Shiyou(Alan) Huang

Curriculum Vitae

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Research Interests

My areas of interest are model checking, system security, and bug reproduction. The goal of my research is to help develop automated systems combining program analysis, hardware advances, and systematic testing to improve the reliability and security of the software.

Education

9/2015–present **Ph.D. Candidate in Computer Science**, *Texas A&M University*, USA.
Advisor: Jeff Huang

9/2011–6/2015 **B.E. in Computer Science**, *Huazhong University of Science and Technology (HUST)*, Wuhan, China.
GPA: 4.0/4.0

Publication

ICSE 2019 **Shiyou Huang**, *SafeCheck: Safety Enhancement of Java Unsafe API*, Proceedings of International Conference on Software Engineering Companion, 2019.

USENIX ATC 2017 **Shiyou Huang**, *Towards Production-Run Heisenbugs Reproduction on Commercial Hardware*, Proceedings of USENIX Annual Technical Conference (USENIX ATC), July 2017.

ECOOP 2017 **Shiyou Huang**, *Speeding Up Maximal Causality Reduction with Static Dependency Analysis*, 31st European Conference on Object-Oriented Programming, 2017.

OOPSLA 2016 **Shiyou Huang**, *Maximal Causality Reduction for TSO and PSO*, Proceedings of ACM SIGPLAN conference on Object-Oriented Programming,Systems, Languages, and Applications, 2016.

Honor & Awards

Fall 2018 **Graduate Teaching Fellow**, Department of Engineering, Texas A&M.

June 2017 **Student Scholar for 50^{th} Turing Award Celebration**.

March 2017 **Graduate Research Excellence Award**, Department of CSE, Texas A&M.

OOPSLA 2016 **SIGPLAN PAC Award**, OOPSLA, 2016.

ICSE 2016 **ACM's SRC Travel Award**, ICSE, 2016.

ICSE 2016 **SIGSOFT CAPS Award**, ICSE, 2016.

ICSE 2016 **Third Place, Student Research Competition**, ICSE, 2016.

Service

Sub-reviewer **ICSE'19, PLDI'19, PLDI'17, PPoPP'17, FSE'16**.

AE Committee **PPoPP'17**.

Work Experience

5/2018 - 8/2018 **Research Intern**, *Alibaba Group US.*, 525 Almanor Ave., Sunnyvale, California.
Study the crashes caused by the improper use of Java Unsafe API, and present a bytecode-level transformation to enhance the safety of Java Unsafe API.

Teaching Experience

Fall 2018 **CSCE111: Introduction to Computer Science Concepts and Programming**, Texas A&M University.
Instructor

Spring 2018 **CSCE314: Programming Languages**, *Haskell & Java*, Texas A&M University.
Teaching Assistant

Spring 2017 **CSCE431: Software Engineering**, Texas A&M University.
Teaching Assistant

Fall 2016 **CSCE606: Software Engineering**, Texas A&M University.
Teaching Assistant

Skills

Research Model Checking, Bug Reproduction, Testing, Static Analysis

Languages Java, C/C++, Python, Ruby

Misc. ASM, Z3, LLVM, Intel PT, Java Unsafe, JVM