

Yue Dai

ASSISTANT PROFESSOR · DEPARTMENT OF COMPUTER SCIENCE

Illinois Institute of Technology, Chicago, IL 60616

✉ ydai21@illinoistech.edu

Education

University of Pittsburgh

PHD STUDENT IN COMPUTER SCIENCE

- Advisor: Dr. Youtao Zhang
- Co-Advisor: Dr. Xulong Tang

Pittsburgh, PA 15260

2018/09 - 2025/06

University of Maryland, College Park

MS OF SCIENCE IN TELECOMMUNICATION

College Park, MD 20742

2015/09 - 2017/05

Beihang University

BACHELOR OF ENGINEERING IN ELECTRICAL ENGINEERING AND AUTOMATION

Beijing, China 100191

2010/09-2014/06

Professional Experience

2025/08-
present

Tenure-track Assistant Professor, Department of Computer Science, Illinois Institute of Technology

2022-2025

Graduate Research Assistant, Department of Computer Science, University of Pittsburgh

2018-2022

Graduate Teaching Assistant, Department of Computer Science, University of Pittsburgh

2016

Graduate Research Assistant, Department of Computer Science, University of Maryland

2014

Intern, Information Department of Research Center of Automatic Control and Logistic Technology Engineering, Beijing Research Institute of Automation for Machinery Industry

2014

Undergraduate Research Assistant, Department of Electrical Engineering and Automation, Beihang University

2013

Intern, Department of Automatic System of Simons (China) LTD., Beijing Branch

Publications

**the authors contribute equally*

Yue Dai*, Liang Liu*, Xulong Tang, Youtao Zhang, Jun Yang. 2025. MemFreezing: A Novel Adversarial Attack on Temporal Graph Neural Networks under Limited Future Knowledge. (The Forty-Second International Conference on Machine Learning (**ICML'2025**))

Yue Dai, Xulong Tang, Youtao Zhang. 2025. Cascade: A Dependency-Aware Efficient Training Framework for Temporal Graph Neural Network. 2025 ACM International Conference on Architectural Support for Programming Languages and Operating Systems (**ASPLOS'2025**)

Li, Yingheng, **Yue Dai**, Aditya Pawar, Rongchao Dong, Jun Yang, Youtao Zhang, and Xulong Tang. 2025. Using Reinforcement Learning to Guide Graph State Generation for Photonic Quantum Computers. The 52nd International Symposium on Computer Architecture (**ISCA'2025**).

Sheng Li, Qitao Tan, **Yue Dai**, Zhenglun Kong, Tianyu Wang, Jun Liu, Ao Li, Ninghao Liu, Yufei Ding, Xulong Tang, Geng Yuan. 2025. Mutual Effort for Efficiency: A Similarity-based Token Pruning for Vision Transformers in Self-Supervised Learning. The Thirteenth International Conference on Learning Representations (**ICLR'2025**)

Yue Dai, Youtao Zhang, Xulong Tang. 2023. CEGMA: Coordinated elastic graph matching acceleration for graph matching networks. 2023 IEEE International Symposium on High-Performance Computer Architecture (**HPCA'2023**).

Yue Dai, Xulong Tang, Youtao Zhang. 2023. FlexGM: An Adaptive Runtime System to Accelerate Graph Matching Networks on GPUs. 2023 IEEE 41st International Conference on Computer Design (**ICCD'2023**).

Sheng Li*, Geng Yuan*, **Yue Dai***, Youtao Zhang, Yanzhi Wang, Xulong Tang. 2023. Smartfrz: An efficient training framework using attention-based layer freezing. The 11th International Conference on Learning Representations (**ICLR'2023 Spotlight**).

Yue Dai, Xulong Tang, Youtao Zhang. 2022. An efficient segmented quantization for graph neural networks. CCF Transactions on High Performance Computing, 4(4), 461-473.(**THPC'2022**)

Zhexiong Liu*, Meiqi Guo*, **Yue Dai***, Diane Litman. 2022. ImageArg: A multi-modal tweet dataset for image persuasiveness mining. Proceedings of the 9th Workshop on Argument Mining, International Conference on Computational Linguistics at **COLING'2022**.

Sheng Li, Yang Sui, Junhao Ran, Bo Yuan, **Yue Dai**, and Xulong Tang. Temporal Aware Pruning for Efficient Diffusion-based Video Generation. arXiv preprint arXiv:2605.17837 (2026).

Sheng Li, Yang Sui, Yue Wu, Zhuoran Song, Bo Yuan, Xulong Tang, and **Yue Dai**. "Accelerating 3D Gaussian Splatting using Tensor Cores." arXiv preprint arXiv:2605.17855 (2026).

Sheng Li, Geng Yuan, Yawen Wu, **Yue Dai**, Chao Wu, Alex K Jones, Jingtong Hu, Yanzhi Wang, Xulong Tang. 2024. EdgeOL: Efficient in-situ Online Learning on Edge Devices. arXiv preprint arXiv:2401.16694.

Tianyu Wang, Sheng Li, Bingyao Li, **Yue Dai**, Ao Li, Geng Yuan, Yufei Ding, Youtao Zhang, Xulong Tang. 2024. Improving GPU multi-tenancy through dynamic multi-instance GPU reconfiguration. arXiv preprint arXiv:2407.13126.

