Soundarya Ramesh

CONTACT

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Web   : <https://soundaryaramesh.github.io>

EDUCATION

National University of Singapore   *Aug 2018 – Present*
PhD Student, Department of Computer Science   *Current GPA : 5/5*
Area : Cyber-physical Systems Security
Advisor : Jun Han

National Institute of Technology Karnataka, India   *Jul 2014 – May 2018*
Bachelor of Technology in Information Technology   GPA : 9/10

CONFERENCES AND WORKSHOPS

<u>Soundarya Ramesh</u>, Harini Ramprasad, Jun Han. Listen to Your Key: Towards Acoustics-based Physical Key Inference. *To appear in the Proceedings of the 21st Annual International Workshop on Mobile Computing Systems and Applications (HotMobile '20).*

<u>Soundarya Ramesh</u>, Thomas Pathier, Jun Han. SoundUAV: Towards Delivery Drone Authentication via Acoustic Noise Fingerprinting. *In the Proceedings of the 5th ACM Workshop on Micro Aerial Vehicle Networks, Systems, and Applications (DroNet '19).*

Shen Shiqi, Shweta Shinde, <u>Soundarya Ramesh</u>, Abhik Roychoudhury and Prateek Saxena. Neuro-Symbolic Execution: Augmenting Symbolic Execution with Neural Constraints. *In the Proceedings of the 26th Annual Network and Distributed System Security Symposium (NDSS '19).*

POSTERS

<u>Soundarya Ramesh</u>, Thomas Pathier, Jun Han. SoundUAV: Fingerprinting Acoustic Emanations for Delivery Drone Authentication. *In the Proceedings of 17th Annual International Conference on Mobile Systems, Applications, and Services (MobiSys '19).*

RESEARCH EXPERIENCE

National University of Singapore   May – Dec 2017
Research Intern in System Security Lab
Supervisor : Prateek Saxena
Project : Domain-agnostic Constraint Learning using Neural Networks

Indian Institute of Science   May – Jun 2016
Research Intern in Cryptography and Information Security Lab
Supervisor : Arpita Patra
Project : Developing efficient protocol for Graph Consensus Problem in Directed Graphs

HONORS AND AWARDS

- MobiSys 2019 *Best Poster Runner-Up Award*   *Jun 2019*
- *Graduate Research Fellowship*, National University of Singapore   *Aug 2018 – Present*

- *Research Forum Award* at the Deep Learning and Security Workshop,
  National University of Singapore   *Dec 2017*

- *Indian Academy of Sciences Fellowship*   *May – Jun 2016*

MEDIA COVERAGE OF RESEARCH

- Forbes Magazine (Aug 2020) - *How Hackers Use Sound To Unlock The Secrets Of Your Front Door* by Davey Winder. Available at:
  https://www.forbes.com/sites/daveywinder/2020/08/22/how-hackers-use-sound-to-unlock-the-secrets-of-your-front-door-key-spikey-singapore-university-research/.

- ACM News (Aug 2020) - *Picking Locks with Audio Technology* by Paul Marks. Available at:
  https://cacm.acm.org/news/246744-picking-locks-with-audio-technology/

- ScienceAlert (Aug 2020) - *Security Researchers Found a New Way to Pick Locks, Using Only The Sound of The Key* by David Nield. Available at:
  https://www.sciencealert.com/researchers-can-break-locks-just-from-the-sound-of-a-key-being-inserted

TEACHING EXPERIENCE

- Teaching Assistant for CS3235 Computer Security   *Spring 2020*

- Teaching Assistant for CS5476 IoT Security   *Fall 2019, Fall 2020*