

Shai Caspin

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shaicaspin.com

EDUCATION

August 2021—

Ph.D. in Computer Science

Princeton University, Princeton, New Jersey

Advised by Professor Amit Levy. Expected 2026.

August 2021—

March 2024

M.A in Computer Science

Princeton education, Princeton, New Jersey

Earned after completing coursework and general exam as part of Ph.D.

Aug 2017—

May 2021

Bachelor of Science in Computer Science and Mathematics

University of North Carolina at Chapel Hill, Chapel Hill, NC

Graduation with Distinction and Highest Honors for thesis titled "Evaluating and Optimizing Real-Time Software Transactional Memory". Dean's list all semesters. Study abroad at National University of Singapore School of Computing.

RESEARCH

August 2021—

Graduate Research Assistant

SNS Group, Princeton University

Projects: Enabling strong consistency for end-to-end encrypted applications under Byzantine actors, verifying memory safety of linked assembly for Rust.

August 2019—

June 2021

Undergraduate Research Assistant

Real-Time Systems Group, University of North Carolina at Chapel Hill

Projects: thread scheduling on Nvidia GPU, Software Transactional Memory for real-time systems in Rust, lightweight locking for read-dominant workloads.

PUBLICATIONS

- C. Nord*, **S. Caspin***, C. Nemitz, H. Shrobe, H. Okhravi, J. Anderson, N. Burow and B. Ward, "TORTIS: Retry-Free Software Transactional Memory for Real-Time Systems", Proceedings of the 42nd IEEE Real-Time Systems Symposium, December 2021. *shared first authorship
Outstanding Paper Award.
- C. Nemitz, **S. Caspin**, J. Anderson, and B. Ward, "Light Reading: Optimizing Reader/Writer Locking for Read-Dominant Real-Time Workloads", Proceedings of the 33rd Euromicro Conference on Real-Time Systems, July 2021 (Artifact available).

HONORS AND AWARDS

- NSF Graduate Research Fellowship (Princeton, 2023-2026)
- Gordon Y.S. Wu Graduate Fellowship in Engineering (Princeton, 2021-2026)
- Outstanding Paper Award (RTSS 2021)
- Stephen F. Weiss Award for Outstanding Achievement in Computer Science (UNC, 2021)
- Dell-EMC Scholarship (2018)
- Mary Frances Eldridge Scholarship (Town of Carrboro, 2017)

INDUSTRY

*May 2021—
August 2021*

Software Engineering Graduate Intern
Dell-EMC (remote)

CloudIQ Team in Networking Group.

*May 2020—
August 2020*

Software Engineering Intern
RSA Security, Dell-EMC, Bedford MA (remote)

Log Collection Team of RSA Netwitness.

*May 2019—
September 2019*

Software Engineering Intern
Device Magic, Raleigh NC

Full-stack development.

*May 2018—
August 2018*

Software Engineering Intern
RSA Security, Dell-EMC, Reston VA

Continuous Engineering Team of RSA Netwitness.

TEACHING

*Fall 2022—
Spring 2023*

Assistant in Instruction
Princeton University

- Spring 2023 - Nand to Tetris: Building a Modern Computer from First Principles (Prof. Shimon Schocken)
- Fall 2022 - Principles of Computer System Design (Prof. Amit Levy and Prof. Ravi Netravali).

*Aug 2019—
May 2021*

Learning Assistant
University of North Carolina at Chapel Hill

Department of Computer Science:

- Spring 2021 - COMP 311 Computer Organization (Prof. Henry Fuchs)
- Fall 2020 - COMP 311 Computer Organization (Fuchs)

- Spring 2020 - COMP 60H First Year Seminar in Lego Robotics (Fuchs)
- Fall 2020 - COMP 411 Computer Organization (Fuchs)

Department of Mathematics:

- Fall 2019 - MATH 547 Linear Algebra (Prof. Xavier Mela)

SERVICE AND MEMBERSHIP

- Princeton COS Committee on Climate and Inclusion Graduate Student Representative (2024-)
- Princeton COS Graduate Committee Member and Organizer (2022-)
- Princeton COS Graduate Student Mentor (2022-)
- Princeton Pre-Application Mentorship Organizer (2022-)
- ATC External Reviewer (2024)
- Princeton COS Research and Inclusion Social Events (RISE) member
- UNC CS TOPICS Reading Group Founder and Member
- UNC Women in Computer Science (WiCS) Member