Yuyang(Peter) Rong

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EDUCATION

UC Davis	Sep 2019 - Present
Computer Science	*Davis, CA*

· Ph.D. Candidate,

· Research interest: software security, fuzz testing, dynamic taint analysis.

ShanghaiTech University	Sep 2015 - Jun 2019
Computer Science	*Shanghai, China*

· Overall GPA 3.80/4(Ranking: 5/124)

EXPERIENCE

Bytedance	Jun 2020 - Sep 2020
Research Intern	*Mountain View, CA*

· Focus on improving fuzzing branch coverage using principled techniques;

· ***Valkyrie: Improving Fuzzing Performance Through Principled Techniques*** submitted to Euro S&P 2022.

Bytedance	Sep 2018 - Aug 2019
Research Intern	*Beijing, China*

· Security Lab lead by Prof. Hao Chen, main work focuses on integer overflow;

· Main focus on integer overflow, we trigger constrained integer overflow by instrumenting source code using **LLVM**;

· ***IntEgrity: finding integer errors by targeted fuzzing*** published on SecureComm 2020;

ShanghaiTech University	Nov 2017 - Jan 2018
Lab Intern	*Shanghai, China*

· By combining line search and trust region, we designed our subproblem algorithm;

· Implemented our algorithm and subproblem algorithm using Python and did extensive experiments;

· ***An inexact first-order method for constrained nonlinear optimization*** published on *Optimization Methods and Software*

ABB Group	Oct 2017 - Jun 2018
Research Intern	*Shanghai, China*

· Group of 10, Tried to combine robot arm and an indoor mobile car;

· Responsible for the software development of **navigation system**, **mapping system**, and **state machine**;

· Python, C++ and Robot Operating System(ROS) used.

STAR Lab, ShanghaiTech	Jun 2017 - Sep 2017
Lab Intern	*Shanghai, China*

· Supervised by Prof. Sören Schwertfeger in STAR Lab(Now MARS Lab);

· Investigated on **multi-robot mapping** to help fasten mapping process;

· Used VLP16, tried Gmapping, Cartographer and our modified version.

Screen++	Jun 2017 - Jun 2017
Team leader	*Shanghai, China*

· Proposed an application to connect all the screens in different platforms;

- · Responsible for the software development & market model; I also did the final presentation;
- · Python & Apache used. Group of 5 and won the **3rd prize** in iLab Hackathon.

SafeBox   Jun 2017 - Jul 2017

Team member   *Shanghai, China*

- · Course project for graduate level Operating System, group of 2;
- · Implemented a visualization technology to create a sandbox;
- · Using ***ptrace***, we catch every system call and fail the ones that we consider unsafe.
- · Rust & C used on Linux.

TEACHING

ECS032A: Introduction to Programming	2020 Fall Quater
Teaching Assistant	*UC Davis*
CS110: Computer Architecture I	2018 Spring Semester
Leading Teaching Assistant	*ShanghaiTech*
SI100C: Introduction to Computer Science	2017 Fall Semester
Leading Teaching Assistant	*ShanghaiTech*
SI100: Introduction to Information Science and Technology	2017 Spring Semester
Teaching Assistant	*ShanghaiTech*
CS100: Introduction to Programming	2016 Fall Semester
Teaching Assistant	*ShanghaiTech*

AWARDS

ShanghaiTech President's Scholarship	Nov 2016
Shanghai Scholarship	Oct 2016