

Qian-Ming Zhang

CONTACT INFORMATION	Suining Institute of Digit Economy Civic Center 3rd building DongSheng Road in Hedong New District Suining, Sichuan, China	✉ qmzhang@gmail.com ☎ (86) 130-7604-7597 🌐 Google Scholar
EMPLOYMENT HISTORY	Associate Dean , Suining Institute of Digit Economy Suining, Sichuan, China 02/2022–present Assistant Researcher , University of Electronic Science and Technology of China Chengdu, Sichuan, China 02/2017–09/2022 Chief Data Officer , Chengdu DataCastle Technology Co. Ltd Chengdu, Sichuan, China 04/2016–02/2022	
EDUCATION	Ph.D. Computer Software and Technology, University of Electronic Science and Technology of China, Chengdu, China • Advisor: Professor Tao Zhou , Professor Yi-Cheng Zhang 09/2011–12/2016 M.S. Computer Software and Technology, University of Electronic Science and Technology of China, Chengdu, China • Advisor: Professor Ming-Sheng Shang , Professor Linyuan Lü 09/2009–07/2011 B.S. Computer Science, Zhengzhou University, Zhengzhou, China 09/2004–07/2008	
VISITING	Center for Ploymer Studies, Boston University, Boston, MA USA 01/2014–12/2015 Beijing Computational Science Research Center, Beijing, China 09/2011–12/2012	
FUNDING & AWARDS	List of grants <ul style="list-style-type: none">主研, 国家自然科学基金重点项目, 经济大数据分析的理论、方法及应用研究, 210 万, 01/2021–12/2025。 Core Scientific Team (with PI Yingcun Xia), the Key Program of the Natural Science Foundation of China. Research on the theory, method and application of big data analysis in economics, 2,100,000 CNY. 01/2021–12/2025.主持, 国家自然科学基金青年科学基金项目, 基于复杂网络分析的文化演化研究及应用, 25 万, 01/2018–12/2020。 PI, Natural Science Foundation of China. Studying cultural evolution and its related applications through complex network analysis, 250,000 CNY. 01/2018–12/2020.国家自然科学基金面上项目, 动态演化在线系统中的信息推荐问题研究, 82 万, 01/2014–12/2017。 Natural Science Foundation of China. Research on information recommendation problem in dynamic evolution online system, 820,000 CNY. Role: Data analyst (with PI Ming-Sheng Shang). 01/2014–12/2017.主持, 中央高校基本科研业务费-电子科技大学学生创新创业项目, 基于社会化网络分析的企业微博营销平台研究, 1 万, 01/2012 – 12/2014。 PI, the basic research funds for central universities and colleges. Research on enterprise microblog marketing platform based on social network analysis, 10,000 CNY. 01/2012 – 12/2014.国家自然科学基金面上项目. 复杂网络链路预测的理论、算法和应用研究, 39 万, 01/2011–12/2013. Natural Science Foundation of China. Research on theory, algorithm and application of link prediction in complex networks, 390,000 CNY. Role: Data analyst(with PI Tao Zhou).	

01/2011–12/2013.

List of awards

- 2016, Outstanding graduates of Sichuan Province
- 2014, Obtained funding from China Scholarship Council to study abroad
- 2013, Best paper in 9th proceedings of the Chinese Conference Complex Networks
- 2013, National scholarship for graduate students
- 2011, Sybase Scholarship
- 2010, Excellent graduate students of UESTC
- 2010, Sybase Scholarship

PUBLICATIONS

Articles (*: corresponding author)

