

# Priyanka Bose

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## Research Interests

My research interest is in the domain of systems and software security. Specifically, I focus on developing novel static and dynamic program analysis techniques to discover vulnerabilities in application software.

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## Education

- 2016–Present **Ph.D.**, *University of California, Santa Barbara*, GPA – 4.0/4.0.  
Computer Security, advised by Giovanni Vigna & Christopher Kruegel
- 2013–2016 **MS**, *Indian Institute of Technology, Madras*, GPA – 9.0/10.0.  
Computer Science & Engineering, advised by PanduRangan Chandrasekaran
- 2007–2011 **B.Tech.**, *Institute of Engineering & Management, Kolkata*, GPA – 9.05/10.0.  
Computer Science & Engineering

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## Professional Experience

- 2016–Present **Graduate Student Researcher**, *University of California, Santa Barbara*, Santa Barbara.
- 2015–2016 **Post-Graduate Research Intern**, *School of Computing (SoC), National University of Singapore (NUS)*, Singapore.
- 2013–2015 **Teaching Assistant**, *Indian Institute of Technology (IIT), Madras*.
- 2011–2013 **Systems Engineer**, *Infosys Limited*, Bhubaneswar.

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## Publications

- [4] **P. Bose**, D. Das, Y. Chen, Y. Feng, C. Kruegel, and G. Vigna, “Sailfish: Vetting smart contract state-inconsistency bugs in seconds,” in *IEEE Symposium on Security and Privacy (IEEE S&P)*, 2022.
- [3] D. Meng, M. Guerriero, A. Machiry, H. Aghakhani, **P. Bose**, A. Continella, C. Kruegel, and G. Vigna, “Bran: Reduce vulnerability search space in large open source repositories by learning bug symptoms,” in *ACM Asia Conference on Computer and Communications Security (ASIA CCS)*, 2021.
- [2] **P. Bose**, V. T. Hoang, and S. Tessaro, “Revisiting aes-gcm-siv: Multi-user security, faster key derivation, and better bounds,” in *Advances in Cryptology (EUROCRYPT)*, 2018.
- [1] **P. Bose**, D. Das, and C. P. Rangan, “Constant size ring signature without random oracle,” in *Australasian Conference on Information Security and Privacy (ACISP)*, 2015.

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## Professional Activities

- Reported six high-impact security vulnerabilities with financial consequences in OpenSea, Sorare, and Rarible marketplaces (2021).
- Member of *Shellphish* Capture-The-Flag (CTF) team. Participated in DEFCON CTF Finals in the year 2019.
- Member of Women in Cybersecurity (WiCyS), UCSB Chapter.
- Guest speaker at Career Panel for Women in Cybersecurity (WiCyS), UCSB Chapter.

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## Honors and Awards

- Received scholarship to attend Black Hat USA 2019.
- Received scholarship to attend *Grace Hopper Celebration*'18.
- Selected for attending *RSA Security Scholar Program*'18.
- Entitled to *Presidential Graduate Fellowship* (PGF) at *National University of Singapore* (NUS).
- Received scholarship from *National University of Singapore* (NUS) to attend *5<sup>th</sup> South Asia Workshop on Research Frontiers in Computing*, 2015 held at NUS, Singapore.
- Received scholarship for two years (2013 - 2015) from *Ministry of Human Resource and Development* (MHRD), Government of India for higher studies at IIT, Madras.
- Received **National Merit Scholarship** from *Ministry of Human Resource and Development* (MHRD), Government of India for 66<sup>th</sup> position in state in X<sup>th</sup> standard board examination.

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## Scholastic Achievements

- Secured All-India Rank 657 among 2, 24, 160 candidates in GATE 2013.
- Secured All-India Rank 1196 among 87, 163 candidates in West Bengal Joint Entrance Examination 2007 (Engineering).
- Secured All-India Rank 372 among 27, 579 candidates in West Bengal Joint Entrance Examination 2007 (Pharmacy).
- Stood 66<sup>th</sup> in state in X<sup>th</sup> standard board examination.

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## Academic Service

Shadow PC IEEE Symposium on Security and Privacy (IEEE S&P)

2020

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## Media Coverage

Jan 2021 **The Hacker News**, [SAILFISH System to Find State-Inconsistency Bugs in Smart Contracts](#), for Sailfish [4].