

# Priyanka Mondal

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## Education

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**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 Interest and Experience

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- Searchable Encryption
- Applied Cryptography
- Language based security
- Distributed Systems

**Supervisors:** Prof. Owen Arden and Prof. Ioannis Demertzis

### Publications

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#### 1. Applying consensus and replication securely with FLAQR

Priyanka Mondal, Maximilian Algehed and Owen Arden

*Computer Security Foundations, 2022* **Distinguished Paper Award**

### Ongoing Research Projects

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- I/O efficient dynamic searchable encryption meets forward & backward privacy [**Under Submission**]
- Flow-Limited authorization for consensus, replication, and secret sharing [**Under Submission**]
- System-wide security for dynamic searchable encryption with minimal leakage [**Ongoing**]

### ME Thesis

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

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

### Other Notable Projects

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- Verifying Language Specifications of STLC with Exceptions in Coq
- Inter and Intra Procedural Program Slicing
- Distributed Secure Message Passing Protocol using Cryptographic Mechanisms
- An efficient Greedy Location-Aided Routing (GLAR) Protocol, B.E. Project

## Work Experience

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- **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-July 2012

## Teaching Experience

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

## Talks & Posters

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- I/O efficient dynamic searchable encryption meets forward & backward privacy, CRSS seminar, UC Santa Cruz
- Applying replication and consensus securely with FLAQR - CSF'22, Israel Institute of Technology, Haifa
- Flow Limited Authorization for Quorum Replication - PLCrypt'22, Stanford Research Institute, Menlo Park
- Applying replication and consensus securely with FLAQR - LSD Seminar, UC Santa Cruz
- Applying replication and consensus securely with FLAQR - PLAS'21 (Virtual)
- A Language for Secure Replicated Computation - CSF'19, Stevens Institute, New Jersey
- Poster - Vote Them Out: Detecting and Eliminating Byzantine Peers - SoCC'19, Santa Cruz

## Computer skills

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- C, C++, Java, Haskell, Coq, Python, JavaScript, HTML, CSS

## Grants and Scholarships

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- Computer Security Foundations 2022 Travel Grant
- Symposium on Cloud Computing 2019 Student Scholarship
- Computer Security Foundation 2019 Travel Grant
- Programming Languages Design and Implementations 2019 Travel Grant
- Programming Languages Mentoring Workshop at POPL 2019 Travel Grant
- Oregon Programming Languages Summer School 2018 Travel Grant
- UC Santa Cruz Regents Fellowship, Winter 2018
- All India Council for Technical Education Scholarship, 2013-2015
- All India Higher Secondary Education Council Scholarship, 2010-2013

## References

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1. [Professor. Owen Arden](#)  
E-mail: owen@soe.ucsc.edu
2. [Professor. Ioannis Demertzis](#)  
E-mail: idemertz@ucsc.edu