

Yang Wang

CONTACT INFORMATION

Department of Computer Science and Engineering *Office:* DL 689
The Ohio State University *Phone:* (614) 292-2577
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RESEARCH INTERESTS

Large-scale distributed systems, fault tolerance, scalability, performance debugging

EDUCATION

Ph.D. Computer Science, The University of Texas at Austin, 2014
Advisors: Dr. Lorenzo Alvisi (now at Cornell University) and Dr. Mike Dahlin (now at Google)

M.E. Computer Science and Technology, Tsinghua University, 2008
Advisor: Dr. Jiwu Shu

B.E. Computer Science and Technology, Tsinghua University, 2005

ACADEMIC POSITIONS

Assistant Professor Computer Science, the Ohio State University, Jan. 2015 - Present

HONORS AND AWARDS

Google PhD Fellowship in Distributed Computing, 2013 - 2014

Best paper award, Systor 2014

REFEREED PUBLICATIONS

Sixiang Ma, Fang Zhou, Mike D. Bond, and Yang Wang. “Finding Heterogeneous-Unsafe Configuration Parameters in Cloud Systems”. *Proceedings of Eurosys 2021*.

Junyu Wei, Guangyan Zhang, Yang Wang, Zhiwei Liu, Zhanyang Zhu, Junchao Chen, Tingtao Sun, and Qi Zhou. “On the Feasibility of Parser-based Log Compression in Large-Scale Cloud Systems”. *Proceedings of the 19th USENIX Conference on File and Storage Technologies (FAST)*, Online, Feb, 2021.

Huazhe Wang, Xin Li, Yang Wang, Yu Zhao, Yu Ye, Hongkun Yang, and Chen Qian. “SICS: Secure and Dynamic Middlebox Outsourcing”. In *IEEE/ACM Transactions on Networking (ToN)*, Vol 6, Issue 28, Sep 2020.

Yifan Gan, Xueyuan Ren, Drew Ripberger, Spyros Blanas, Yang Wang. “IsoDiff: Debugging Anomalies Caused by Weak Isolation”. *Proceedings of the VLDB Endowment, Vol. 13, No.11 (VLDB 20)*, Online, August - September, 2020.

Youmin Chen, Youyou Lu, Fan Yang, Qing Wang, Yang Wang, Jiwu Shu. “FlatStore: an Efficient Log-Structured Key-Value Storage Engine for Persistent Memory”. *Proceedings of the 25th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS 20)*, Online, March, 2020.

Zhufan Wang, Guangyan Zhang, Yang Wang, Qinglin Yang, and Jiaji Zhu. “Dayu: Fast and Low-interference Data Recovery in Very-large Storage Systems”. *Proceedings of the 2019 USENIX Annual Technical Conference (USENIX ATC)*, Renton, WA, July, 2019.

Panpan Jin, Jian Guo, Yikai Xiao, Rong Shi, Yipei Niu, Fangming Liu, Chen Qian, and Yang Wang. “PostMan: Rapidly Mitigating Bursty Traffic by Offloading Packet Processing”. *Proceedings of the 2019 USENIX Annual Technical Conference (USENIX ATC)*, Renton, WA, July, 2019.

Donghe Kang, Vadang Patel, Ashwati Nair, Spyros Blanas, Yang Wang, and Srinivasan Parthasarathy. “Henosis: Workload-driven small array consolidation and placement for HDF5 applications on heterogeneous data stores”. *Proceedings of the 33rd ACM International Conference on Supercomputing (ICS)*, Phoenix, AZ, June 2019.

Chengwen Wu, Guangyan Zhang, Yang Wang, Xinyang Jiang, and Weimin Zheng. “Redio: Accelerating Disk-based Graph Processing by Reducing Disk I/Os”. *IEEE Transactions on Computers*, Vol 68, Issue 3, March 2019.

Fang Zhou, Yifan Gan, Sixiang Ma and Yang Wang. “wPerf: Generic Off-CPU Analysis to Identify Critical Waiting Events”. *Proceedings of the 13th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2018)*, Carlsbad, CA, October, 2018.

Rong Shi, Yifan Gan and Yang Wang. “Evaluating Scalability Bottlenecks by Workload Extrapolation”. *Proceedings of the 26th IEEE International Symposium on the Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS 2018)*, Milwaukee, WI, September, 2018.

Sixiang Ma and Yang Wang. “Accurate Timeout Detection Despite Arbitrary Processing Delays”. *Proceedings of the 2018 USENIX Annual Technical Conference (USENIX ATC)*, Boston, MA, July, 2018.

