

Jiaxu Cui (崔佳旭)

(Postdoc)

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Summary

Jiaxu Cui is a postdoc in Jilin University, selected into Jilin University "Dingxin Scholar" Program. He received the B.Sc., M.S. and Ph.D. degrees from Jilin University in 2013, 2016, and 2021, respectively. He has visited Dr. Xia Hu's group at Texas A&M in 2018 and Prof. Jiming Liu's group at Hong Kong Baptist University in 2019-2020, and worked as an intern in Huawei in 2020-2021. His thesis was awarded as Excellent Doctoral Thesis by the Jilin University in 2021. His survey paper has been awarded as the "High Impact Paper of Journal of Software in 2020" (《软件学报》2020 年高影响力论文). He participated in the 1ST CHINA POSTDOCTORAL INNOVATION & ENTREPRENEURSHIP COMPETITION (首届全国博士后创新创业大赛), and won the WINNING prize (top 14%). His main research interests include complex network analysis and optimization, intelligent optimization and network representation learning. He has published over 10 high-quality papers in international conferences and journals including AAAI, TNNLS, and ESWA. He has served as reviewers in several major academic conferences and journals, including AAAI, IJCAI, TNNLS, and TBD.

Education Background

2016 – 2021: Ph.D.S. major in Computer Software and Theory, College of Computer Science and Technology, Jilin University, China. Supervisor: Prof. Bo Yang

2013 – 2016: M.S. major in Software Engineering, Software College of Jilin University, China. Supervisor: Prof. Yonggang Zhang

2009 – 2013: B.S. major in Software Engineering, Software College of Jilin University, China.

Research Experience

2021.07 – present: Postdoc in Jilin University, selected into Jilin University "Dingxin Scholar" Program. Under the guidance of Prof. Bo Yang.

2020.10 – 2021.01: Worked as an intern in Huawei.

2019.08 – 2020.06: Visited Prof. Jiming Liu's group at Hong Kong Baptist University as an exchange student.

2018.07 – 2018.10: Visited Dr. Xia Hu's group at Texas A&M as a visiting student.

My research interests include Bayesian optimization, complex network analysis, intelligent optimization, network representation learning.

My research projects include:

- China Postdoctoral Science Foundation funded project under Grant No.2021M701388

Research projects I am participating in and participated in include:

- National Key R&D Program of China under Grant Nos. 2021ZD0112501 and 2021ZD0112502;
- National Natural Science Foundation of China under Grant Nos. 62172185 (融合深度学习和贝叶斯优化的网络优化理论和方法) and 61876069;
- Jilin Province Key Scientific and Technological Research and Development Project: Research, development and application of fast knowledge sharing system in the era of big data and mobile Internet (大数据和移动互联网时代的快速知识共享系统研究、开发与应用) (20180201067GX);
- Jilin Province Key Scientific and Technological Research and Development Project (20180201044GX);
- Jilin Province Natural Science Foundation: 20200201036JC (面向复杂网络的贝叶斯优化理论研究与应用);
- Hong Kong Research Grants Council (RGC) under project RGC/HKBU12201318;
- Cooperation project with Huawei: Adaptive intelligent fault detection and diagnosis system based on prior knowledge (基于先验知识自适应的故障发现与诊断技术合作项目).

Honors & Scholarships

- 2021: Participated in the 1ST CHINA POSTDOCTORAL INNOVATION & ENTREPRENEURSHIP COMPETITION (首届全国博士后创新创业大赛), and won the WINNING prize (top 14%).
- 2021: My thesis was awarded as Excellent Doctoral Thesis by the Jilin University. Doctoral Thesis: Bayesian Graph Optimization: Cost-Aware Network Optimization Theory and Method (贝叶斯图优化: 关注成本的网络优化理论与方法) Supervisor: Prof. Bo Yang
- 2009-2010, 2011-2012, 2018, 2019 Academic Scholarship
- 2018 First prize at the 11th Ph.D. Academic Forum of Jilin University

