Chang Lou

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EDUCATION

Ph.D. Candidate in Computer Science   Sept 2017 - May 2023
Johns Hopkins University, MD, United States   (expected)
   Advisor: Prof. Ryan (Peng) Huang

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

[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**.

HONORS AND AWARDS

NSDI'20 Best Paper Award: Partial Failures

Travel Grants: SOSP'17, OSDI'18, NSDI'20, OSDI'22

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

TEACHING EXPERIENCE

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

Proceedings of the European Conference on Computer Systems (EuroSys'23)
Shadow Program Committee   2023

Proceedings of the European Conference on Computer Systems (EuroSys'23)
Artifact Evaluation Committee   2022

Workshop on High Availability and Observability of Cloud Systems (HAOC'21)
in conjunction with EuroSys '21
Web Chair   2021

USENIX Symposium on Networked Systems Design and Implementation (NSDI'21)
External Reviewer   2021

ACM Transactions on Computer Systems (TOCS)
Journal Reviewer   2021

USENIX Symposium on Operating Systems Design and Implementation (OSDI'20)
External Reviewer   2020

ACM Symposium on Operating Systems Principles (SOSP'19)
External Reviewer   2019

Workshop on Hot Topics in Operating Systems (HotOS'19)
External Reviewer   2019

ACM Symposium on Operating Systems Principles (SOSP'17)
Student Volunteer   2017

COUNSELING SERVICES

Womxn Mentoring Whiting Program   Fall 2022 - Spring 2023
Mentor   Johns Hopkins University

VISITING EXPERIENCE

Institute of Parallel and Distributed Systems   Jul 2016 - Aug 2017
Research Intern   Shanghai Jiao Tong University
Advisors: Prof. Haibo Chen and Prof. Rong Chen

Software Systems Lab   Jul 2015 - Sept 2015
Visiting Intern   Columbia University
Advisors: Prof. Junfeng Yang

TALKS

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

- Smart trace collection, Microsoft Azure (Virtual)   Aug 2021
- Memory leak literature survey, Microsoft Azure (Virtual)   Jan 2021
- Framework design, 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

Exploring Silent Semantic Failures
Dimas Shidqi Parikesit, Undergrad@Bandung Institute of Technology   Fall 2022

Exploring Silent Semantic Failures
Bagja Basith, Undergrad@Bandung Institute of Technology   Fall 2022

Empowering Fuzzing with Cross-checking to Find Semantic Bugs in Python Software
Oriane Nana, High School Intern@Baltimore Polytechnic Institute   Spring 2022

Investigating Silent Errors in Distributed Systems
Ding Ding, Undergrad@Shanghai Jiao Tong Univ. → PhD@NYU   Summer 2019

Building Semantic Checks for Software Watchdogs
Ziyan Wang, Master@Johns Hopkins Univ. → Xmind   Fall 2018, Spring 2019

Implementing Efficient Fault Injection for Distributed Systems
Xu Meng, Undergrad@Johns Hopkins Univ. → Amazon   Fall 2017, Spring 2018

Efficient RDF Queries using RDMA-assisted GPU Graph Exploration
Siyuan Wang, Master@Shanghai Jiao Tong Univ. → Huawei   Fall 2016, Spring 2017

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