

Jiezhong Qiu

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Google Scholar Citation: 1368
scholar.google.com/citations?user=3rlMzwYAAAAJ

RESEARCH SUMMARY

I am a fifth-year Ph.D. student at the Department of Computer Science and Technology of Tsinghua University, under the supervision of Prof. Jie Tang. My research interest is **machine learning for graphs**, includes Network Embedding, Graph Neural Networks, Graph Spectral Methods, and Graph Learning Systems.

I have been a visiting scholar at Cornell University (working with Turing Award winner Prof. John Hopcroft). I have been research interns in Microsoft Research Redmond, Facebook AI, Alibaba DAMO Academy, and Tencent Quantum Lab.

I have published 6 CCF-A and 2 CCF-B first-author papers, with Google Scholar citation 1368. I was honored with the Nomination Award of the 2020 WAIC Youth Outstanding Paper and the Nomination Award of the 2018 Microsoft Research Asia Fellowship. I was the team leader and core member of the Tsinghua Supercomputing Team in 2015. Our team won 1st place in ASC '15 and SC '15 Student Supercomputing Competition.

EDUCATION

2016~Present	Ph.D., Department of Computer Science and Technology, Tsinghua University Advisor: Prof. Jie Tang.
2012~2016	B.E., Department of Computer Science and Technology, Tsinghua University

AWARDS

07/2020	Nomination Award of the 2020 WAIC Youth Outstanding Paper
09/2018	Nomination Award of the 2018 Microsoft Research Asia Fellowship
2018	National Scholarship
11/2015	SC '15 Student Supercomputing Competition 1st place (Team leader)
05/2015	ASC '15 Student Supercomputing Competition 1st place (Team member)

EXPERIENCE

07/2020-10/2020	Pre-training Graph Neural Networks Research Intern, Alibaba DAMO Academy. Advisor: Dr. Hongxia Yang. Design self-supervised learning algorithm for pre-training GNNs (KDD '20), ship into Taobao's recommendation system.
07/2019-10/2019	Designing Efficient Transformer Models

Research Intern, Facebook AI, Seattle. Advisor: Dr. Hao Ma.
Designing efficient Transformer models, saving up to 36% memory and 25.1% time
(Findings of EMNLP '20).

- 01/2019~06/2019 **Graph Neural Networks for Drug Discovery**
Research Intern, Tencent Quantum Lab. Advisor: Prof. Shengyu Zhang.
Core organizer of Tencent Alchemy Contest (ICLR '19 Workshop)
- 07/2017-10/2017 **Theoretical Analysis on Graph Representation Learning**
Research Intern, Microsoft Research Redmond. Advisor: Dr. Hao Ma and Dr.
Yuxiao Dong.
Unify popular network embedding algorithms as matrix factorization (WSDM' 18
most cited), ship into Microsoft Academic Search (WWW '19).
- 07/2015-10/2015 **WeChat Group Dynamics.**
Research Intern, Cornell University. Advisor: Prof. John Hopcroft (Turing Award
winner).
First work about the formation and evolution of WeChat groups (WWW '16).
- 2015 **Student Supercomputing Competition.**
Team leader and core member. Tsinghua University. Advisor: Prof. Jidong Zhai.
The most significant student competitions (ASC '15 and SC '15) in HPC
community. Built HPC cluster under power constraint and optimized HPC
applications.

