

Cynthia Richey

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Education

- 2024 – **University of Pennsylvania**, Philadelphia, PA, United States
PhD, Computer Science
Advised by Benjamin C. Pierce.
- 2023 – 2024 **University of Washington**, Seattle, WA, United States
MSc, Computer Science
Advised by Zachary Tatlock & Chandrakana Nandi.
- 2019 – 2023 **University of Washington**, Seattle, WA, United States
BSc, Computer Science, Minor in Mathematics

Publications

- Preprint. **Fail Faster: Staging and Fast Randomness for High-Performance PBT**
*Cynthia Richey**, Joseph W. Cutler*, Harrison Goldstein, Benjamin C. Pierce.
- OOPSLA 2023. **Equality Saturation Theory Exploration à la Carte.** Anjali Pal, Brett Saiki, Ryan Tjoa*, *Cynthia Richey**, Amy Zhu, Oliver Flatt, Max Willsey, Zachary Tatlock, and Chandrakana Nandi.
- ICFP 2023 SRC. **What is a “Good” Ruleset? Comparing Rulesets Using Equality Saturation.** *Cynthia Richey.*

Awards, Scholarships, & Grants

- 2024 – 2029 NSF Graduate Research Fellowship
- 2024 Abel Lukens Stout Fellowship
- 2023 First Place Undergraduate, ICFP SRC
- 2022 – 2023 Burkhardt Family Endowed Scholarship
- 2021 – 2022 Leo Maddox Foundation Scholarship
- 2020 – 2021 Dreama Frost Endowed Scholarship
- 2019 – 2023 Pell Grant

Employment

- Aug 2025 – **University of Pennsylvania**, Teaching Assistant, Philadelphia, PA, United States.
CIS 5000: Software Foundations.

- May 2025 – **Amazon Agentic Automated Reasoning Group**, *Applied Scientist Intern*,
Aug 2025 Seattle, WA, United States.
Scaling anti-unification of SMT formulas.
- Aug 2024 – **University of Pennsylvania**, *Research Assistant*, Philadelphia, PA, United States.
- Jun 2023 – **Certora**, *Research Intern*, Seattle, WA, United States.
Sep 2023 Mutation testing of formal specifications.
- Jun 2022 – **AT&T**, *Software Engineering Intern*, Atlanta, GA, United States.
Sep 2022
- Mar 2022 – **Paul G. Allen School of Computer Science & Engineering**, *Teaching Assistant*, Seattle, WA, United States.
CSE 341: Programming Languages.
- Mar 2022 – **Paul G. Allen School of Computer Science & Engineering**, *Research Assistant*, Seattle, WA, United States.
- Sep 2020 – **University of Washington, Math Study Center**, *Tutor*, Seattle, WA,
Mar 2022 United States.
Provided drop-in tutoring in precalculus and calculus.
- Jun 2021 – **Geneial**, *Software Engineer Intern*, Seattle, WA, United States.
Mar 2022 Developed a homomorphic encryption application.