

# Gao Xiang

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## Research Interest

Program analysis, Android Security, programming languages

## Education

- [National University of Singapore, Singapore](#)

Ph.D., Computer Science, Fall 2016 - Present

- ◆ GPA: 4.7/5 (until now)

Fall 2016 - Present

- ◆ Advisor : [Abhik Roychoudhury](#)

- [Shandong University, Computer Science and Technology, China](#)

Bachelor, Computer Science, Fall 2012 – June 2016

- ◆ GPA: 90.34/100

Fall 2012 – June 2016

- ◆ Advisor : [Ju Lei](#)

## Projects

- **Android concolic execution platform**

May, 2017 - Present

On going project. Building a general concolic execution framework for Android programs, which could be used for testing generation and vulnerability detection.

- **Android program repair**

May, 2017 - Present

Automatically fixing the crash of android programs based on program analysis.

- **F1X - Automated program repair Tool**

Jan, 2017 - Jul, 2017

Test-driven automated program repair tool for C/C++ programs to increase the efficiency and effectiveness of program repair.

## Work Experience

- **System Engineer Intern — Alibaba**

Jul, 2015 - Oct, 2015

Working on Security Enhanced Android (SEAndroid). Increasing security properties of android system based on Mandatory Access Control (MAC).

- **Research Assistant — National University of Singapore**

Jul, 2017 - Present

Working on dynamic Android program analysis in [TSUNAMI](#) lab. Building a dynamic program analysis platform for Android.

- **Teaching Assistant — National University of Singapore**

Tutor for Computer Organization (CS2100) AY 2016/2017 Semester 2

Jan, 2017 - Apr, 2017

Teaching Assistant in Formal Methods (CS4211) AY 2017/2018 Semester 1

Aug, 2017 - Present

- **External Reviewer**

Sub-reviewing papers for FSE/ESEC'17.

## Skills

Languages                      English (fluent), Mandarin Chinese (native).

Programming                  Java, C, C++, Python.

Other: Bash, C#, Javascript, R and etc.

## Publication

- **Write-back aware shared last-level cache management for hybrid main memory**

Deshan Zhang, Lei Ju, Mengying Zhao, Xiang Gao, Zhiping Jia

53rd Design Automation Conference (DAC), 2016

- **Partitioning Patches into Test-equivalence Classes for Scaling Program Repair** [[pdf](#)]

Sergey Mechtaev, Gao Xiang, Shin Hwei Tan and Abhik Roychoudhury

arXiv 1707.03139