

Fan Lai

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Ann Arbor, MI 48105

EDUCATION

University of Michigan, Ann Arbor

Sep. 2017 – Present

Ph.D. candidate in Computer Science and Engineering

Advisor: Mosharaf Chowdhury, GPA: 3.83/4.0

Field: Systems + AI, Cloud Computing

Shanghai Jiao Tong University (SJTU)

Sep. 2013 – July 2017

B.S. in Computer Science (IEEE Honor Class), Rank: Top 5%

PUBLICATIONS

- Fan Lai**, Yinwei Dai, Sanjay S. Singapuram, Jiachen Liu, Xiangfeng Zhu, Harsha Madhyastha, Mosharaf Chowdhury. "*FedScale: Benchmarking Model and System Performance of Federated Learning at Scale*", to appear at International Conference on Machine Learning (ICML'22). Short version (**Best Paper Award**) in ResilientFL@SOSP workshop.
- Fan Lai**, Xiangfeng Zhu, Harsha Madhyastha, Mosharaf Chowdhury. "*Oort: Efficient Federated Learning via Guided Participant Selection*", in Proc. of USENIX Symposium on Operating Systems Design and Implementation (OSDI'21). (**Distinguished Artifact Award Winner**)
- Fan Lai**, Jie You, Xiangfeng Zhu, Harsha Madhyastha, Mosharaf Chowdhury. "*Sol: Fast Distributed Computation Over Slow Networks*", in Proc. of USENIX Symposium on Networked Systems Design and Implementation (NSDI'20).
- Fan Lai**, Mosharaf Chowdhury, Harsha Madhyastha. "*To Relay or Not to Relay for Inter-Cloud Transfers?*", in Proc. of USENIX Workshop on Hot Topics in Cloud Computing (HotCloud'18).
- Fan Lai**, Feng Qiu, Wenjie Bian, Ying Cui, Edmund Yeh. "*Scaled VIP Algorithms for Joint Dynamic Forwarding and Caching in NDN*", in Proc. of ACM Conference on Information-Centric Networking (ICN'16).
- Ying Cui, **Fan Lai**, Edmund Yeh, Ran Liu. "*Enhanced VIP Algorithms for Forwarding, Caching, and Congestion Control in NDN*", in Proc. of IEEE Global Communications Conference (GLOBECOM'16).
- Ying Cui, **Fan Lai**, Stephen Hanly, Philip Whiting. "*Optimal Caching and Scheduling in Cache-enabled Heterogeneous Wireless Networks*", in Proc. of IEEE Global Communications Conference (GLOBECOM'16).
- Ying Cui, Muriel Médard, Edmund Yeh, Douglas Leith, **Fan Lai**, Ken R. Duffy. "*A Linear Network Code Construction for General Integer Connections Based on CSPs*", in IEEE/ACM Transactions on Networking (TON'17).

WORK EXPERIENCE

Meta AI, Visiting Researcher

March 2022 – Sept. 2022

Area: ML System, Model Quality and Efficiency

Meta AI, Internship, AI Platform Team

June 2021 – Sept. 2021

Area: Applied research on ML systems for Ads production Infrastructure

HONORS AND AWARDS

Finalist, Meta Fellowship (<i>Top 4% among 2300+ worldwide PhD applicants</i>)	2022
Best Paper Award (ResilientFL@SOSP)	2021
Distinguished Artifact Award Winner (OSDI)	2021
National Scholarship (<i>Highest scholarship in China</i>)	2016