Yigong Hu

Assistant Professor
Department of Electrical and Computer Engineering
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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   Sep. 2017 - Aug. 2023
PhD in Computer Science   Baltimore, MD
Thesis: Reasoning About and Mitigating Performance Issues in Large-Scale Systems
Advisor: Ryan (Peng) Huang

Huazhong University of Science and Technology   Sep. 2013 - May. 2017
B.S. in Computer Science   Wuhan, China
Graduated with High Honors

EMPLOYMENT

Assistant Professor		Jul. 2025 -
Boston University		Boston, MA
Postdoctoral Researcher		Sep. 2023 - Jun. 2025
University of Washington		Seattle, WA
Research Assistant		Sep. 2017 - Jul. 2023
Johns Hopkins University		Baltimore, MD
Microsoft Azure		May. 2019 - Aug. 2019
Data Scientist Intern		Seattle, WA
University of Chicago		May. 2016 - Sep. 2016
Student Research Intern		Chicago,IL

PUBLICATIONS

[1] 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**

[2] 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**

[3] 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**

[4] 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**

[5] 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*

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*

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 -

Master Students

Haodong Zheng	Jan. 2024 -
Zeyin Zhang	Sep. 2022 -

Undergraduate Students

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

Alumni

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