# ZANG, ZHIQIANG

zhiqiang.zang@utexas.edu
(+1) 737-333-2408 (US)
https://github.com/cptgit
thtps://rocketeer.buptra.net/

#### **EDUCATION**

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

Expected 2021

Concentration: fuzz testing, test generation, regression testing

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

Jun 2018



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

# **Q** 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