# Aravind Machiry

| CONTACT INFORMATION | University of California, Santa Barbara<br>Department of Computer Science<br>Santa Barbara, CA, 93106-5110 | 678-907-7128<br>machiry@cs.ucsb.edu |

**RESEARCH INTERESTS**

Trusted Execution Environments, Program Analysis, Vulnerability detection, Operating systems, Fuzzing, Smartphone security.

**EDUCATION**

**University of California, Santa Barbara**, CA, USA

Ph.D., Computer Science, *Expected:* 2019
- Advisors: Christopher Kruegel, Ph.D and Giovanni Vigna, Ph.D

**Georgia Institute of Technology**, Atlanta, GA, USA

M.S., Information Security, 2013
- Advisor: Mayur Naik, Ph.D

**R.V. College of Engineering**, Bengaluru, KA, India

B.E., Computer Science, 2008

**RESEARCH EXPERIENCE**

**Graduate Research Assistant**            Sep 2014 to present
Department of Computer Science,
University of California, Santa Barbara
Supervisors: Christopher Kruegel, Ph.D and Giovanni Vigna, Ph.D

**Graduate Research Assistant**            Jan 2012 to May 2013
Department of Computer Science,
Georgia Institute of Technology.
Supervisor: Mayur Naik, Ph.D

**WORK EXPERIENCE**

**Software Security Engineer, Qualcomm R&D, San Diego**     2013-2014
Fuzzing embedded subsystems like ARM TrustZone.
Using static type checkers to find multiple address space vulnerabilities.
Reviewing micro kernel design and implementation.
Code audit of Linux Kernel device drivers.

**PUBLICATIONS**

1. **Aravind Machiry**, E. Gustafson, C. Spensky, C. Salls, N. D. Stephens, R. Wang, A. Bianchi, Y. E. Choe, C. Kruegel, G. Vigna. "BOOMERANG: Exploiting the Semantic Gap in Trusted Execution Environments." *Proceedings of the ISOC Network and Distributed System Security Symposium (NDSS)*, 2017.

2. R. Wang, Y. Shoshitaishvili, A. Bianchi, **Aravind Machiry**, J. Grosen, P. Grosen, C. Kruegel, G. Vigna. "Ramblr: Making Reassembly Great Again." *Proceedings of the ISOC Network and Distributed System Security Symposium (NDSS)*, 2017.

3. A. Bianchi, K. Borgolte, J. Corbetta, F. Disperati, A. Dutcher, J. Grosen, P. Grosen, **Aravind Machiry**, C. Salls, N. Stephens, G. Vigna, R. Wang (Authors listed alphabetically). "Cyber Grand Shellphish." *Phrack*, 2017.

4. Y. Fratantonio, **Aravind Machiry**, A. Bianchi, C. Kruegel, G. Vigna. "CLAPP: Characterizing Loops in Android Applications." *ACM Symposium on Foundations of Software Engineering (FSE)*, 2015.

5. Y. Fratantonio, **Aravind Machiry**, A. Bianchi, C. Kruegel, G. Vigna. "CLAPP: Characterizing Loops in Android Applications (Invited Talk)." *Proceedings of the International Workshop on Software Development Lifecycle for Mobile (DeMobile)*, 2015.

6. **Aravind Machiry**, Rohan Tahiliani, Mayur Naik. "Dynodroid: An Input Generation System for Android Apps." *ACM Symposium on Foundations of Software Engineering (FSE)*, 2013.

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| PRESENTATION AND TALKS | 1. Y. Shoshitaishvili, A. Bianchi, K. Borgolte, J. Corbetta, F. Disparati, A. Dutcher, G. Vigna, **Aravind Machiry**, C. Salls, N. Stephens, F. Wang, J. Grosen. "Cyber Grand Shellphish." *DEFCON 24 USA*, 2016. |
|  | 2. **Aravind Machiry**. "Million Dollar Baby: Towards ANGRly conquering DARPA CGC." *nullcon - International Security Conference*, 2016. |

HONORS AND AWARDS

Research Awards
- Distinguished Paper Award for Ramblr. — NDSS 2017
- Distinguished Artifact Award for Dynodroid. — FSE 2013

Student Awards — Georgia Institute of Technology
- College of Computing, MS Research award — 2013

TEACHING EXPERIENCE

Teaching Assistant — Summer 2015
CS8 - Introduction to Computer Science
Instructor: Veronika Strnadova-Neeley
Division of Computer Science,
University of California, Santa Barbara.

REFERENCES

Christopher Kruegel — E-mail: chris@cs.ucsb.edu
Professor
Computer Science Department
University of California, Santa Barbara.

Giovanni Vigna — E-mail: vigna@cs.ucsb.edu
Professor
Computer Science Department
University of California, Santa Barbara.

Mayur Naik — E-mail: mhnaik@cis.upenn.edu
Associate Professor
Computer and Information Science
University of Pennsylvania.