Fang Zhou

Meta platforms, Inc.
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Research Interests

Performance Analysis, Operating Systems, and Distributed Systems

Industry Experience

Research Scientist, Meta platforms, Inc. November, 2021 - Present
I am working in the Ads Serving Efficiency and Scalability team. My major work is to improve the ads delivery system that supports complex ML models efficiently.

Software Engineering Intern, Facebook, Inc. Summer 2020
I worked with Dr. Jason Flinn in the Hedwig team, where I designed and implemented the Hedwig emulator to find the optimal distribution policies for different Hedwig clients.

Education

Ph.D. in Computer Science, The Ohio State University 2015 – 2021
Dissertation: Identifying and Understanding Performance Problems in Software Systems
Advisor: Dr. Yang Wang

M.S. in Computer Science, Auburn University 2013 – 2015

M.E. in Computer Science, Harbin Institute of Technology 2010 – 2012

B.E. in Computer Science, Central South University 2006 – 2010

Publications

Jason Flinn, Xianzheng Dou, Arushi Aggarwal, Alex Boyko, Francois Richard, Eric Sun, Wendy Tobagus, Nick Wolchko, and **Fang Zhou**. Owl: Scale and Flexibility in Distribution of Hot Content. *The 16th USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, Carlsbad, CA, July, 2022.

Yang Wang, Miao Yu, Yujie Hui, **Fang Zhou**, Yuyang Huang, Rui Zhu, Xueyuan Ren, Tianxi Li, and Xiaoyi Lu. A Study of Database Performance Sensitivity to Experiment Settings. *The 48th International Conference on Very Large Data Bases (VLDB)*, Sydney, Australia, September, 2022.

Sixiang Ma, **Fang Zhou**, Mike Bond, and Yang Wang. Finding Unsafe Heterogeneous Configurations in Cloud Systems. *The 16th European Conference on Computer Systems (EuroSys)*, Virtual, April, 2021.

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

Fang Zhou, Hai Pham, Jianhui Yue, Hao Zou, and Weikuan Yu. SFMapReduce: An optimized MapReduce framework for Small Files. *The 12th International Conference on Networking, Architecture, and Storage (NAS)*, Boston, MA, August, 2015.

Changyun Miao, **Fang Zhou**, Chunqing Ye, and Jing Liu. Design of anUltrasonic Detecting System Based on LabVIEW. *The 2nd International Congress on Image and Signal Processing (CISP)*, Shanghai, China, 2009.

Hua Fu, Dan Zhao, **Fang Zhou**. Research on Application of RS-RBF Information Fusion in Gas Monitoring. *Transducer and Microsystem Technologies*, 2009.

Posters and Reports

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

Fang Zhou, Yifan Gan, Sixiang Ma, and Yang Wang. wPerf: GenericOff-CPU Analysis to Identify Bottleneck Waiting Events. Technical Report, The Ohio State University, 2018.

Fang Zhou. wPerf: Identifying Critical Waiting in Multi-threaded Applications. *ACM Student Research Competition (SRC)* held in conjuction with *Symposium on Operating Systems Principles (SOSP)*, Shanghai, China, November, 2017.

Fang Zhou, Huansong Fu, Kevin Vasko, and Weikuan Yu. A New Large-Scale Cloud Image Processing Framework using MapReduce. Technical Report, Auburn University, 2015.

Honors and Awards

Nomination of OSU Graduate Associate Teaching Award, 2020

Runner-up for Annual Student Research Competition in CSE Department, 2019

Runner-up for Student Research Competition in *SOSP 2017*

Student Travel Grant for *SOSP 2017, OSDI 2018, SOSP 2019,* and *OSDI 2020*

Woltosz Fellowship at Auburn University, 2013 - 2015

Outstanding Freshman Scholarship at Central South University, 2006

Invited Talks

Introduction to Performance Analysis. CSE 2431: Introduction to Operating System, The Ohio State University, Columbus, OH, 2019.

wPerf: Generic Off-CPU Analysis to Identify Bottleneck Waiting Events. *The 13th USENIX Symposium on Operating Systems Design and Implementation (OSDI)*, Carlsbad, CA, October, 2018.

Academic Service

Shadow PC member

EuroSys 2019

Artifact Evaluation Committee member

Journal of Systems Research (JSys), 2021 – Present

OSDI 2020, 2021

SOSP 2019

ASPLOS 2020, 2021

EuroSys 2021, 2022

Teaching Experience

CSE 1110: Introduction to Computing Technology, Teaching Assistant, OSU	Fall 2020, Spring 2021
CSE 5243: Introduction to Data Mining, Teaching Assistant, OSU	Fall 2018 to Spring 2020 (4 times)
CSE 2431: Introduction to Operating Systems, Teaching Assistant, OSU	Fall 2017
CSE 5234: Distributed Enterprise Computing, Teaching Assistant, OSU	Fall 2017
CSE 5351: Introduction to Cryptography, Teaching Assistant, OSU	Fall 2015
COMP 3220: Principles of Programming Languages, Teaching Assistant, AU	Spring 2015

Selective Projects

VarMRI: a latency analysis tool to understand latency variance caused by kernel and hardware events.

wPerf: a performance analysis tool to identify bottleneck waiting events (released on Github).

SFHadoop: an optimized Hadoop framework for small files.

References

Yang Wang (Ph.D. Advisor)
Associate Professor, Computer Science and Engineering, The Ohio State University
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Robert M. Critchfield Professor in Engineering, Computer Science and Engineering, The Ohio State University
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Jason Flinn
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