- [A1] Zhongtao Yue, Tao Zhou, Yan-Li Lee, **Qian-Ming Zhang**, and Jian Gao. “Student promotional mobility network reveals the academic hierarchy and educational inequalities”. In: *in review* (2023).
- [A2] Kai-chen Cao, Ming-Ren Chen, **Qian-Ming Zhang**, Shi-Min Cai, and Tao Zhou. “Student promotional mobility network reveals the academic hierarchy and educational inequalities (in Chinese)”. In: *Journal of University of Electronic Science and Technology of China* 50.2 (2021), pp. 285–293.
- [A3] Shuqi Xu, **Qian-Ming Zhang**, Linyuan Lü, and Manuel Sebastian Mariani. “Recommending investors for new startups by integrating network diffusion and investors’ domain preference”. In: *Information Sciences* 515 (2020), pp. 103–115.
- [A4] Ling-Jiao Chen, Shi-Ming Cai, **Qian-Ming Zhang**, Tao Zhou, and Yi-Cheng Zhang. “Improved Research on Resource-Allocation Recommendation Algorithm Based on Trust Relationship (in Chinese)”. In: *Journal of the University of Electronic Science and Technology of China* 48.3 (2019), pp. 449–455.
- [A5] Jiantao Hu, **Qian-Ming Zhang***, and Tao Zhou. “Segregation in religion networks”. In: *EPJ Data Science* 8.1 (2019), p. 6.
- [A6] Jun Wang, **Qian-Ming Zhang***, and Tao Zhou. “Tag-aware link prediction algorithm in complex networks”. In: *Physica A: Statistical Mechanics and Its Applications* 523 (2019), pp. 105–111.
- [A7] Jun-Fang Zhu, Duan-Bing Chen, Tao Zhou, **Qian-Ming Zhang***, and Yong-Jie Luo. “A survey on mining relatively important nodes in network science (in Chinese)”. In: *Journal of University of Electronic Science and Technology of China* 48.4 (2019), pp. 595–603.
- [A8] **Qian-Ming Zhang***, Xing Yu, and Jingqiu Wang. “Temporal recommender system in online tourism website”. In: *Proceedings of the International MultiConference of Engineers and Computer Scientists*. Vol. 1. 2016.
- [A9] Linyuan Lü, Duanbing Chen, Xiao-Long Ren, **Qian-Ming Zhang**, Yi-Cheng Zhang, and Tao Zhou. “Vital nodes identification in complex networks”. In: *Physics reports* 650 (2016), pp. 1–63.
- [A10] Linyuan Lü, Tao Zhou, **Qian-Ming Zhang**, and H Eugene Stanley. “The H-index of a network node and its relation to degree and coreness”. In: *Nature communications* 7.1 (2016), p. 10168.
- [A11] Jia Yuan, **Qian-Ming Zhang***, Jian Gao, Linyan Zhang, Xue-Song Wan, Xiao-Jun Yu, and Tao Zhou. “Promotion and resignation in employee networks”. In: *Physica A: Statistical Mechanics and its Applications* 444 (2016), pp. 442–447.
- [A12] **Qian-Ming Zhang**, Xiao-Ke Xu, Yu-Xiao Zhu, and Tao Zhou. “Measuring multiple evolution mechanisms of complex networks”. In: *Scientific reports* 5.1 (2015), pp. 1–11.

- [A13] Lili Miao, **Qian-Ming Zhang**, Da-Cheng Nie, and Shi-Min Cai. "Whether information network supplements friendship network". In: *Physica A: Statistical Mechanics and its Applications* 419 (2015), pp. 301–306.
- [A14] Chang Yi, Ming-Sheng Shang, and **Qian-Ming Zhang**. "Auxiliary domain selection in cross-domain collaborative filtering". In: *Applied Mathematics & Information Sciences* 9.3 (2015), p. 1375.
- [A15] Jing Zhao, Lili Miao, Jian Yang, Haiyang Fang, **Qian-Ming Zhang**, Min Nie, Petter Holme, and Tao Zhou. "Prediction of links and weights in networks by reliable routes". In: *Scientific reports* 5.1 (2015), p. 12261.
- [A16] Hao-Fang Lu, **Qian-Ming Zhang**, Ying Zhou, Xing Yu, Tao Zhou, and Zi-Ke Zhang. "Information Spreading in Microblogging Systems: Media Effect Versus Social Impact". In: *Journal of University of Electronic Science and Technology of China* 43.2 (2014), pp. 167–173.
- [A17] Xiaoke Xu, Shuang Xu, Yu-Xiao Zhu, and **Qian-Ming Zhang**. "Link predictability in complex networks". In: *Complex Systems and Complexity Science* 11.1 (2014), pp. 41–47.
- [A18] **Qian-Ming Zhang**, Linyuan Lü, Wen-Qiang Wang, Yu-Xiao, and Tao Zhou. "Potential theory for directed networks". In: *PloS one* 8.2 (2013), e55437.
- [A19] **Qian-Ming Zhang**, An Zeng, and Ming-Sheng Shang. "Extracting the information backbone in online system". In: *PloS one* 8.5 (2013), e62624.
- [A20] Yu-Xiao Zhu, Junming Huang, Zi-Ke Zhang, **Qian-Ming Zhang**, Tao Zhou, and Yong-Yeol Ahn. "Geography and similarity of regional cuisines in China". In: *PloS one* 8.11 (2013), e79161.
- [A21] Wen-Qiang Wang, **Qian-Ming Zhang**, and Tao Zhou. "Evaluating network models: A likelihood analysis". In: *Europhysics letters* 98.2 (2012), p. 28004.
- [A22] Yu-Xiao Zhu, Linyuan Lü, **Qian-Ming Zhang**, and Tao Zhou. "Uncovering missing links with cold ends". In: *Physica A: Statistical Mechanics and its Applications* 391.22 (2012), pp. 5769–5778.
- [A23] Zhen Liu, **Qian-Ming Zhang**, Linyuan Lü, and Tao Zhou. "Link prediction in complex networks: A local naive Bayes model". In: *Europhysics Letters* 96.4 (2011), p. 48007.
- [A24] Wen-Qiang Wang and **Qian-Ming Zhang**. "New Method of Assessing Network Evolving Models Based on Link Prediction (in Chinese)". In: *Journal of University of Electronic Science and Technology of China* 40.2 (2011), pp. 174–179.
- [A25] **Qian-Ming Zhang**, Ming-Sheng Shang, and Linyuan Lü. "Similarity-based classification in partially labeled networks". In: *International Journal of Modern Physics C* 21.06 (2010), pp. 813–824.
- [A26] **Qian-Ming Zhang**, Ming-Sheng Shang, Wei Zeng, Yong Chen, and Linyuan Lü. "Empirical comparison of local structural similarity indices for collaborative-filtering-based recommender systems". In: *Physics Procedia* 3.5 (2010), pp. 1887–1896.
- [A27] Wei Zeng, Ming-Sheng Shang, **Qian-Ming Zhang**, Linyuan Lü, and Tao Zhou. "Can dissimilar users contribute to accuracy and diversity of personalized recommendation?" In: *International Journal of Modern Physics C* 21.10 (2010), pp. 1217–1227.
- [A28] Yu-Xiao Zhu, Wei Zeng, and **Qian-Ming Zhang**. "The effect of rating variance on personalized recommendation". In: *2010 5th International Conference on Computer Science & Education*. IEEE. 2010, pp. 366–370.

