT) Group

Advisor: Saman Amarasinghe

Graduate Researcher

Sept 2023 - Aug 2024

- Developed a new technique to seamlessly migrate packet processing from an optimized kernel module to an unoptimized user application via on-stack replacement, to improve the correctness and performance of prior work

Undergraduate Researcher (SuperUROP)

Sept 2022 - June 2023

- Worked on LakePlacid, a system of compilers for optimizing networking applications with profile-guided optimization
- Designed and implemented a new toolchain for applying arbitrary compiler passes to some given source code

Visual Computing Languages and Systems (VCLS) Group

Advisor: Jonathan Ragan-Kelley

Undergraduate Researcher (UROP)

Sept 2021 - June 2022

- Developed a new tool for generating efficient pattern-matching code for Halide’s term rewriting system (TRS)

Publications

- [1] A. Srivatsan, Y. Deng, **K. Mohr**, et al. “Continuation-Centric Computing with Arca.” *OSDI*, 2026.
- [2] H. S. Shim, **K. Mohr**, and P. Levis. “The Kernel’s Write: Application Read-Only Memory.” *DIMES*, 2026.

Work Experience

Five Rings

New York, NY

Software Developer

Aug 2024 - Sept 2025

- Operated as a C++ generalist in a high-performance trading environment, building internal developer tooling, delivering trader-requested features, and refactoring latency-sensitive systems to enhance speed and efficiency across the codebase

Adobe

San Francisco Bay Area

Software Developer Intern

June 2023 - Aug 2023

- Implemented and tested different tactics for managing competing threads and prioritizing renders to improve efficiency and make background rendering less noticeable by Premiere Pro users

Computer Scientist Intern (C++)

May 2022 - Aug 2022

- Built an end-to-end GPU inference pipeline to prevent slowdowns due to extraneous copies between the CPU and GPU

LinkedIn

San Francisco, CA

Software Engineer Intern

June 2021 - Aug 2021

- Redesigned messaging delivery logic and plugin schemas to improve maintainability and security