

Yigong Hu

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Research Interests

My research interests are in the areas of systems software, focusing on designing efficient software system. My research aims to improve the performance, reliability, and energy efficiency of modern system including mobile system, large system and distributed system. Specifically, I have designed and implemented systems that improve service performance and energy efficiency across different system stack from cloud platform to mobile system.

Education

Johns Hopkins University

PhD in Computer Science

Advisor: Ryan(Peng) Huang

Baltimore, MD

Sept 2017 - May 2023(expected)

Huazhong University of Science and Technology

B.S. in Computer Science, rank 1/258

Wuhan, China

Sept 2013 - May 2017

Publications

- [1] **Yigong Hu**, Gongqi Huang and Peng Huang. Automated Reasoning and Detection of Specious Configuration in Large Systems with Symbolic Execution. *In Proceedings of 14th USENIX Symposium on Operating Systems Design and Implementation, OSDI'20*
- [2] **Yigong Hu**, Ze Li, Peng Huang, Suhas Pinnamaneni, Francis David, Yingnong Dang and Murali Chintalapati. Scaling Performance Issue Detection and Diagnosis in Cloud Infrastructures. *In Proceedings of the 24th AAAI workshop on Cloud Intelligence: AI/ML for Efficient and Manageable Cloud Services, AAAI'20 Workshop*
- [3] **Yigong Hu**, Suyi Liu and Peng Huang. A Case for Lease-Based, Utilitarian Resource Management on Mobile Devices. *In Proceedings of the 24th international conference on Architectural Support for Programming Languages and Operating Systems, ASPLOS'19 (Best Paper Award)*

Work Experience

Microsoft Azure

Data Scientist Intern (part-time)

Collaborators: Yingnong Dang, Ze Li

Sept 2019 – Jan 2020

Microsoft Azure

Data Scientist Intern

Collaborators: Yingnong Dang, Ze Li

May 2019 – Aug 2019

University of Chicago

Research Intern

Advisor: Shan Lu

May 2016 – Sept 2016

Teaching Experience

Guest Lecturer

CS 624: Reliable Software Systems

Topic: Early detection of configuration errors

Johns Hopkins University

Spring 2022

CS 624: Reliable Software Systems

Topic: Detecting misconfiguration with symbolic configuration

Johns Hopkins University

Spring 2021

EN.601.290: User Interfaces and Mobile Applications

Topic: Energy aware android programming

Johns Hopkins University

Fall 2019

CS 318/418/618: Principles of Operating Systems

Johns Hopkins University

Fall 2019

Teaching Assistant

CS 624: Reliable Software Systems Topic: Hosting office hours and lectures	Johns Hopkins University Spring 2021
CS 318/418/618: Principles of Operating Systems Topic: Hosting lab session on Pintos (lab overviews, office hours, grading, etc.)	Johns Hopkins University Fall 2019

Services

EuroSys'23: Proceedings of the European Conference on Computer Systems Artifact Evaluation Committee	2022
EuroSys'21: Proceedings of the European Conference on Computer Systems Student Volunteer	2021
NSDI'21: USENIX Symposium on Networked Systems Design and Implementation External Reviewer	2020
OSDI'20: USENIX Symposium on Operating Systems Design and Implementation External Reviewer	2020
SOSP'19: ACM Symposium on Operating Systems Principles External Reviewer	2019
HotOS'19: Workshop on Hot Topics in Operating Systems External Reviewer	2019
SOSP'17: ACM Symposium on Operating Systems Principles Student Volunteer	2017

Talks

Automated Reasoning and Detection of Specious Configuration in Large Systems with Symbolic Execution Seminar, MIT	Nov 2022
Automated Reasoning and Detection of Specious Configuration in Large Systems with Symbolic Execution Seminar, StoryBrook	Mar 2021
Automated Reasoning and Detection of Specious Configuration in Large Systems with Symbolic Execution OSDI'20 (Virtual)	Nov 2020
Case for Lease-Based, Utilitarian Resource Management on Mobile Devices Microsoft Azure	Jun 2019
Case for Lease-Based, Utilitarian Resource Management on Mobile Devices ASPLOS'19	Apr 2019

Student Mentoring

Zeyin Zhang Master@Johns Hopkins University	Sept 2022 - Current
Emily Zhai Undergrad@Johns Hopkins University →Microsoft	Sept 2021 - May 2022
Gongqi Huang Undergrad@Johns Hopkins University →Ph.D. student@Princeton	Sept 2019 - May 2022
Varun Radhakrishnan Undergrad@Johns Hopkins University →Amazon	Oct 2018 - May 2019
Justin Shafer Master@Johns Hopkins University →Westpoint	Sept 2018 - May 2019
Suyi Liu Undergrad@Johns Hopkins University →Netflix	Sept 2017 - May 2018

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