Book chapters

- [C1] **Qian-Ming Zhang**. "The foundation of big data application in online retailing (in Chinese)". In: *Online Retailing*. Ed. by De-Ren Chen and Hui-Li Lin. 2nd ed. TsingHua University Press, 2015, pp. 289–300.

- [C2] Jian Gao, Linyan Zhang, **Qian-Ming Zhang**, and Tao Zhou. “Big data human resources: Performance analysis and promotion/resignation in employee networks (in Chinese)”. In: *Social Physics: Social Governance*. Ed. by Yi-Jun Liu. Beijing: Science Press, 2014, pp. 38–56.

Patents

- [P1] Linyan Zhang, Xing Yu, Yang Zhang, and **Qian-Ming Zhang**. “A Mobile Online Editing Platform Based on Big Data”. CN115129120A (China). Sept. 2022.

Other Works

- [O1] **Qian-Ming Zhang** and Tao Zhou. *Recommendations on building a regional integrated service platform for digital consumption(in Chinese)*. Submitted as an internal reference to the Mayor of Suining. 2023.
- [O2] **Qian-Ming Zhang** and Qin-Feng Wu. *Investment promotion report on the digital economy industrial chain in Suining City (in Chinese)*. Submitted to the Big Data Administration of Suining City. 2022.
- [O3] **Qian-Ming Zhang** and Qin-Feng Wu. *Recommendations on developing the digital economy in Hedong New District of Suining (in Chinese)*. Submitted as an internal reference to the Secretary of Hedong New District of Suining. 2022.
- [O4] **Qian-Ming Zhang**, Zihan Zhang, and Qin-Feng Wu. *Research report and recommendations on the pre-made food industry in Suining City (in Chinese)*. Submitted to the Big Data Administration of Suining City. 2022.
- [O5] **Qian-Ming Zhang** and Tao Zhou. *Recommendations on seizing the opportunity to develop the space-based information industry through the vigorous development of satellite data applications(in Chinese)*. Submitted as an internal reference to the Mayor of Suining. 2022.
- [O6] Zihan Zhang, **Qian-Ming Zhang**, and Qin-Feng Wu. *Research report on electronic information enterprises in Suining City (in Chinese)*. Submitted to the Mayor of Suining. 2022.
- [O7] Tao Zhou, **Qian-Ming Zhang**, Yujia Liu, Qin-Feng Wu, Zihan Zhang, Qi Feng, Ge Liao, Jihong Li, Geng Peng, Liang Chen, Gang Wang, Wei Zhao, Jun-Jie Chen, Fan-Chao Xiao, and Ruxin Duan. *White Paper on the Development of Electronic Information Industry in Suining City (in Chinese)*. Submitted to Suining Government. 2022.