Publications

- [1]. **Jiaxu Cui**, Bo Yang, Bingyi Sun, and Jiming Liu. Cost-Aware Graph Generation: A Deep Bayesian Optimization Approach. The 35th AAAI Conference on Artificial Intelligence (AAAI-21), 2021. (CCF A)
- [2]. **Jiaxu Cui**, Bo Yang and Xia Hu. Deep Bayesian Optimization on Attributed Graphs. The 33rd AAAI Conference on Artificial Intelligence (AAAI-19), 2019. (CCF A)
- [3]. **Jiaxu Cui**, Bo Yang, Bingyi Sun, Xia Hu and Jiming Liu. Scalable and Parallel Deep Bayesian Optimization on Attributed Graphs. IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2022, 33(1): 103 – 116. (Q1, IF 10.451, CCF B)
- [4]. **Jiaxu Cui**, Qi Tan, Chunxu Zhang, and Bo Yang. A Novel Framework of Graph Bayesian Optimization and Its Applications to Real-World Network Analysis. Expert Systems with Applications (ESWA). 2021, 170, 114524. (Q1, IF 6.954, CCF C)
- [5]. **Jiaxu Cui**, Bo Yang. Survey on Bayesian Optimization Methodology and Applications (贝叶斯优化方法和应用综述). Ruan Jian Xue Bao/Journal of Software, 2018,29(10):3068-3090. **This survey paper has been awarded as the "High Impact Paper of Journal of Software in 2020" (《软件学报》2020 年高影响力论文).**
- [6]. Jinglong Ji, Fujin Zhu, **Jiaxu Cui**, Haihong Zhao, Bo Yang. A Dual-system Method for Intelligent Fault Localization in Communication Networks. IEEE International Conference on Communications (ICC 2022) Accepted (CCF C).

- [7].Xitong Wang, Yonggang Zhang, **Jiaxu Cui**. The New Adaptive ETLBO Algorithms with K-Armed Bandit Model. The 11th International Conference on Knowledge Science, Engineering and Management (KSEM 2018) (CCF C).
- [8].Xiaohui Wei, Bingyi Sun, **Jiaxu Cui**, Gaochao Xu. A Multi-Objective Compounded Local Mobile Cloud Architecture Using Priority Queues to Process Multiple Jobs. Plos One, 2016, 11(7): e0158491.
- [9].Lizheng Ma, **Jiaxu Cui**, Bo Yang. Deep Neural Architecture Search with Deep Graph Bayesian Optimization. WI 2019 Special Session on AI for Social Good in the Connected World, 2019.
- [10].Xiaohui Wei, Bingyi Sun, **Jiaxu Cui**. Recommending Activity to Users via Deep Graph Neural Network. Journal of Jilin University (Engineering and Technology Edition), (in Chinese). Accepted
- [11].Xiaohui Wei, Bingyi Sun, **Jiaxu Cui**. Task Replica Assignment in Mobile Self-Organized Crowdsensing. International Journal of Performability Engineering, 2020, 16(1): 152-162.
- [12].Shuangmei Zhao, **Jiaxu Cui**, Yonggang Zhang. Solving the MaxCSPs using MMC with teaching strategy. Journal of Nanjing University (Natural Science), 2018,54(01):134-147, (in Chinese)
- [13].Yunpeng Wu, **Jiaxu Cui**, Yonggang Zhang. A New ETLBO Algorithm Combined with Reward Mechanism. Journal of Jilin University (Science Edition), 2019,57(6), (in Chinese)

Services

I am serving as reviewers in the following conferences and journals:

- AAAI Conference on Artificial Intelligence (AAAI) 2022
- International Joint Conference on Artificial Intelligence (IJCAI) 2021-2022
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS) 2020-2021
- IEEE Transactions on Big Data (TBD) 2021