

Sumanth Rao

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Ph.D. Candidate, Computer Science • University of California, San Diego

EDUCATION

University of California, San Diego

2021 – 2027 (expected)

Ph.D. in Computer Science • Advisors: Stefan Savage and Geoffrey M. Voelker • Sysnet & CryptoSec groups

PES University, Bengaluru, India

2016 – 2020

B.Tech. in Computer Science • First Class with Honors • GPA 9.6/10

ACADEMIC PUBLICATIONS

Lost in Translation: Text Message Spoofing via Email — Distinguished Paper Award

IEEE S&P (Oakland) 2026 • First author • CSAW Applied Research Finalist 2026 • CVE-2025-46311

Unfiltered: Measuring Cloud-based Email Filtering Bypasses

ACM Web Conference (WWW) 2024 • First author • DarkReading, ACM TechNews

Patient Care Technology Disruptions Associated With the CrowdStrike Outage

JAMA Network Open 2025 • Co-first author • Wired, Forbes

BLE Theft Auto: Evaluating the Security of Aftermarket BLE-based Automotive Remote Control Systems

USENIX Security 2026 • Co-author • CVE-2026-18411, CISA ICSA-26-216-01 • Wired • Presented at DEF CON 34

Rooting Out Incorrect RIPE Atlas Probe Geolocations

ACM Internet Measurement Conference (IMC) 2026 • Co-author

IRRegularities in the Internet Routing Registry

ACM Internet Measurement Conference (IMC) 2023 • Co-author

No Privacy Among Spies: Assessing the Functionality and Insecurity of Consumer Android Spyware Apps

Privacy Enhancing Technologies Symposium (PETS) 2023 • Co-author • FTC PrivacyCon 2024

RESEARCH & INDUSTRY EXPERIENCE

Google — Gmail Delivery Security | Student Researcher

Jun 2026 – Sep 2026

Mentor: Weihaw Chaung

- Built an observatory for domain hijacks used to bypass SPF, correlating domain and IP ownership signals.
- Deployed into Google prod, scanning 200M Gmail domains every 24 hours.

Corelight Labs | Research Intern

Jun 2025 – Sep 2025

Mentors: Yacin Nadj, Vern Paxson

- Developed Zeek-based fingerprints for malicious Domain Controller activity in east/west enterprise traffic.
- Converted noisy telemetry into detection signatures suitable for deployment across customer networks.

Google Cloud — Virtual Cluster | Software Engineering Intern

Jun 2022 – Sep 2022

- Improved debugging Borg jobs by invoking history from Colossus and Spanner.

Citrix — Licensing | Software Engineer I

Aug 2020 – Aug 2021

- Built Docker-based test automation, reducing Citrix License Server test resource use by up to 50%.
- Earned the highest tier of Citrix's internal software security certification.

Zulip Open Source Project | Volunteer Contributor

2019 – 2026

Mentor: Tim Abbott • Google Summer of Code (GSoC)

- Helped launch the terminal client (GSoC 2021) and later mentored five GSoC students (2022–2026).

TECHNICAL SKILLS

Languages Python, C++, Rust, Go, Java, JavaScript, Shell, SQL.

Internet Measurement Censys, PassiveDNS, ZMap, ZDNS, RIPE Atlas.

Network Analysis Zeek, Wireshark, Mitmproxy, Traffic fingerprinting.

Reverse Engineering Ghidra, JADX, Android app and firmware analysis, BLE protocol analysis.

Systems & Infrastructure Linux, Docker, Git, Django.

SERVICE, TEACHING & MENTORING

- **Program Committee:** SIGMETRICS 2027, IEEE EuroS&P 2027, RAID 2026.
- **Teaching Assistant**, UC San Diego: Intro to Computer Security (Spring 2022, Fall 2022, Spring 2023); Graduate Operating Systems (Winter 2023).
- **Mentoring:** five Google Summer of Code students (2020–2024).
- **Leadership:** CSE Visit Day Coordinator (2026); Allyship Co-Chair, UCSD GradWIC (2023–2024); VP External, Jacobs Graduate Student Council (2021–2023).

DISCLOSURES, PATENTS & MEDIA COVERAGE

- **CVE-2026-18411** — KARR Security System auth bypass; disclosed via CISA (ICSA-26-216-01).
- **CVE-2025-46311** — iOS message sender-parsing flaw enabling spoofing of arbitrary phone numbers.
- **Provisional U.S. Patent 63/674,158**, “Digital Availability Surveillance Method,” assigned to UCSD (2024).
- Research covered by *Wired* ($\times 2$), *Forbes*, *DarkReading*, ACM TechNews, CACM News, KPBS, CTV News.

SELECTED AWARDS & HONORS

- **2026** Distinguished Paper Award, IEEE Symposium on Security and Privacy (Oakland).
- **2026** CSE Doctoral Award for Excellence in Service and Leadership, UC San Diego.
- **2026** Finalists, CSAW Applied Research Competition.
- **2024** Finalist, NatSec Hackathon (Stanford DEFCON & Shield Capital).
- **2021–2022** JN Tata Endowment Scholar (national scholarship for graduate study abroad).

INVITED TALKS

- **Guest Lecture, CSE 227 (Graduate Computer Security)** — UC San Diego, Oct 2026.
- **Measuring Hospital Ransomware Attacks** — CAIDA AIMS-5 Workshop, Feb 2025.
- **Panel 6: Mobile Device Security** — Federal Trade Commission (FTC) PrivacyCon, Mar 2024.
- **Having a Great GSoC as an Open Source Newbie** — Google Open Source, Nov 2022.