

# Yuxin Tang

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## EDUCATION

Ph.D. Computer Science, Rice University, 2018-2024  
Advisor: Chris Jermaine  
B.S. Computer Science, Shanghai Jiao Tong University, 2014-2018

## RESEARCH AREAS

Data Management, Data Analytics, Systems for ML, Distributed ML

## INTERNSHIP

2023 Summer **Visa Research, Palo Alto, CA**

- Design algorithms for subgraph pattern discovery within graphs composed of trillion-sized transactions.
- Implement biclique computation framework designed to efficiently handle bipartite graphs that are several orders of magnitude larger.

2022 Summer **ByteDance Inc, Mountain View, CA**

- Work on self-supervised learning (SSL) on graphs and increase the accuracy of multi-view graph contrastive learning model (MVGRL) on large graph datasets (ogbn-\*) by 10%.
- Work on the scalability issues of graph diffusion by approximating personalized PageRank. Reduce the end-to-end training time by more than 60%.

2021 Summer **Jane Street, New York City, NY**

- Create efficient array data structure to index historical market data for feature selection pipeline.
- Develop adaptive quantitative investment strategies to new market conditions and optimize performance & efficiency.

## PUBLICATION

2024 **Monarch: Distributed Butterfly Counting for Large-scale Bipartite Graph.**

Yuxin Tang, Mangesh Bendre, Chris Jermaine, Mahashweta Das.

*In submission*

2023 **Compress, Then Prompt: Improving Accuracy-Efficiency Trade-off of LLM Inference with Transferable Prompt.**

Zhaozhuo Xu, Zirui Liu, Beidi Chen, Yuxin Tang, Jue Wang, Kaixiong Zhou, Xia Hu, Anshumali Shrivastava.

*In submission*

- 2023 **Federated Learning Over Images: Vertical Decompositions and Pre-Trained Backbones Are Difficult to Beat.**  
Yuxin Tang\*, Ed Hu\*, Anastasios Kyrillidis, Chris Jermaine.  
*ICCV'23*
- 2023 **Auto-Differentiation of Relational Computations for Very Large Scale Machine Learning.**  
Yuxin Tang, Zhimin Ding, Dimitrije Jankov, Binhang Yuan, Daniel Bourgeois, Chris Jermaine.  
*ICML'23*
- 2022 **Distributed learning of fully connected neural networks using independent subnet training.**  
 Binhang Yuan, Cameron R. Wolfe, Chen Dun, Yuxin Tang, Anastasios Kyrillidis, Chris Jermaine.  
*VLDB'22*
- 2021 **Federated Multiple Label Hashing (FedMLH): Communication Efficient Federated Learning on Extreme Classification Tasks.**  
Yuxin Tang\*, Zhenwei Dai\*, Chen Dun\*, Anastasios Kyrillidis, Anshumali Shrivastava.  
*ICML-FL'21*
- 2021 **Tensor Relational Algebra for Machine Learning System Design.**  
 Binhang Yuan, Dimitrije Jankov, Jia Zou, Yuxin Tang, Daniel Bourgeois, and Chris Jermaine.  
*VLDB'21*
- 2020 **Programmable In-Network Security for Context-aware BYOD Policies.**  
 Qiao Kang, Lei Xue, Adam Morrison, Yuxin Tang, Ang Chen, Xiapu Luo.  
*USENIX Security'20*
- 2018 **A Programmable, Hardware-Assisted Network Protocol Fuzzer.**  
Yuxin Tang, Ang Chen.  
*OSDI'18 (Poster)*
- 2017 **Exploring Simulation of Software-Defined Underwater Wireless Networks.**  
 Li Wei, Yuxin Tang, Yuching Cao, Zhaohui Wang, Mario Gerla.  
*MobiCom'17 Workshop on Underwater Networks*

## SERVICE

### Conference Reviewer:

*ICLR 2021–2023, ICML 2022–2023, NeurIPS 2022–2023, AISTATS 2022–2023, EDBT 2023, VLDB 2023, KDD 2023*

### Session Chair:

*VLDB 2023*