Priyanka Mondal

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🌐 priyanka-mondal.github.io • ⚙ Github • in LinkedIn

Education

University of California, Santa Cruz
*PhD, Computer Science, **GPA: 4.0/4.0*** 2017–2024

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: Language based security | Distributed Systems | Applied Cryptography

Ph.D. Supervisors: Prof. Owen Arden & Prof. Ioannis Demertzis

Publications

1. **Flow-Limited authorization for consensus, replication, and secret sharing**
   Priyanka Mondal, Maximilian Algehed and Owen Arden
   Journal of Computer Security, 2023 (31st Volume)
2. **Applying consensus and replication securely with FLAQR** (*Distinguished Paper Award*)
   Priyanka Mondal, Maximilian Algehed and Owen Arden
   Proceedings of 35th IEEE Computer Security Foundations Symposium, CSF'22
3. **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, SoCC'19

Ongoing Research Projects

- I/O efficient dynamic searchable encryption meets forward & backward privacy **[Submitted]**
- System-wide security for dynamic searchable encryption with minimal leakage **[Ongoing]**
- Incoporating Information flow control policies to Choregraphies **[Ongoing]**

ME Thesis

Title: *Atomicity Checking with Blame Assignment for Android Applications.*

Supervisor: Prof. Aditya Kanade, Software Engineering and Analysis Lab, IISc Bangalore

Work Experience

- **Citrix R&D Pvt. Ltd, Bangalore.** Networking & Cloud team, Software Engineer II, 2015-17
- **Nomura Research Institute, Kolkata.** Enterprise Data Warehouse team, Summer Intern, May-Aug 2012

Teaching Experience

- Programming Languages, CMPS210A - UC Santa Cruz, Spring 2021, Spring 2023
- Introduction to Analysis of Algorithms, CMPS102, UC Santa Cruz, Winter 2023
- Introduction to Algorithms, CMPS101 - UC Santa Cruz, Winter 2021, Fall 2022
- Advanced Programming, CMPS109 - UC Santa Cruz, Summer 2019, Spring 2022
- Comparative Programming Languages, CMPS112 - UC Santa Cruz, Spring 2018
- Compiler Design, CMPS104 - UC Santa Cruz, Fall 2017

Computer skills

Programming skills: C, C++, Java, Haskell, Coq, Dafny, HTML, CSS, Python, JavaScript
Technical skills: Linux, Git, LaTeX, GDB, Wireshark, OpenSSL, SQL, Matlab, Docker, Django

Selected Talks & Posters

- Flow-Limited Authorization: background and extension - SRL Seminar, UCSC
- I/O efficient dynamic searchable encryption - CRSS seminar, UCSC
- Applying replication and consensus securely with FLAQR - CSF'22, Haifa, Israel
- Flow Limited Authorization for Quorum Replication - PLCrypt'22, Stanford Research Institute
- 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

Grants and Scholarships

- 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 Worshop at POPL Travel Grant, 2019
- Oregon Programming Languages Summer School Travel Grant, 2018
- UC Santa Cruz Regents Fellowship, Winter 2018
- All India Council for Technical Education Scholarship, 2013-2015
- All India Higer Secondary Education Council Scholarship, 2010-2013

Service and Outreach

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

References

1. **Professor. Owen Arden** E-mail: oarden@ucsc.edu
2. **Professor. Ioannis Demertzis** E-mail: idemertz@ucsc.edu