

PRADYUMNA SHOME

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EDUCATION

Georgia Institute of Technology

Doctor of Philosophy - PhD, Computer Science, College of Computing

Advisor: Prof. Daniel Genkin

Atlanta, Georgia, USA

August 2022 – May 2027

University of Illinois at Urbana-Champaign

Bachelor of Science - BS, Computer Science, Grainger College of Engineering

Advisor: Prof. Christopher W. Fletcher

Champaign-Urbana, Illinois, USA

August 2017 – May 2021

National Public School, HSR Layout

All India Senior Secondary Certificate (High School Diploma), Science with Computer Science

Bangalore, Karnataka, India

June 2009 – May 2017

AWARDS AND HONORS

- Intel Hardware Security Academic Award Honorable Mention (2022)
- IEEE Security & Privacy Symposium Shadow Program Committee Invitation (sole undergraduate among senior PhD students and postdoctoral researchers) (2021)
- Malwarebytes Cybersecurity Scholarship (2020)
- Illinois Engineering Achievement Scholarship, Grainger College of Engineering (2020)
- CS Outstanding Course Assistant Award (5 out of ~600) (2020)
- Kleiner Perkins Engineering Fellowship Finalist (2019)
- Forbes Under 30 Scholar (2019)
- Illinois Engineering Achievement Scholarship, Grainger College of Engineering (2019)
- Illinois Engineering Achievement Scholarship, Grainger College of Engineering (2018)
- Edmund J. James Scholar (2017)
- AP Scholar with Distinction, College Board (2017)

RESEARCH

Conference Papers

- [C1] Jose Rodrigo Sanchez Vicarte, **Pradyumna Shome**, Nandeeeka Nayak, Caroline Trippel, Adam Morrison, David Kohlbrenner, and Christopher W. Fletcher. "Opening Pandora's Box: A Systematic Study of New Ways Microarchitecture Can Leak Private Data". In: *Proceedings of the 48th ACM/IEEE Annual International Symposium on Computer Architecture (ISCA)*. ISCA '21. Acceptance rate: 76/405 = 18.8%; Intel Hardware Security Academic Award Honorable Mention 2022. June 2021.

Talks

- [T1] *Small World with High Risks: A Study of Security Threats in the npm Ecosystem*. Security Seminar, School of Cybersecurity and Privacy, Georgia Institute of Technology, Sept. 2022.
- [T2] *Prime+Probe 1, JavaScript 0: Overcoming Browser-based Side-Channel Defenses*. Clean Slate Processor Design Seminar, University of Illinois at Urbana-Champaign, May 2021.
- [T3] *Broadway: Scaling Programming Education Through a Distributed Autograding Framework*. Undergraduate Research Symposium, University of Illinois at Urbana-Champaign, Apr. 2020.
- [T4] *PRISM: Protections Impeding Side-channel Attacks in Microarchitecture*. Illinois Computer Science Research Experiences for Undergraduates (REU), Aug. 2020.

EXPERIENCE

Georgia Institute of Technology

Researcher

- Advisor: Prof. Daniel Genkin
- Research in hardware security and microarchitectural side-channel attacks

Atlanta, GA, USA

August 2022 – Present

University of Illinois at Urbana-Champaign

Researcher

- Advisor: Prof. Christopher W. Fletcher

Champaign-Urbana, IL, USA

August 2019 – May 2021

- Research in hardware security and microarchitectural side-channel attacks; published top-tier conference paper [C1]

Meta (formerly Facebook) <i>Software Engineer, Messenger Growth</i>	Menlo Park, CA, USA <i>September 2021 – August 2022</i>
AxisMED <i>Sourcing and Outreach Liaison</i>	Champaign-Urbana, IL, USA <i>August 2021 – May 2022</i>
Meta (formerly Facebook) <i>Software Engineering Intern, Privacy Control Infrastructure, Privacy and Data Use Org</i>	Seattle, WA, USA <i>September 2020 – December 2020</i>
Salesforce <i>Software Engineering Intern, Records Experience, Platform Cloud</i>	San Francisco, CA, USA <i>June 2019 – August 2019</i>
Virtusa <i>Software Engineering / Data Science Intern, Media & Content Division</i>	New York, NY, USA <i>July 2018 – August 2018</i>
HackIllinois <i>Systems Staff</i>	Urbana, IL, USA <i>April 2018 – February 2019</i>
Reflections Projections <i>Director, Web Team and Lead Web Developer</i>	Urbana, IL, USA <i>January 2018 – September 2018</i>
i2i Telesolutions & Telemedicine <i>Software Engineering Intern, Heartnet India</i>	Bangalore, KA, India <i>May 2017 – June 2017</i>

TEACHING

Coding Together / Harvard University <i>Section Leader, CS 50: Intro to Computer Science</i>	Cambridge, MA, USA <i>June 2020 – August 2020</i>
Stanford University <i>Section Leader, CS 106A: Programming Methodologies</i>	Stanford, CA, USA <i>April 2020 – June 2020</i>
University of Illinois at Urbana-Champaign <i>Course Assistant / Lead Course Assistant</i> <ul style="list-style-type: none"> ◦ Fall 2018 / Course Assistant, CS 233: Computer Architecture ◦ Spring 2019 – May 2021 / Course Assistant → Lead Course Assistant, CS 241: System Programming 	Urbana, IL, USA <i>August 2018 – May 2021</i>

VOLUNTEERING AND SERVICE

USENIX Security 2023 <i>Artifact Evaluation Committee Member</i>	Anaheim, CA, USA <i>September 2022 – August 2023</i>
Wave Learning Festival <i>Fundraising Analyst</i>	Palo Alto, CA, USA <i>September 2021 – April 2022</i>
College ARCH <i>Fellowship Mentor</i>	Urbana, IL, USA <i>July 2021 – August 2021</i>
ACM SIGPLAN Symposium on Principles of Programming Languages <i>Volunteer</i>	Urbana, IL, USA <i>September 2020 – May 2021</i>
IEEE Symposium on Security & Privacy 2021 <i>Shadow Program Committee Member (sole undergrad)</i>	San Francisco, CA, USA <i>December 2020 – February 2021</i>
Illinois Women in Computer Science Bits and Bytes Program <i>Mentor ("Byte")</i>	Urbana, IL, USA <i>September 2020 – August 2022</i>
Illinois CS Undergraduate Mentorship Program <i>Mentor</i>	Urbana, IL, USA <i>May 2020 – Present</i>
CS @ Illinois SAIL <i>Teacher</i>	Urbana, IL, USA <i>March 2019</i>
CS @ Illinois SAIL <i>Volunteer</i>	Urbana, IL, USA <i>March 2018</i>
Ashwini Charitable Trust <i>Web Development Volunteer</i>	Bangalore, KA, India <i>May 2016 – July 2016</i>

Last updated: September 06, 2022