

Tong Zhao

CONTACT INFORMATION	355 Fitzpatrick Hall Department of Computer Science and Engineering, College of Engineering University of Notre Dame Notre Dame, IN 46556, USA	Phone: (+1) (216) 785-3351 E-mail: tzhao2@nd.edu https://www.tzhao.io
RESEARCH INTERESTS	<ul style="list-style-type: none">• Behavior modeling• Anomaly detection• Graph mining• Graph machine learning	
EDUCATION	University of Notre Dame, Notre Dame, IN, US • Ph.D. student in Computer Science and Engineering. • Advisor: Dr. Meng Jiang; Expected to graduate in 2022. (GPA: 3.7/4) Case Western Reserve University, Cleveland, OH, US • Bachelor of Art in Mathematics. (GPA: 3.6/4)	Aug. 2017 – present Aug. 2013 – May 2017
PROFESSIONAL EXPERIENCES	Snap Inc., Santa Monica, CA, US <i>Research Intern</i> <ul style="list-style-type: none">• Led a research project on graph data augmentation for graph machine learning. This work [P1] is under review at AAAI 2021.• Helped implement a large scale graph neural network-based system for user representation learning and age inference. (Used in production) Case Western Reserve University, Cleveland, OH, US <i>Peer Tutor</i> <ul style="list-style-type: none">• Provided on-campus tutoring for undergraduate students in EECS courses. Cassia Networks, San Jose, CA, US <i>Data analyst</i> <ul style="list-style-type: none">• Analyzed signal strength data for indoor Bluetooth locating systems. Organized and analyzed CRM data for summarization of customer feedbacks. Hanhai Investment, San Jose, CA, US <i>Market Assistant</i> <ul style="list-style-type: none">• Analyzed data from the market and prospects. Arranged conferences to promote networking and investment activity for technology start-ups.	Jan. 2020 – Aug. 2020 Sept. 2016 – May 2017 Aug. 2016 June 2016 – Aug. 2016
HONORS AND AWARDS	SIGIR Student Travel Grant, 29th ACM CIKM Outstanding Teaching Assistant Honorable Mention, University of Notre Dame	2020 2019
REFEREED CONFERENCE PUBLICATIONS	[C6] Tong Zhao , Chuchen Deng, Kaifeng Yu, Tianwen Jiang, Daheng Wang, and Meng Jiang. “Error-bounded Graph Anomaly Loss for GNNs.” In the 29th ACM International Conference on Information and Knowledge Management (CIKM). 2020. [C5] Wenhao Yu, Mengxia Yu, Tong Zhao , and Meng Jiang. “Identifying Referential Intention with Heterogeneous Contexts.” In Proceedings of the Web Conference (WWW). 2020. [C4] Tianwen Jiang, Zhihan Zhang, Tong Zhao , Bing Qin, Ting Liu, Nitesh V. Chawla, and Meng Jiang. “CTGA: Graph-based Biomedical Literature Search.” In IEEE International Conference on Bioinformatics and Biomedicine (BIBM). 2019. [C3] Tianwen Jiang, Tong Zhao , Bing Qin, Ting Liu, Nitesh V. Chawla, and Meng Jiang. “Multi-input Multi-output Sequence Labeling for Joint Extraction of Fact and Condition Tuples from Scientific Text.” In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP). 2019. [C2] Tianwen Jiang, Tong Zhao , Bing Qin, Ting Liu, Nitesh V. Chawla, and Meng	

	<p>Jiang. "The Role of "Condition": A Novel Scientific Knowledge Graph Representation and Construction Model." In ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). 2019.</p> <p>[C1] Tong Zhao, Matthew Malir, and Meng Jiang. "Actionable Objective Optimization for Suspicious Behavior Detection on Large Bipartite Graphs." In IEEE International Conference on Big Data (BigData). 2018. (Oral)</p>
REFEREED JOURNAL PUBLICATIONS	<p>[J1] Tianwen Jiang, Qingkai Zeng, Tong Zhao, Bing Qin, Ting Liu, Nitesh Chawla, and Meng Jiang. "Biomedical Knowledge Graphs Construction from Conditional Statements." In IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB), 2020.</p>
REFEREED WORKSHOP PUBLICATIONS	<p>[W4] Tong Zhao, Chuchen Deng, Kaifeng Yu, Tianwen Jiang, Daheng Wang, and Meng Jiang. "GNN-based Graph Anomaly Detection with Graph Anomaly Loss." In Workshop on Deep Learning on Graphs (DLG-KDD) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). 2020.</p> <p>[W3] Tong Zhao*, Bo Ni*, Wenhao Yu, and Meng Jiang. "Early Fraud Detection with Augmented Graph Learning." In Workshop on Deep Learning on Graphs (DLG-KDD) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). 2020. (* for equal contributions)</p> <p>[W2] Daheng Wang, Zhihan Zhang, Yihong Ma, Tong Zhao, Tianwen Jiang, Nitesh V. Chawla, and Meng Jiang. "Learning Attribute-Structure Co-Evolutions in Dynamic Graphs." In Workshop on Deep Learning on Graphs (DLG-KDD) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). 2020. (Best Paper Award)</p> <p>[W1] Tianwen Jiang, Tong Zhao, Bing Qin, Ting Liu, Nitesh V. Chawla, and Meng Jiang. "Constructing Information-Lossless Biological Knowledge Graphs from Conditional Statements." In International Workshop on Data Mining in Bioinformatics (BioKDD) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). 2019.</p>
PREPRINTS	<p>[P5] Tong Zhao, Yozen Liu, Leonardo Neves, Oliver Woodford, Meng Jiang, and Neil Shah. "Data Augmentation for Graph Neural Networks." arXiv:2006.06830.</p> <p>[P4] Tong Zhao*, Bo Ni*, Wenhao Yu and Meng Jiang. "Early Anomaly Detection by Learning and Forecasting Behavior." arXiv:2010.10016.</p> <p>[P3] Meng Jiang, Taeho Jung, Ryan Karl, and Tong Zhao. "Federated Dynamic GNN with Secure Aggregation." arXiv:2009.07351.</p> <p>[P2] Yihao Hu, Tong Zhao, Zhiliang Xu, and Lizhen Lin. "Neural Time-Dependent Partial Differential Equation." arXiv:2009.03892.</p> <p>[P1] Yao Ma, Xiaorui Liu, Tong Zhao, Yozen Liu, Jiliang Tang, and Neil Shah. "A Unified View on Graph Neural Networks as Graph Signal Denoising." arXiv:2010.01777.</p>
PROFESSIONAL SERVICES	<p>Invited Conference PC member/Reviewer</p> <ul style="list-style-type: none"> • LXAI at ICML 2020 • NeurIPS 2020 • AAAI 2021 • IJCAI 2021 <p>Invited Journal Reviewer</p> <ul style="list-style-type: none"> • Big Data Networks (specialty section of Frontiers in ICT, Frontiers in Digital Humanities, Frontiers in Big Data and Frontiers in Computer Science)