

Justin Tracey

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📱 Redacted
✉️ jdt at unsuspecting dot click
🌐 <https://unsuspecting.click>
🔄 <https://github.com/jtracey>

DOCTORAL RESEARCH

My doctoral research was focused on lowering barriers of entry to making contributions to privacy enhancing technologies. Relevant publications (see below, right) focused on valid methodology for conducting experiments on simulated Tor networks, and the impact of switching from memory-unsafe programming languages to Rust on vulnerability rates from new contributors. Ongoing research investigates the consequences of relying on Tor for adding metadata protection to messenger clients.

EXPERIENCE

AUG 2020–PRESENT (PT)

Tor Research Safety Board *Volunteer Board Member*

I serve on the TRSB, reviewing Tor research proposals for their impact on the wider community. I provide expertise on determining whether experiments are safe to perform on the Tor network or would be better suited for controlled environments, and explaining to researchers new to Tor how and why we keep everyone safe while conducting research.

JUL 2021–AUG 2024 (PT)

CrySP Lab *Lab System Administrator*

I am a system administrator for student-run services in the Cryptography, Security, and Privacy Lab at the University of Waterloo. I created and administer the lab Matrix server, IRC bridge, bots, Mastodon server, and related software and hardware infrastructure now being transitioned to current students. I was also in charge of wiki administration, scheduling weekly speakers, and tracking relevant events.

AUG 2021–DEC 2022 (PT)

Cybersecurity and Privacy Institute *Research Support Specialist*

I was tasked with investigating the role of programming and engineering assistance for CPI researchers, though my role immediately expanded to providing technical and logistical support to CPI and its members, organizing and running several online events for students, and assisting with organizing and running online (and occasionally in-person) talks, panels, poster sessions, and two conferences.

SEP 2015–AUG 2021 (PT)

University of Waterloo *Teaching Assistant, etc.*

I frequently served as a teaching assistant for the computer security course. This includes running various assignments, but I was frequently requested for the system administration role, especially when complications were anticipated for the term. I created or vastly improved the infrastructure and documentation for the course, was in charge of securing and managing several distinct servers concurrently used by hundreds of students running security exploit assignments, and overhauled the custom assignment submission site. I also taught the course on days when the instructor could not attend, and taught a week-long seminar on computer security on behalf of [Cryptoworks21](#).

EDUCATION

- 2024 **PhD, Computer Science**
University of Waterloo
- 2018 **Master of Mathematics**
Computer Science
University of Waterloo
- 2014 **B.S. with Highest Honors**
UNIVERSITY HONORS, MAGNA CUM LAUDE
Computer Science
University of California, Santa Cruz

SKILLS

PROGRAMMING	Rust, C, Python, Shell/Bash, Java, PHP, JavaScript, Ruby
OPERATING SYSTEMS	Debian, Qubes, Gentoo
TYPESETTING	LaTeX, HTML/CSS, Muse

PUBLICATIONS

- J. Tracey**. Raising the Bar on Lowering Barriers: Improving Ease of Research and Development Contributions to Privacy Enhancing Technologies. *PhD Thesis*.
- J. Tracey**, I. Goldberg (2023). Grading on a Curve: How Rust can Facilitate New Contributors while Decreasing Vulnerabilities. *IEEE SecDev 23*.
- R. Jansen, **J. Tracey**, I. Goldberg (2021). Once is Never Enough: Foundations for Sound Statistical Inference in Tor Network Experimentation. *USENIX Security 21*.¹
- J. Tracey**, R. Jansen, I. Goldberg (2018). High Performance Tor Experimentation from the Magic of Dynamic ELF's. *USENIX CSET 18*.

REFERENCES

Redacted; contact me for full resume.

¹Naval Research Lab 2021 Alan Berman Research Publication Award: Best paper in Information Technology.