

Dongdong She

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Research Interests

System security, machine learning, particularly applying machine learning and other data-driven approaches to security

Education

Columbia University, New York, New York

Ph.D in Computer Science

Anticipated May 2023

Advisor: Dr. Suman Jana, Dr. Baishakhi Ray

University of California Riverside, Riverside, California

M.S in Computer Science

June 2017

Advisor: Dr. Zhiyun Qian

Huazhong University of Science and Technology, Wuhan, China

B.E in Electronic & Information Engineering

June 2015

Publications

Summary: 10 papers published in top-tier conferences such as *S&P(Oakland)* (3), *CCS* (3), *Usenix Security* (2), and *FSE* (2). 4 first-author papers include *S&P(Oakland)* (3) and *FSE* (1).

MC2: Rigorous and Efficient Directed Greybox Fuzzing.

Abhishek Shah, **Dongdong She**, Samanway Sadhu, Krish Singal, Peter Coffman, Suman Jana

ACM Conference on Computer and Communications Security (CCS), 2022.

Best Paper Award Runner-Up.

NeuDep: Neural Binary Memory Dependence Analysis.

Kexin Pei, **Dongdong She**, Michael Wang, Scott Geng, Zhou Xuan, Yaniv David, Junfeng Yang, Suman Jana, Baishakhi Ray

ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2022.

Effective Seed Scheduling for Fuzzing with Graph Centrality Analysis.

Dongdong She, Abhishek Shah, Suman Jana

IEEE Symposium on Security and Privacy (S&P), 2022.

Fine grained dataflow tracking with proximal gradients.

Gabriel Ryan, Abhishek Shah, **Dongdong She**, Koustubha Bhat, Suman Jana

USENIX Security Symposium (Security), 2021.

MTFuzz: Fuzzing with a Multi-Task Neural Network.

Dongdong She, Rahul Krishna, Lu Yan, Suman Jana, Baishakhi Ray

ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2020.

On Training Robust PDF Malware Classifiers.

Yizheng Chen, Shiqi Wang, **Dongdong She**, and Suman Jana

USENIX Security Symposium (Security), 2020.

Neutaint: Efficient Dynamic Taint Analysis with Neural Networks.

Dongdong She, Yizheng Chen, Abhishek Shah, Baishakhi Ray and Suman Jana

IEEE Symposium on Security & Privacy (S&P), 2020.

Effective Seed Scheduling for Fuzzing with Graph Centrality Analysis.

Dongdong She, Abhishek Shah, Suman Jana

IEEE Symposium on Security and Privacy (S&P), 2022.

Finalist in 2019 NYU CSAW Applied Research Competition

Android ION Hazard: the Curse of Customizable Memory Management System.

Hang Zhang, **Dongdong She**, Zhiyun Qian

ACM Conference on Computer and Communications Security (CCS), 2016.

Android Root and its Providers: A Double-Edged Sword

Hang Zhang, **Dongdong She**, Zhiyun Qian

ACM Conference on Computer and Communications Security (CCS), 2015.

Teaching

Teaching Assistant

Columbia University

COMS W4182: Security, Spring 2021

Design the written and programming assignments, lead recitations and office hours.

Teaching Assistant

Columbia University

COMS 4115: Programming Language & Translators, Fall 2021

Design the written and programming assignments, lead recitations and office hours.

Teaching Assistant

University of California, Riverside

CS175 Project in Computer Science (Operating Systems), Fall 2016

Co-design the coursework material and lead the lab section.

Mentorship

Abhishek Shah (<i>B.S at Columbia, now Ph.D student at Columbia</i>)	Fall 2020 - present
Dennis Roellke (<i>Ph.D student at Columbia, now at Bloomberg</i>)	Fall 2019 - Summer 2020
Dave Epstein (<i>B.S at Columbia, now Ph.D student at UC, Berkeley</i>)	Fall 2018 - Fall 2019
Lu Yan (<i>B.S at SJTU, now Ph.D student at Purdue</i>)	Summer 2020 - Spring 2021
Jun Yang (<i>B.S at HUST, M.S student at UIUC</i>)	Fall 2021 - present
Thomas Xu (<i>B.S at Columbia</i>)	Fall 2022 - present
Benjamin Allison (<i>M.S student at Columbia</i>)	Fall 2022 - present
Seoyoung Kweon (<i>B.S at Columbia</i>)	Fall 2022 - present