Chang Lou

UVA Department of Computer Science
Rice Hall 304, 85 Engineer's Way
Charlottesville, VA 22903

🔗 changlousys.github.io/
✉ chlou@virginia.edu
📞 410-320-5184

EMPLOYMENT

Assistant Professor, Department of Computer Science July 2023 - Present
University of Virginia, VA, United States

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
- Data Scientist Intern (part-time) — Nov 2021 - Jan 2022
- 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 SERVICES

Program Committee:
- EuroSys'25

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

DEPARTMENT SERVICES	Graduate Admission Committee, University of Virginia	2023

GRANTS	Google Cloud Platform Research Credits	2023
	$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. → JHU — Spring 2022

Ding Ding, Undergrad@Shanghai Jiao Tong Univ. → PhD@NYU — Summer 2019

Ziyan Wang, Master@Johns Hopkins Univ. → Xmind — Fall 2018, Spring 2019

Xu Meng, Undergrad@Johns Hopkins Univ. → 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

Judge, Girls Hoo Hack (GWC Hackathon) — 2023

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