

Yigong Hu

Assistant Professor

Department of Electrical and Computer Engineering
Boston University
PHO335, 8 St Mary's St, Boston, MA 02215

 yigongh@bu.edu |  [yigonghu](https://github.com/yigonghu) |  [yigonghu.github.io](https://github.com/yigonghu)

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 <i>PhD in Computer Science</i>	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 <i>B.S. in Computer Science</i>	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

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 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

Aszadur Rahman Rakin	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 → verisilicon
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