

Priyanka Mondal

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🌐 Priyanka-Mondal • in mondalp

Education

University of California, Santa Cruz

PhD, Computer Science, GPA: 4.0/4.0

2017–June, 2024 (expected)

Indian Institute of Science, Bangalore

Master of Engineering, Computer Science, GPA: 6.7/8.0

2013–2015

Bengal Engineering and Science University, Kolkata

Bachelor of Engineering, Computer Science, *First-class with Honors*

2009–2013

Research Experience

Research Interests: Cryptography, Decentralized Security, Language-based Security

Publications

1. I/O-Efficient Dynamic Searchable Encryption meets Forward & Backward Privacy
Priyanka Mondal, Javad Ghareh Chamani, Ioannis Demertzis, and Dimitrios Papadopoulos
In the proceedings of 33rd USENIX Security, 2024
2. Flow-Limited authorization for consensus, replication, and secret sharing
Priyanka Mondal, Maximilian Alghed and Owen Arden
Journal of Computer Security, 31st Volume, 2023
3. Applying consensus and replication securely with FLAQR (**Distinguished Paper Award**)
Priyanka Mondal, Maximilian Alghed and Owen Arden
In Proceedings of 35th IEEE Computer Security Foundations Symposium, 2022
4. Vote them out: Detecting and eliminating byzantine peers (*Extended abstract*)
Tuan Tran, **Priyanka Mondal**, Roy Shadmon, Peter Alvaro and Owen Arden
Proceedings of 10th ACM Symposium on Cloud Computing, 2019
5. Atomicity Checking with Blame Assignment for Android Applications (*Masters Thesis*)

Work Experience

- **Citrix R&D Pvt. Ltd, Bangalore.** Networking & Cloud team, *Software Engineer II*, 2015-17
 - Implemented an algorithm in **Python** to transmit JSON data from Packet Engines to Amazon S3 buckets, that **doubled** the speed of the Unified Logger Daemon
 - In-charge of implementing an algorithm (in **C++**, **Shell scripts**) to convert HAProxy to Netscaler configuration
 - Fixed more than **20** existing bugs in the codebase of Netscaler load-balancer
 - Developed an **Wireshark** plugin that increased efficiency of internal testing by **30%**
- **Nomura Research Institute, Kolkata.** Enterprise Data Warehouse team, *Summer Intern*, 2012
 - Deployed an automated parsing technique in **Java** to extract information from incoming XML data packets, resulting in **70%** improvement of the system in-terms of speed

Skills

Programming skills: C++, C, Java, Haskell, Coq, Dafny, HTML, CSS, Python, JavaScript

Technical skills: Linux, Git, L^AT_EX, GDB, Wireshark, OpenSSL, SQL, Matlab, Docker, Django

Teaching Assistant Experience at University of California, Santa Cruz

- Foundations of Programming Languages CSE114, Spring'19, Fall'23, Winter'24
- Programming Languages CMPS210, Spring'21, Spring'23, Spring'24
- Introduction to Analysis of Algorithms CMPS102, Winter'23
- Introduction to Algorithms CMPS101, Winter'21, Fall'22
- Advanced Programming CMPS109, Summer'19, Spring'22
- Comparative Programming Languages CMPS112, Spring'18
- Compiler Design CMPS104, Fall'17

Selected Talks & Posters

- Applying replication and consensus securely with FLAQR - CSF'22, Haifa, Israel
- Flow Limited Authorization for Quorum Replication - PLCrypt'22, Stanford Research Inst.
- Applying replication and consensus securely with FLAQR - PLAS'21 (Virtual)
- A Language for Secure Replicated Computation (Poster & talk) - CSF'19, New Jersey
- Vote Them Out: Detecting and Eliminating Byzantine Peers(Poster) - SoCC'19, Santa Cruz

Awards and Scholarships

- Distinguished Paper Award, CSF'22
- Computer Security Foundations Travel Grant, 2019 and 2022
- Symposium on Cloud Computing Student Scholarship, 2019
- Programming Languages Design and Implementations Travel Grant, 2019
- Programming Languages Mentoring Workshop at POPL Student Grant, 2019
- Oregon Programming Languages Summer School Student Grant, 2018
- UC Santa Cruz Regents Fellowship, Winter 2018

Service and Outreach

- Vice President - Women in Cyber-security (WiCyS) students chapter, UC Santa Cruz
- Member - Women in Science and Engineering (WiSE), UC Santa Cruz
- External reviewer - AsiaCCS'24, Sigmod'23, FCS'22
- Student volunteer - CSF'22, PLDI'19, CSF'19, PLDI'22

References

1. [Professor. Owen Arden](#) E-mail: oarden@ucsc.edu