# Chang Lou

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EMPLOYMENT Assistant Professor, Department of Computer Science University of Virginia, VA, United States

July 2023 - Present

#### **EDUCATION**

Ph.D. in Computer Science

Sept 2017 - May 2023

Johns Hopkins University, MD, United States

Advisor: Prof. Ryan (Peng) Huang

Thesis: Enhancing Cloud System Runtime to Address Complex Failures The Dennis M. Ritchie Doctoral Dissertation Award (Honorable Mention)

Bachelor in Computer Science

Sept 2012 - Jun 2016

Shanghai Jiao Tong University, Shanghai, P.R.China

# RESEARCH INTERESTS

Distributed Systems, Operating Systems, Software Reliability

#### **PUBLICATION**

### **Conference Papers**

- [1] Chang Lou, Yuzhuo Jing, Peng Huang. Demystifying and Checking Silent Semantic Violations in Large Distributed Systems. In Proceedings of the 16th USENIX Symposium on Operating Systems Design and Implementation, Carlsbad, CA, July 2022. OSDI'22.
- [2] Chang Lou, Cong Chen, Peng Huang, Yingnong Dang, Si Qin, Xinsheng Yang, Xukun Li, Qingwei Lin, Murali Chintalapati. RESIN: A Holistic Service for Dealing with Memory Leaks in Production Cloud Infrastructure. In Proceedings of the 16th USENIX Symposium on Operating Systems Design and Implementation, Carlsbad, CA, July 2022. **OSDI'22**.
- [3] Chang Lou, Peng Huang, Scott Smith. Understanding, Detecting and Localizing Partial Failures in Large System Software. In Proceedings of the 17th USENIX Symposium on Networked Systems Design and Implementation, Santa Clara, CA, February 2020. NSDI'20 (Best Paper Award).
- [4] Chang Lou, Peng Huang, Scott Smith. Comprehensive and Efficient Runtime Checking in System Software through Watchdogs. In Proceedings of the 17th Workshop on Hot Topics in Operating Systems, Bertinoro, Italy, May 2019. HotOS'19.
- [5] Siyuan Wang, Chang Lou, Rong Chen, Haibo Chen. Fast and Concurrent Distributed RDF Queries using RDMA-assisted GPU Graph Exploration. In Proceedings of the 2018 USENIX Annual Technical Conference, Boston, MA, July 2018. ATC'18.
- [6] Chang Lou, Xiaofeng Gao, Fan Wu, Guihai Chen. Energy-Aware Clustering and Routing Scheme in Wireless Sensor Network. In International Conference on Wireless Algorithms, Systems, and Applications, August 2015. WASA'15.

#### Thesis

Chang Lou. Enhancing Cloud System Runtime to Address Complex Failures. Ph.D. Dissertation, Johns Hopkins University, August 2023.

**HONORS AND** AWARDS

The SIGOPS Dennis M. Ritchie Thesis Award, Honorable Mention

2023

USENIX NSDI'20 Best Paper Award

2020

WORK **EXPERIENCE**  Microsoft Azure

Mentors: Yingnong Dang and Cong Chen

Nov 2021 - Jan 2022 • Data Scientist Intern (part-time) • Data Scientist Intern Jun 2021 - Aug 2021 • Data Scientist Intern Jun 2020 - Sept 2020

Microsoft Research Asia Mentors: Zhenyu Guo

• Research Intern Oct 2015 - Jun 2016

Institute of Parallel and Distributed Systems, Shanghai Jiao Tong University

Mentors: Prof. Haibo Chen and Prof. Rong Chen

• Research Intern Jul 2016 - Aug 2017

**TEACHING EXPERIENCE**  CS4740 Cloud Computing

Spring 2024 Instructor University of Virginia

CS6501-015 Cloud System Reliability Fall 2023 Instructor University of Virginia

WISE Program for Underrepresented Students from Baltimore Public High Schools Topic: Efficient Fuzzing in Python Softwares Spring 2022 Instructor & Research Mentor Johns Hopkins University

CS624 Reliable Software Systems Spring 2022 Guest Lecturer & Teaching Assistant Johns Hopkins University

CS318/418/618 Operating System Fall 2018 Teaching Assistant Johns Hopkins University

# PROFESSIONAL Program Committee:

**SERVICES** 

• EuroSys'25

## Misc.:

- Shadow PC, EuroSys'23
- AEC, EuroSys'23
- Web Chair, HAOC'21 (in conjunction with EuroSys '21)
- Journal Reviewer, ACM TOCS'21

**SERVICES** 

**DEPARTMENT** Graduate Admission Committee, University of Virginia

2023

2023

**GRANTS** 

Google Cloud Platform Research Credits

\$5,000 (Cloud Credits)

TALKS	Beyond High Availability: Taming Complex Failures in Cloud Systems  • University of Washington, Seminar (Virtual)  Feb 2023
	Demystifying and Checking Silent Semantic Violations in Large Distributed Systems
	• OSDI'22, Carlsbad, CA, USA Jul 2022
	• Northeastern University, Seminar (Virtual) Jul 2022
	RESIN: A Holistic Service for Dealing with Memory Leaks in Production Cloud Infrastructure
	• OSDI'22, Carlsbad, CA, USA Jul 2022
	• Boston University, Seminar (Virtual) Jul 2022
	Automatic Diagnosis Data Collection and Analysis Framework – A Case for Memory Leaks
	• Microsoft Azure (Virtual) Aug 2021
	• Microsoft Azure (Virtual) Jan 2021
	• Microsoft Azure (Virtual) Aug 2020
	Understanding, Detecting and Localizing Partial Failures in Large System Software
	• NSDI'20, Santa Clara, CA, USA Feb 2020
	Comprehensive and Efficient Runtime Checking in System Software through Watchdogs
	• HotOS'19, Bertinoro, Italy May 2019
MENTORING	Zhenyu Li, Master@University of California San Diego Fall 2023
	Zhewen Yang, Master@Johns Hopkins University Spring 2023, Fall 2023
	Dimas Shidqi Parikesit, Undergrad@BIT Fall 2022, Spring 2023, Fall 2023
	Oriane Nana, High School Intern@Baltimore Polytechnic Inst. $\rightarrow$ JHU Spring 2022
	Ding Ding, Undergrad@Shanghai Jiao Tong Univ. $\rightarrow$ PhD@NYU
	Ziyan Wang, Master@Johns Hopkins Univ. $\rightarrow$ Xmind Fall 2018, Spring 2019
	Xu Meng, Undergrad@Johns Hopkins Univ. $\rightarrow$ Amazon Fall 2017, Spring 2018

# THESIS ADVISING

An Analysis of Distributed System Tests for Constructing Runtime Checkers Yujin Huang, Undergraduate, University of Science and Technology of China

# OUTREACH

Host, SWE High School Visitation Majors Fair 2023

Host, SEAS Tours for Underrepresented Youth 2023

Judge, UVA CS Research Symposium 2023

Mentor, JHU Woman Mentoring Whiting Program 2022-2023

Last edit: October 25, 2023

Judge, Girls Hoo Hack (GWC Hackathon)

2023