PUBLICATION

- 1. LightNE: A Lightweight Graph Processing System for Network Embedding**
Jiezhong Qiu, Laxman Dhulipala, Jie Tang, Richard Peng, and Chi Wang.
(SIGMOD'21, CCF-A) Proceedings of the 2021 ACM SIGMOD International Conference on
Management of Data. Pages 2281–2289
- 2. A Matrix Chernoff Bound for Markov Chains and Its Application to Co-occurrence Matrices**
Jiezhong Qiu, Chi Wang, Ben Liao, Richard Peng, Jie Tang
(NeurIPS '20, CCF-A) 34th Conference on Neural Information Processing Systems.
- 3. Blockwise Self-Attention for Long Document Understanding**
Jiezhong Qiu, Hao Ma, Omer Levy, Wen-tau Yih, Sinong Wang, Jie Tang
Findings of the Association for Computational Linguistics: EMNLP 2020. Pages 2555—2565.
- 4. GCC: Graph Contrastive Coding for Graph Neural Network Pre-Training**
Jiezhong Qiu, Qibin Chen, Yuxiao Dong, Jing Zhang, Hongxia Yang, Ming Ding, Kuansan Wang, Jie
Tang
(KDD '20, CCF-A) Proceedings of the 26th ACM SIGKDD International Conference on Knowledge
Discovery & Data Mining. Pages 1150–1160.
- 5. Alchemy: A Quantum Chemistry Dataset for Benchmarking AI Models**
(Alphabetical Order) Guangyong Chen, Pengfei Chen, Chang-Yu Hsieh, Chee-Kong Lee, Benben Liao,
Renjie Liao, Weiwen Liu, **Jiezhong Qiu**, Qiming Sun, Jie Tang, Richard Zemel, Shengyu Zhang
ICLR '19 Workshop of Representation Learning on Graphs and Manifolds
- 6. NetSMF: Large-Scale Network Embedding as Sparse Matrix Factorization**
Jiezhong Qiu, Yuxiao Dong, Hao Ma, Jian Li, Chi Wang, Kuansan Wang, Jie Tang
(WWW '19, CCF-A) The World Wide Web Conference. Pages 1509–1520.
- 7. DeepInf: Social Influence Prediction with Deep Learning**
Jiezhong Qiu, Jian Tang, Hao Ma, Yuxiao Dong, Kuansan Wang, Jie Tang

(KDD '18, CCF-A) Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining. Pages 2110–2119.

8. Network Embedding as Matrix Factorization: Unifying DeepWalk, LINE, PTE, and node2vec
Jiezhong Qiu, Yuxiao Dong, Hao Ma, Jian Li, Kuansan Wang, Jie Tang

(WSDM '18, CCF-B) Proceedings of the Eleventh ACM International Conference on Web Search and Data Mining. Pages 459–467.

Most cited paper in WSDM'18; Nomination Award of the 2020 WAIC Youth Outstanding Paper.

9. Detecting Stress Based on Social Interactions in Social Networks

Huijie Lin, Jia Jia, **Jiezhong Qiu**, Yongfeng Zhang, Guangyao Shen, Lexing Xie, Jie Tang, Ling Feng, Tat-Seng Chua

(TKDE '17, CCF-A) In IEEE Transactions on Knowledge and Data Engineering, vol. 29, no. 9, pp. 1820-1833.

10. The Lifecycle and Cascade of WeChat Social Messaging Groups

Jiezhong Qiu, Yixuan Li, Jie Tang, Zheng Lu, Hao Ye, Bo Chen, Qiang Yang, John Hopcroft

(WWW '16, CCF-A) Proceedings of the 25th International Conference on World Wide Web. Pages 311–320.

11. Modeling and Predicting Learning Behavior in MOOCs

Jiezhong Qiu, Jie Tang, Tracy Xiao Liu, Jie Gong, Chenhui Zhang, Qian Zhang, Yufei Xue

(WSDM '16, CCF-B) Proceedings of the Ninth ACM International Conference on Web Search and Data Mining. Pages 93–102.

TEACHING EXPERIENCE

2020 Fall	Teaching Assistant: Advanced Machine Learning
2017 Fall	Teaching Assistant: Algorithm Design
2017 Spring	Teaching Assistant: Advanced Machine Learning

REVIEWING

Reviewer	ICML'21, KDD'21, ECML/PKDD'20, SDM'21 TKDE, KAIS, IEEE Intelligent Systems
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INVITED TALKS

09/2020	Graph Representation Learning & Applications (Tutorial at ECML/PKDD '20) Organizers: Jiezhong Qiu , Yuxiao Dong, Jie Tang
05/2019	Invited Talk at International Workshop on Deep Learning for Graphs and Structured Data Embedding (DL4G-SDE) at the WWW' 19 Invited to present the work on Network Embedding Learning and Applications