Fei Wang

Toronto, Canada
silviafey.wang@utoronto.ca

EDUCATION

University of Toronto, Toronto, ON, Canada
Department of Electrical & Computer Engineering
Ph.D. Student, Computer Engineering (transferred from M.A.Sc in Jan 2022) Sep 2020 – present
- Cumulative GPA: 3.86/4.00

Wuhan University, Wuhan, Hubei, People's Republic of China
Hongyi Honor College
B.Engr., Computer Science and Technology (with honors) 2016 – 2020
- Cumulative GPA: 3.80/4.00
- Rank: 4/34 (selected from 587 students in the School of Computer Science, Wuhan University)

PUBLICATIONS

JOURNALS & MAGAZINES

Fei Wang, Baochun Li, "Data Reconstruction and Protection in Federated Learning for Fine-Tuning Large Language Models," *in IEEE Transactions on Big Data, Special Section on Pre-Trained Large Language Models, 2024 (JIF: 7.2).*

Fei Wang, Ethan Hugh, Baochun Li, "More than Enough is Too Much: Adaptive Defenses against Gradient Leakage in Production Federated Learning," *in IEEE/ACM Transactions on Networking, 2024 (JIF: 3.7).*

Fei Wang, Baochun Li, "Harnessing the Power of Local Supervision in Federated Learning," *in IEEE Transactions on Big Data, Special Issue on Federated Learning for Big Data Applications, 2024 (JIF: 7.2).*

Fei Wang, Baochun Li, Bo Li, "Federated Unlearning and Its Privacy Threats," *in IEEE Network, 2023 (JIF: 10.294).*

Fei Wang, Baochun Li, Bo Li, "Quality-Oriented Federated Learning on the Fly," *in IEEE Network, Special Issue on Federated Optimizations and Networked Edge Intelligence, vol. 36, no. 5, pp. 152–159, September–October 2022 (JIF: 10.294).*

Salma Emara, **Fei Wang**, Baochun Li, Timothy Zeyl, "Pareto: Fair Congestion Control with Online Reinforcement Learning," *in IEEE Transactions on Network Science and Engineering, vol. 9, no. 5, pp. 3731–3748, September–October 2022 (JIF: 5.033).*

CONFERENCES

Fei Wang, Yan Zhu, Baochun Li, "Unraveling Elevated Data Leakage in Split Learning for Fine-Tuning Stable Diffusion Models," *in the 20th ACM ASIA Conference on Computer and Communications Security (AsiaCCS), Hanoi, Vietnam, August 25–29, 2025.*

Salma Emara, Daniel Liu, **Fei Wang**, Baochun Li, "Cascade: Enhancing Reinforcement Learning with Curriculum Federated Learning and Interference Avoidance — A Case Study in Adaptive Bitrate Selection," *in the Proceedings of IEEE INFOCOM 2024 Workshop on Distributed Machine Learning and Fog Networks (FOGML), Vancouver, Canada, May 20-23, 2024.*

Baochun Li, Ningxin Su, Chen Ying, **Fei Wang**, "Plato: An Open-Source Research Framework for Production Federated Learning," *in the Proceedings of ACM Turing Award Celebration Conference (TURC), Wuhan, China, July 28–30, 2023.*

Fei Wang, Salma Emara, Isidor Kaplan, Baochun Li, Timothy Zeyl, "Multi-Agent Deep Reinforcement Learning for Cooperative Edge Caching via Hybrid Communication," *in the Proceedings of IEEE ICC 2023, Selected Areas in Communications — Machine Learning for Communications and Networking Track, Rome, Italy, May 28 – June 1, 2023.*

Fei Wang, Ethan Hugh, Baochun Li, "More than Enough is Too Much: Adaptive Defenses against Gradient Leakage in Production Federated Learning," *in the Proceedings of IEEE INFOCOM 2023, New York Area, U.S.A., May 17–20, 2023 (acceptance rate: 19.2%, Best Paper Award).*

Salma Emara, **Fei Wang**, Isidor Kaplan, Baochun Li, "Ivory: Learning Network Adaptive Streaming Codes," *in the Proceedings of the 30th IEEE/ACM International Symposium on Quality of Service (IWQoS), Online, June 10–12, 2022 (acceptance rate: 24.3%).*

PATENTS

Zhenhua Hu, Timothy J. Zeyl, Salma Emara, Baochun Li, **Fei Wang**, "Method and Apparatus for Multiple Reinforcement Learning Agents in a Shared Environment," *July 6, 2023.*

TEACHING EXPERIENCE

Lab Teaching Assistant for APS105 – Computer Fundamentals (in C) W22 & W23 & W25
Department of Electrical & Computer Engineering, University of Toronto
- Providing support to students with their lab assignments
- Grading lab assignments particularly on coding style
- Invigilating and marking the final exam

Teaching Assistant for ECE 1724-F1 – Performant Software Systems with Rust F24
Department of Electrical & Computer Engineering, University of Toronto
- Developed auto-marking test suites for assignments
- Evaluated course projects and reports

Tutorial Teaching Assistant for APS105 – Computer Fundamentals (in C) W24
Department of Electrical & Computer Engineering, University of Toronto
- Leading tutorial sessions on assigned problem sets
- Assisting students with troubleshooting on Piazza
- Invigilating and marking the midterm and final exams

Teaching Assistant for ECE1771 – Quality of Service F23
Department of Electrical & Computer Engineering, University of Toronto
- Grading critiques, midterm paper draft, and final course paper
- Invigilating and marking the final exam

Developer Assistant for ECEH1S – ECE Project W22
Department of Electrical & Computer Engineering, University of Toronto
- Developing a research database web application using Node.js with PostgreSQL

SKILLS

Programming/Scripting Language: Python, C, JavaScript, Rust, UNIX Shell Scripting, LaTeX, MATLAB
Platforms/Frameworks/Tools: PyTorch, NumPy, Transformers, React, Next.js, Matplotlib, Git, Linux

AWARDS & HONORS

- Mary H. Beatty Fellowship, University of Toronto 2024 – 2025
- School of Graduate Studies (SGS) Conference Grant, University of Toronto Winter 2024
- IEEE INFOCOM 2023 Student Travel Grant 2023
- Farid and Diana Najm Graduate Fellowship (received with professor's nomination), University of Toronto 2023
- IEEE ICNP 2022 Travel Grant 2022
- The Edward S. Rogers Sr. Graduate Scholarship, University of Toronto 2020 – 2024
- Outstanding Graduate at Wuhan University 2020
- Special Overseas Scholarship, Wuhan University 2018 – 2020
- Outstanding Student Scholarship, Wuhan University 2016 – 2019