Justin Brody, Samuel Barham, **Yue Dai**, Christopher Maxey, Donald Perlis, David Sekora, Jared Shamwell. 2016. Reasoning with grounded self-symbols for human-robot interaction. 2016 AAAI Fall Symposium Series

Research Experience _____

University of Pittsburgh	<i>Pittsburgh, PA</i>
RESEARCH ASSISTANT	<i>Sep. 2018 - Present</i>
• Develop efficient training frameworks for general Deep Neural Networks and Temporal Graph Neural Networks • Design software-hardware co-designs and GPU runtimes for inference acceleration on diverse deep graph learning models • Develop adversarial attacks and defenses for deep graph learning models, with a focus on Temporal Graph Neural Networks • Optimize deep graph learning models for accurate and scalable graph similarity computing	
University of Maryland, College Park	<i>College Park, MD</i>
RESEARCH ASSISTANT	<i>2015-2017</i>
• Develop metacognitive intelligent system based on active logic machine • Design a reliable and secure distributed data management method for cloud services	
Beihang University	<i>Beijing, CHINA</i>
UNDERGRADUATE RESEARCH	<i>2010-2014</i>
• Design sensor and control system for solar panel maintaining robots and devices	
Beijing Research Institute of Automation for Machinery Industry	<i>Beijing, CHINA</i>
RESEARCH INTERN	<i>2014</i>
• Develop an electrical nonlinearity pre-compensation method for optical orthogonal frequency-division multiplexing systems	

Research Talks _____

2025	Efficient and Robust Dynamic Deep Graph Learning , at University of California at Riverside, Riverside, USA
2025	Towards Efficient and Robust Deep Graph Learning , at University of Pittsburgh, Pittsburgh, USA
2023	FlexGM: An Adaptive Runtime System to Accelerate Graph Matching Networks on GPUs , at ICCD 2023, Washington. DC, USA
2020	Effectiveness of Video Encoder for Adversarial Videos Defense , at University of Pittsburgh, Pittsburgh, PA.

Awards _____

- 2024 **CS 50 Outstanding Research Fellowship**, Department of Computer Science, University of Pittsburgh
- 2023 **Orrin E. and Margaret M. Taulbee Graduate Award**, Department of Computer Science, University of Pittsburgh

Mentoring

- 2026-Now **Chenxi Gao**, PhD, Illinois Institute of Technology
- 2026-Now **Haroon Gharwi**, PhD, Illinois Institute of Technology
- 2026-Now **Sebastian Alejandro Mendoza**, Master of Science, Illinois Institute of Technology
- 2021-Now **Sheng Li**, PhD, University of Pittsburgh
- 2022-2025 **Yingheng Li**, PhD, University of Pittsburgh
- 2021-2022 **Austin Tercha**, Master of Science, University of Pittsburgh

Teaching

- Fall 2026 **CS577 DEEP LEARNING**, Instructor
- Spring 2026 **CS595 EFFICIENT MACHINE LEARNING SYSTEM**, Instructor
- Fall 2022 **CS2210 COMPILER DESIGN**, Teaching Assistant
- Fall 2022 **CS1622 INTRODUCTION TO COMPILER DESIGN**, Teaching Assistant
- Summer 2022 **CS0007 INTRODUCTION TO COMPUTER PROGRAMMING**, Teaching Assistant
- Spring 2022 **CS1550 INTRODUCTION TO OPERATING SYSTEMS**, Teaching Assistant
- Summer 2021 **CS1501 ALGORITHMS DATA STRUCTURES 2**, Teaching Assistant
- FALL 2020 **CS2510 COMPUTER OPERATING SYSTEMS**, Teaching Assistant
- FALL 2020 **CS1621 STRUCTURE PROGRAMMING LANGUAGES**, Teaching Assistant
- Summer 2020 **CS0007 INTRODUCTION TO COMPUTER PROGRAMMING**, Teaching Assistant
- Spring 2020 **CS1550 INTRODUCTION TO OPERATING SYSTEMS**, Teaching Assistant
- Fall 2019 **CS0008 INTRODUCTION TO COMPUTER PROGRAMMING WITH PYTHON**, Teaching Assistant
- Summer 2019 **CS0007 INTRODUCTION TO COMPUTER PROGRAMMING**, Teaching Assistant
- Spring 2019 **CS1520 PROGRAMMING LANGUAGE FOR WEB APPLICATIONS**, Teaching Assistant
- Fall 2018 **CS0449 INTRODUCTION TO SYSTEMS SOFTWARE**, Teaching Assistant

Professional Development

REGISTRATION CHAIR ASPLOS'2026

PROGRAM COMMITTEE ISCA'26, MLSys'26, MICRO'26, HPCA'26

ARTIFACT EVALUATION COMMITTEE MICRO'22, ASPLOS'23, PLDI'23,

PEER REVIEW ICLR'24, ICLR'25, ICLR'26, MLSys'26, ISCA'26, TCC'26, J. Supercomput'26, Clust. Comput'26, TACO'26

GUEST EDITOR IEEE Internet Computing'26

OTHERS NSF Reviewer 2026