Jiaxin Jiang

Grab-NUS AI Lab, IDS and SOC National University of Singapore jxjiang@nus.edu.sg



Education and Working Experience

- 2011-2015 **B.E.**, *TaiShan College, Shandong University (SDU)*, Shandong, China Major in Computer Science and Technology; Major GPA: 86.82/100 Ranking: 4/180
- 2015-2017 **RA**, *DB group*, Department of Computer Science, Hong Kong Baptist University Core module(s): Database (DB), High performance computing (HPC)
- 2017-2020 **PhD**, *DB group*, Department of Computer Science, Hong Kong Baptist University Core module(s): Database (DB), High performance computing (HPC)
- 2020.10-2021.09 **Postdoc**, *DB group*, Department of Computer Science, Hong Kong Baptist University Core module(s): Database (DB), High performance computing (HPC)
- 2021.09-Present **Research fellow**, *Grab-NUS AI Lab*, IDS, National University of Singapore Core module(s): Database (DB), Data Mining (DM), High performance computing (HPC)

Honors

- 2017 SIGMOD 2017 Best Paper Award.
- 2017 VLDB 2017 Best Demo Award.
- 2017 ACM SIGMOD Research Highlight Award
- 2020 Research Performance Award. Department of Computer Science, HKBU.
- 2016-2020 **4-year PhD Studentship**. HKBU.
- 2016-2019 Excellent Teaching Assistant Performance Award (3 times), Teaching Assistant Performance Award (2 times). Department of Computer Science, HKBU.

Publications

- 2024 **Jiaxin Jiang**, Yuhang Chen, Bingsheng He, Min Chen, and Jia Chen: Spade+: A Generic Real-Time Fraud Detection Framework on Dynamic Graphs, TKDE 2024.
- Yuhang Chen, **Jiaxin Jiang***¹, Shixuan Sun, Bingsheng He, and Min Chen: RUSH: Real-time Burst Subgraph Discovery in Dynamic Graphs, VLDB 2024.
- 2024 **Jiaxin Jiang**, Zhen Zhang, Bingqiao Luo, Bingsheng He, Min Chen, Wei Yang Wang and Jia Chen: Spade: A Real-Time Fraud Detection Framework, VLDB 2024 Demo.
- 2024 **Jiaxin Jiang**, Byron Choi, Xin Huang Jianliang Xu, and Sourav S Bhowmick: DKWS: A Distributed System for Keyword Search on Massive Graphs (Extended Abstract).
- 2023 **Jiaxin Jiang**, Byron Choi, Xin Huang Jianliang Xu, and Sourav S Bhowmick: DKWS: A Distributed System for Keyword Search on Massive Graphs, TKDE 2023.
- 2023 Jiaxin Jiang, Yuan Li, Bingsheng He, Bryan Hooi, Jia Chen and Johan Kok Zhi Kang: Spade: A Real-Time Fraud Detection Framework on Evolving Graphs. VLDB 2023.
- 2021 **Jiaxin Jiang**, Byron Choi, Jianliang Xu, and Sourav S Bhowmick: A Generic Ontology Framework for Indexing Keyword Search on Massive Graphs (Extended Abstract), ICDE2021.

^{1*} indicates the corresponding author

- 2020 **Jiaxin Jiang**, Xin Huang, Byron Choi, Jianliang Xu, Sourav S Bhowmick, and Lyu Xu: PPKWS: An Efficient Framework for Keyword Search on Public-Private Networks, ICDE 2020.
- 2019 **Jiaxin Jiang**, Byron Choi, Jianliang Xu, and Sourav S Bhowmick: A Generic Ontology Framework for Indexing Keyword Search on Massive Graphs, TKDE 2019.
- 2016 **Jiaxin Jiang**, Peipei Yi, Byron Choi, Zhiwei Zhang, and Xiaohui Yu: Privacy-Preserving Reachability Query Services for Massive Networks. CIKM 2016.
- 2024 Siyuan Yao, Yuchen Li, Shixuan Sun, **Jiaxin Jiang**, Bingsheng He: uBlade: Efficient Batch Processing for Uncertainty Graph Queries. Sigmod 2024.
- 2022 Xuankun Liao, Qing Liu, **Jiaxin Jiang**, Xin Huang, Jianliang Xu, and Byron Choi: Distributed D-core Decomposition over Large Directed Graphs, VLDB 2022.
- 2021 Lyu Xu, **Jiaxin Jiang**, Byron Choi, Jianliang Xu, and Sourav S Bhowmick: Privacy Preserving Strong Simulation Queries on Large Graphs, ICDE 2021.
- 2021 Xuliang Zhu, Xin Huang, Byron Choi, **Jiaxin Jiang**, Zhaonian Zou, and Jianliang Xu: Budget Constrained Interactive Search for Multiple Targets, VLDB 2021.
- 2018 Xin Huang, Jiaxin Jiang, Byron Choi, Jianliang Xu, Zhiwei Zhang, and Yunya Song: PP-DBLP: real-world datasets of public-private collaboration networks on DBLP, ICDM 2018.
- 2017 Wenfei Fan, Yinghui Wu, Jingbo Xu, Wenyuan Yu, Jiaxin Jiang, Zeyu Zheng, Bohan Zhang, Yang Cao, and Chao Tian: Parallelizing Sequential Graph Computations. SIGMOD 2017.
- 2017 Wenfei Fan, Jingbo Xu, Yinghui Wu, Wenyuan Yu, and **Jiaxin Jiang**. GRAPE: Parallelizing Sequential Graph Computations. VLDB 2017.
- 2017 Wenfei Fan, Yang Cao, Jingbo Xu, Wenyuan Yu, Yinghui Wu, Chao Tian, **Jiaxin Jiang**, and Bohan Zhang: From Think Parallel to Think Sequential. SIGMOD Record, 2018.

Academic Services

PC member: VLDB2024, ICDE2024, IJCAI2024, SIGMM2024, ECAI2024, CIKM 2021-2024, PAKDD 2021-2024, MUST2020, ADMA2023-2024, AIGC2023-2024

Reviewer: VLDBJ, TKDE, CSUR, DKE, TODS, WWWJ External reviewer: SIGMOD, VLDB, ICDE, EDBT, CIDR

Conference Presentations, Implementation and Datasets

- 2022 Spade: A Real-Time Fraud Detection Framework on Evolving Graphs. Available at: https://github.com/samjjx/Spade.
- 2020 PPKWS: An Efficient Framework for Keyword Search on Public-Private Networks. Dallas, Texas USA, ICDE 2020, 22 April. Available at: https://www.comp.hkbu.edu.hk/~jxjian/694_ICDE_Jiang.mp4
- 2018 PP-DBLP: Real-world datasets of public-private collaboration networks on DBLP. Available at: https://github.com/samjjx/pp-data.
- 2016 Privacy-Preserving Reachability Query Services for Massive Networks. Indianapolis, USA, CIKM 2016, October 24.

Research Interests

1) Distributed graph database systems 2) Big data analytics, and 3) Fraud detection.