

Yigong Hu

Assistant Professor

Department of Electrical and Computer Engineering

Boston University

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RESEARCH INTERESTS

My research interests are in building systems to provide performance guarantees for software. End-users of modern software services expect a consistent performance experience. However, achieving a goal is challenging due to the software's complexity and unpredictable behavior, along with the rapid growth of concurrency. My research design techniques to mitigate variable types of performance issues in mobile systems, large systems, and cloud systems.

EDUCATION

Johns Hopkins University

PhD in Computer Science

Sep. 2017 - Aug. 2023

Baltimore, MD

Thesis: Reasoning About and Mitigating Performance Issues in Large-Scale Systems

Advisor: Ryan (Peng) Huang

Huazhong University of Science and Technology

B.S. in Computer Science

Sep. 2013 - May. 2017

Wuhan, China

Graduated with High Honors

EMPLOYMENT

Assistant Professor

Boston University

Jul. 2025 -

Boston, MA

Postdoctoral Researcher

University of Washington

Sep. 2023 - Jun. 2025

Seattle, WA

Research Assistant

Johns Hopkins University

Sep. 2017 - Jul. 2023

Baltimore, MD

Microsoft Azure

Data Scientist Intern

May. 2019 - Aug. 2019

Seattle, WA

University of Chicago

Student Research Intern

May. 2016 - Sep. 2016

Chicago, IL

PUBLICATIONS

- [1] **Yigong Hu**, Zeyin Zhang, Yicheng Liu, Yile Gu, Shuangyu Lei, Baris Kasikci, Peng Huang. Mitigating Application Resource Overload with Targeted Task Cancellation In *Proceedings of the 31th ACM Symposium on Operating Systems Principles, SOSP 2025*
- [2] **Yigong Hu**, Gongqi Huang and Peng Huang. Pushing Performance Isolation Boundaries into Application with pBox. In *Proceedings of the 29th ACM Symposium on Operating Systems Principles, SOSP 2023*
- [3] Lingmei Weng, **Yigong Hu**, Peng Huang, Jason Nieh and Junfeng Yang. Effective Performance Issue Diagnosis with Value-Assisted Cost Profiling. In *Proceedings of 18th The European Conference on Computer Systems, Eurosys 2023*
- [4] **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*
- [5] **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, AIOps Workshop*
- [6] **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**

HONORS AND AWARDS

Azure Cloud Platform Research Credits

2023

ASPLOS 2019 Best Paper Award

2019

Outstanding Bachelor's Thesis

2017

China National Scholarship

2014

STUDENT AWARDS

CRA outstanding undergraduate researcher award honorable mention, Gongqi Huang	2023
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TEACHING

EC 440: Introduction to Operating Systems, Boston University	2025
CS 624: Reliable Software Systems, Johns Hopkins University(TA)	2021
CS 318/418/618: Principles of Operating Systems, Johns Hopkins University(TA)	2019

PROFESSIONAL SERVICES

Committee Member

Architectural Support for Programming Languages and Operating Systems(ASPLOS)	2026
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External Reviewer

USENIX Symposium on Networked Systems Design and Implementation(NSDI)	2019
USENIX Symposium on Operating Systems Design and Implementation(OSDI)	2019
ACM Symposium on Operating Systems Principles(SOSP)	2019

TALKS

- **Pushing Performance Isolation Boundaries into Application with pBox**
SOSP'23 Oct. 2023
- **Automated Reasoning and Detection of Specious Configuration in Large Systems with Symbolic Execution**
MIT A Nov. 2022
StoryBrook University Mar. 2021
OSDI'20 Nov. 2020
- **Case for Lease-Based, Utilitarian Resource Management on Mobile Devices**
Microsoft Jun. 2019
ASPLOS'19 Apr. 2019

RESEARCH MENTORING

Ph.D. Students

Azadur Rahman Rahim	Sep. 2025 -
Wenbo Qian	Sep. 2025 -
Youliang Huang	Sep. 2025 -

Undergraduate Students

Daifeng Li	Feb. 2025 -
RuiYan Hu	Feb. 2025 -
Yi Pan	Dec. 2024 -

Alumni

Haodong Zheng	MSc → EPFL Ph.D., 2025
Zeyin Zhang	MSc
Yicheng Liu	BSc → UCLA Ph.D., 2024
Shuangyu Lei	BSc → Cornell Ph.D., 2024
Emily Zhai	BSc → Microsoft, 2022
Gongqi Huang	BSc → Princeton Ph.D., 2022
Varun Radhakrishnan	BSc → Amazon, 2019
Justin Shafer	MSc → Westpoint, 2022
Suyi Liu	BSc → Netflix, 2018