Zang, Zhiqiang

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https://github.com/cptgit
https://rocketeer.buptra.net/

Education

Ph.D. **The University of Texas at Austin**, Austin, TX, U.S. Expected 2021

Concentration: fuzzing testing, test generation, regression testing

B.E. **Beijing University of Posts and Telecommunications**, Beijing, P.R. China Jun 2018

Internship

Software Engineering Intern **NIO**, Beijing, P.R.China Jul 2019 – Aug 2019

- Devised a technique of customizing APIs in the simulator to solve the insufficiency of APIs
- Designed APIs to retrieve data and control vehicles to extend datasets acquired from the simulator

Research

Towards Accelerating Code Coverage Collection, UT Austin Feb 2019 – Apr 2019

- Motivation: Reduce runtime overhead of **JaCoCo** caused by repetitive execution of instrumented code
- Techniques: Dynamic Instrumentation (**ASM** library and **Javaagent**), **Software Mining**
- Results: Accelerated JaCoCo's running although optimization itself introduces significant overhead

VeDebug: Video-based Time-travel Regression Debugging Tool for Java, UT Austin Aug 2018 – Nov 2018

- Motivation: Assist debugging by telling how and where two executions differ, e.g. due to flakiness
- Techniques: Dynamic Instrumentation (ASM library and Javaagent), **Record & Replay**
- Results: Identified the erroneous lines for two bugs in Apache Commons Math and Google **Guava**

Publications

B. Buhse, T. Wei, Z. Zang, A. Milicevic, and M. Gligoric, "VeDebug: Regression debugging tool for Java," in *2019 IEEE/ACM 41st International Conference on Software Engineering: Companion Proceedings*. IEEE Press, 2019, pp. 15–18

Teaching

Teaching Assistant	EE 312H: Software Design and Implementation I, UT Austin	Spring 2020
Teaching Assistant	EE 312: Software Design and Implementation I, UT Austin	Fall 2019
Teaching Assistant	EE 422C: Software Design and Implementation II, UT Austin	Spring 2019

Honors & Awards

Undergraduate Top Prize Scholarship of BUPT Nomination (0.6%)	Nov 2017
First Class Scholarship of BUPT	Nov 2017
Qualcomm Innovation Scholarship (0.8%) $\times$ 2	Dec 2015 & 2016
Second Prize Award for National College Students Mathematical Competition	Nov 2015

Skills

- Languages: Java, Bash, Alloy, Python, C/C++
- Tools: Emacs, Git, ASM, JaCoCo, Randoop