Shuai Mu

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Professional Experience

Stony Brook University, Computer Science Department — Stony Brook, NY

2019/01-Present Assistant Professor

2018/08-2019/01 Assistant Professor (On leave)

New York University, Courant Institute — New York, NY

2017/08-2018/08 Assistant Professor/Faculty Fellow (Lecturer)

2015/08-2017/08 Post-Doctoral Associate
Advisor: Michael Walfish

Education

Tsinghua University — Beijing, China

Ph.D. in Computer Science, 2015
Advisor: Yongwei Wu, Kang Chen
Long-stay visit: New York University (hosted by Jinyang Li)
University of Southern California (hosted by Wyatt Lloyd)

China Agricultural University — Beijing, China

B.S. in Computer Science, 2010

Committee, Panel, Referee

2023 NSDI, ICDCS

2022 ASPLOS (ERC)

2021 ApSys, NSDI, TPDS

2020 ApSys, ATC (light), Distributed Comupting, NSF CNS Small, TPDS

2019 ApSys, CACM

2018 TPDS

Advisees

Current

2019/09-Present Reza Alimadadi (PhD, 4th year, co-advised with Mike Ferdman)

2020/08-Present Weihai Shen (PhD, 3rd year)

2022/08-Present Santa Shithil (PhD, 1st year)

2022/08-Present Bing-shiun Han (PhD, 1st year)

2022/08-Present Ze Tang (PhD, 1st year)

Past

2019/06-2020/06 Mrityunjay Kumar (MS, first job: VMWare)

2020/01-2020/12 Ritesh Sinha (MS, first job: HP)

2020/01-2020/12 Satya Jain (MS, first job: VMWare)

2020/01-2021/06 Yida Wu (MS, first job: Cloudera)

2020/01-2021/06 Ansh Khanna (MS, first job: Google)

Publications

[1] Jian Zhang, Ye Ji, **Shuai Mu**, and Cheng Tan. Viper: A fast snapshot isolation checker (to appear). In *Proceedings of ACM European Conference on Computer Systems (EuroSys)*, April 2023.

[2] Xuhao Luo, Weihai Shen, **Shuai Mu**, and Tianyin Xu. Depfast: Orchestrating code of quorum systems. In *Proceedings of USENIX Conference on Annual Technical Conference (ATC)*, July 2022.

[3] Weihai Shen, Ansh Khanna, Sebastian Angel, Siddhartha Sen, and **Shuai Mu**. Rolis: a software approach to efficiently replicating multi-core transactions. In *Proceedings of ACM European Conference on Computer Systems (EuroSys)*, April 2022.

[4] Andrew Yoo, Yuanli Wang, Ritesh Sinha, **Shuai Mu**, and Tianyin Xu. Fail-slow fault tolerance needs programming support. In *Proceedings of USENIX Workshop on Hot Topics in Operating Systems (HotOS)*, June 2021.

[5] Siyuan Zhou and **Shuai Mu**. Fault-tolerant replication with pull-based consensus in MongoDB. In *Proceedings of USENIX Conference on Networked Systems Design and Implementation (NSDI)*, February 2021.

[6] Cheng Tan, Changgeng Zhao, **Shuai Mu**, and Michael Walfish. Cobra: Making transactional key-value stores verifiably serializable. In *Proceedings of USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, November 2020.

[7] Zhaoguo Wang, Changgeng Zhao, **Shuai Mu**, Haibo Chen, and Jinyang Li. On the parallels between paxos and raft, and how to port optimizations. In *Proceedings of ACM Symposium on Principles of Distributed Computing (PODC)*, July 2019.

[8] **Shuai Mu**, Sebastian Angel, and Dennis Shasha. Deferred runtime pipelining for contentious multi-core software transactions. In *Proceedings of ACM European Conference on Computer Systems (EuroSys)*, March 2019.

[9] Yu Lin Chen, **Shuai Mu**, Jinyang Li, Cheng Huang, Jin Li, Aaron Ogus, and Douglas Phillips. Giza: Erasure coding objects across global data centers. In *Proceedings of USENIX Conference on Annual Technical Conference (ATC)*, July 2017.

[10] Haonan Lu, Christopher Hodsdon, Khiem Ngo, **Shuai Mu**, and Wyatt Lloyd. The SNOW theorem and latency-optimal read-only transactions. In *Proceedings of USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, November 2016.

[11] **Shuai Mu**, Lamont Nelson, Wyatt Lloyd, and Jinyang Li. Consolidating concurrency control and consensus for commits under conflicts. In *Proceedings of USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, November 2016.

[12] Zhaoguo Wang, **Shuai Mu**, Yang Cui, Han Yi, Haibo Chen, and Jinyang Li. Scaling multicore databases via constrained parallel execution. In *Proceedings of ACM International Conference on Management of Data (SIGMOD)*, June 2016.

[13] **Shuai Mu**, Yang Cui, Yang Zhang, Wyatt Lloyd, and Jinyang Li. Extracting more concurrency from distributed transactions. In *Proceedings of USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, October 2014.

[14] **Shuai Mu**, Kang Chen, Yongwei Wu, and Weimin Zheng. When Paxos meets erasure code: reduce network and storage cost in state machine replication. In *Proceedings of ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC)*, June 2014.

[15] **Shuai Mu**, Kang Chen, Pin Gao, Feng Ye, Yongwei Wu, and Weimin Zheng. μLibCloud: Providing high available and uniform accessing to multiple cloud storages. In *Proceedings of ACM/IEEE International Conference on Grid Computing (Grid)*, May 2012.

Teaching

2022	Distributed Systems (Fall), Stony Brook	Lecturer
2022	Software Engineering (Spring), Stony Brook	Lecturer
2021	Distributed Systems Seminar, Stony Brook	Organizer
2020	Distributed Systems (Fall), Stony Brook	Lecturer
2020	Distributed Systems Seminar, Stony Brook	Organizer
2019	Asynchronous (Distributed) Systems (Fall), Stony Brook	Lecturer
2019	Asynchronous (Distributed) Systems (Spring), Stony Brook	Lecturer
2018	Computer System Organization, NYU	Lecturer
2017	Computer System Organization, NYU	Recitation Leader
2016	Data Structures, NYU	Recitation Leader
2015	Operating Systems, NYU	Guest Lecturer
2014	Computer Systems, Tsinghua	Guest Lecturer
2012	Introduction to Algorithms, Tsinghua	Teaching Assistant
2011	Introduction to Algorithms, Tsinghua	Teaching Assistant

2011 Object-oriented Programming, Tsinghua Teaching Assistant

Last updated: December 9, 2022