Rong Shi and Yang Wang. “Cheap and Available State Machine Replication”. *Proceedings of the 2016 USENIX Annual Technical Conference (USENIX ATC)*, Denver, CO, June, 2016.

Chao Xie, Chunzhi Su, Cody Littley, Lorenzo Alvisi, Manos Kapritsos, and Yang Wang. “High-Performance ACID via Modular Concurrency Control”. *Proceedings of the 25th ACM Symposium on Operating Systems Principles (SOSP)*, Monterey, California, October, 2015.

Chao Xie, Chunzhi Su, Manos Kapritsos, Yang Wang, Navid Yaghmazadeh, Lorenzo Alvisi, and Prince Mahajan. “Salt: Combining ACID and BASE in a Distributed Database”. *Proceedings of the 11th USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, Broomfield, CO, October, 2014.

Mark Silberstein, Lakshmi Ganesh, Yang Wang, Lorenzo Alvisi, and Mike Dahlin. “Lazy Means Smart: Reducing Repair Bandwidth Costs in Erasure-coded Distributed Storage”. *Proceedings of the 7th ACM International Systems and Storage Conference (Systor)*, Haifa, Israel, June, 2014. Best paper award.

Yang Wang, Manos Kapritsos, Lorenzo Alvisi, and Mike Dahlin. “Exalt: Empowering Researchers to Evaluate Large-Scale Storage Systems”. *Proceedings of the 11th USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, Seattle, WA, April, 2014.

Yang Wang, Manos Kapritsos, Zuocheng Ren, Prince Mahajan, Jeevitha Kirubanandam, Lorenzo Alvisi, and Mike Dahlin. “Robustness in the Salus scalable block store”, *Proceedings of the 10th USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, Lombard, IL, April 2013.

Manos Kapritsos, Yang Wang, Vivien Quema, Allen Clement, Lorenzo Alvisi, and Mike Dahlin. “All about Eve: Execute-Verify Replication for Multi-Core Servers”, *Proceedings of 2012 Symposium on*

Operating Systems Design and Implementation (OSDI), Hollywood, CA, October 2012.

Yang Wang, Lorenzo Alvisi, and Mike Dahlin. “Gnothi: Separating Data and Metadata for Efficient and Available Storage Replication”, *Proceedings of 2012 USENIX Annual Technical Conference (USENIX ATC)*, Boston, MA, June 2012.

Yang Wang, Jiwu Shu, Guangyan Zhang, Wei Xue, and Weimin Zheng. “SOPA: Selecting the Optimal Policy Adaptively”. *ACM transactions on storage (TOS)*, Volume 6 Issue 2, July 2010.

Allen Clement, Manos Kapritsos, Sangmin Lee, Yang Wang, Lorenzo Alvisi, Mike Dahlin, and Taylor Riche. “UpRight Cluster Services”. *Proceedings of the 22nd ACM Symposium on Operating Systems Principles (SOSP)*, Big Sky, MT, October 2009.

PROFESSIONAL
EXPERIENCE

Program committee: APSys 2021, ICDCS 2021, Eurosys 2021, OSDI 2020, USENIX ATC 2019
ERC, ICDCS 2018, SoCC 2016, SysTOR 2016, DCOSS 2016, ICPP 2015

Student grant committee: SOSP 2019, SOSP 2017

Reviewer: *ACM Transactions on Storage (TOS)*, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, *ACM Transactions on Computer Systems (TOCS)*, *ACM Transactions on Parallel Computing (TOPC)*

TEACHING

- CSE2431 Operating System (System II), Spring 2021.
- CSE2431 Operating System (System II), Fall 2020.
- CSE6431 Advanced Operating System, Spring 2020.
- CSE6431 Advanced Operating System, Fall 2019.
- CSE5429 System Design for New Hardware, Spring 2019.
- CSE6431 Advanced Operating System, Fall 2018.
- CSE6431 Advanced Operating System, Fall 2017.
- CSE2431 Operating System (System II), Spring 2017.
- CSE2431 Operating System (System II), Fall 2016.
- CSE5439 Large-scale Data Processing, Spring 2016.
- CSE2431 Operating System (System II), Fall 2015.

STUDENTS

- Ph.D. students: Miao Yu, Xueyuan Ren, Sixiang Ma, Yifan Gan, Fang Zhou
- Undergraduate students: Mingzhe Han, Nuo Xu, Drew Rigberger
- Alumni: Yuyang Huang (B.S. 2021, Master @ U. Chicago), Rui Zhu (B.S. 2021, Master @ Purdue), Rong Shi (Ph.D. 2018, Facebook), Zijian Hu (M.S. 2017, Facebook)