SELECTED TALKS Invited conference talks and presentations

- 人工智能教育实践与区域发展建议 (Recommendations for AI Education Practice and Regional Development)
中国（南充）第四届嘉陵江人工智能教育论坛暨机器人挑战赛 11/28/2022
- 数字经济与数字政府 (Digital Economy and Digital Government)
遂宁高新区 “高新咖啡时” 第三十期活动暨党的二十大精神进数字企业宣讲会 11/11/2022
- 企业中的数据困境与希望 (Dilemma and hope of data in enterprise)
2022 世界人工智能大会 AI 开发的数据基础分论坛 09/02/2022
- 成都市人工智能基础知识水平摸底 (Report on the Basic Knowledge Level of Artificial Intelligence in Chengdu City)
第二届成都市人工智能教育大会 07/16/2021
- 圆桌论坛-汇智共建·引领未来
第二届成都市人工智能教育大会 07/16/2021
- 圆桌论坛-人工智能与教育的融合创新应用 (Round Table: The integration and innovative application of artificial intelligence and education)
全国中小学人工智能时代智慧教育校长高峰论坛 04/29/2021
- Optimal Percolation based on Graph Partitioning
International School and Conference on Network Science 01/05/2018

- 关键节点挖掘 (Identification of vital nodes in complex networks)
开源中国 OSC 源创会年终盛典 2016 12/04/2016
- Temporal recommender system in online tourism website
International MultiConference of Engineers and Computer Scientists 03/17/2016
- Vulnerability of multiplex railway and coach network
Seminar of Center for Polymer Studies, 12/18/2015
- Potential Theory for Directed Networks
Proceedings of the Chinese Conference Complex Networks 09/15/2013
- Geography and similarity of regional cuisines in China
Proceedings of the Chinese Conference Complex Networks 09/13/2013
- Similarity-based classification in partially labeled networks
National Network Science Forum and National Chaos Application Symposium 07/28/2010

PROGRAM

List of engineering programs

- Develop a rating system for Data Science Competition Platform, Evaluation System for Competitions (ESC). It is developed for common metrics, including Precision, Recall, F1, AUC, MAE, MSE, etc. 03/2020–06/2020
- Develop a system for third-party server, named ESC for Third-party Serve (ESCts). It is developed for customized metrics and accepts submitting source codes. It can be deployed to customers' servers in remote way. 08/2020–11/2020

List of selected data mining programs

- Develop a competition on mining users' interest based on users' historical data of viewing short videos for Bytes Dance. 04/2022–05/2022
- Explore the effect of learning programming to children. First, we develop a series of programming courses suitable for children based on robots. Second, we collect multimodal data through a special sensor and a camera to quantify children's attention stability through machine learning method. 03/2021–04/2022
- Predict the risk of overdue based on banking data and conduct machine learning skills training for Agricultural Bank of China. 08/2020–09/2020
- Develop a series of machine learning practical courses including data analysis, data visualization, feature engineering and model optimization. 08/2019–04/2020
- Develop a series of AI courses for high school students and implement teaching in several high schools. 06/2018–06/2020

SERVICE

Professional organizations and advisory boards

- Deputy secretary general, Artificial Intelligence Education, Chengdu Education Society
2020 - current
- Deputy secretary general, Suining Digital Economy Development Promotion Association
2022 - current

Reviewer

- Computing Surveys, PLoS ONE, Physica A, The Journal of Supercomputing, International Journal of Modern Physics C, Journal of University of Electronic Science and Technology of China

Science Popularization Education

- Artificial Intelligence online videos
 - Will AI destroy human beings?
 - If machine can think, will AI be out of control?
 - AI and Fake AI.
 - How far is the Artificial Intelligence in Science Fiction Movies from our lives?
- Artificial Intelligence Lectures in middle schools

- Chengdu Foreign Language School in Xinjin	12/2021
- Chengdu Longquan Middle School	03/2019
- Chengdu Institute of Educational Sciences	08/2019
- No.1 Middle School of Pidu,Chengdu	09/2019
- Chengdu No.7 High School	09/2018–06/2020
- Chengdu No.8 High School	09/2018–06/2019
- Golden Apple Jincheng NO.1 Secondary School	09/2018