Curriculum vitae for key personnel

Personal details

Full Name	Gang Li
Organisation	Deakin University, Australia
Role	Professor

Qualifications

Degree/award	Year	Discipline/field	Organization and country
PhD	2005	Computer Science	Deakin University, Australia
Master of Engineering	1997	Computer Science	Shanghai University, China

Current and previous appointment(s)/position(s) in the past 10 years

Position held	Organisation	Department/Centre	Year appointed	Year completed
Professor (Associate lecturer, lecturer, senior lecturer, associate professor…)	Deakin University	School of IT	2004	Present

Role on the project

I will be working on the project as the expertise in artificial intelligence, data analytics, as well as the support in overall project management

Expertise and contribution to project

I have long term collaborations with researchers in ANU (A/Prof. Birgit Muskat), Macau University (Prof. Davis Fong), and VIT University (Prof. Aswani Kumar Cherukuri, India). I also have a longstanding research collaboration with Prof. Zhi-Hua Zhou (a fellow of ACM, IEEE, AAAI, AAAS, IAPR, CCF and CAAI, Nanjing University) and Prof. Rob Law (Macau University). They have also been my research mentors and collaborators with a number of joint publications and research grants, such as Hong Kong GRF 2016-2018 on *Tourism Trajectory Analysis*, and Macau's Business Service project on *Analysing the Tourism Carrying Capacity in Macau*.

Evidence of research impact and contributions to the field

I am an internationally recognised expert in data science, privacy preservation and the interdisciplinary fields of group behaviour analysis and business intelligence. In the recent five

years, my research group has hosted three international visiting scholars and five international visiting research students. These international visitors seek me out as an internationally recognised expert in data privacy, group anomaly analysis and business intelligence. As a member of the IEEE Data Mining and Big Data Analytics Technical Committee, I have been involved in various mentoring programs as an academic mentor to students and early career researchers, including the Deakin University Academic Mentoring Program and International Joint Conference on Neural Networks 2020 (CORE A) Mentoring Program. I serve the editorial board for 3 CORE/ABDC A*/A journals including Decision Support Systems (CORE/ ABDC A* journal), Journal of Travel Research (ABDC A* Journal) and Asia Pacific Journal of Tourism Research (ABDC A Journal) and have been served as the Area Chair (CORE A* conferences IJCAI 2021, AAAI 2021), Senior PC members (CORE A* conferences IJCAI, AAAI, ICDM etc.); Paper Awards Panel Member for PRICAI (CORE B Conference) and Springer's Journal of Cyber Security (2021, 2022); HDR Examiner for 40+ universities in Australia and overseas; as well as 4 times in IEEE committee for plagiarism cases.

I hold one international patent from previous collaborative research with industry partners:

•   2019: Srivivasan M, Easter Prince J., Gang Li, etc. IOT Architecture for Manufacture of Similar Products, Indian Patent Number 201941041825A.

This invention automates the operator's role and reduces the workload in quality assessment and industrial monitoring of manufacturing processes. The collected data are persistently monitored in the cloud to improve productivity and quality management.

Ongoing and completed national and international projects

1. 2022-2024. Augmenting Cyber Defence Capability, Cyber Security CRC (AUD 390,000) Project lead, with Deakin team.
2. 2019-2022. Oil/Gas Well Surveillance with Artificial Intelligence Methods. Industry Product (AUD50,000) Project Investigator, with Dr Wei Luo.
3. 2019-2021 Intelligent Anomaly Detection System for Encrypted Network Traffic. Indian DST (SPARC Scheme, AUD120,000). Project Investigator, with Prof. Aswani Kumar Cherujuri (Vellor, VIT University) etc.
4. 2018-2019 Building a Secure Cloud-based Collaborative CRM System, Industry Fund (AUD50,000) Project Investigator, with A/Prof. Xiao Liu.
5. 2018-2020 A Provable Privacy-preserving Data Sharing Solution for the Cloud Campus. Australian Research Council (ARC-LP, AUD300,000) Project Investigator, with Prof. W. Zhou, Dr. T. Zhu, etc.

Career-best and most relevant publications in the last 5 years

1. Qian Li, Zhichao Wang, Shaowu Liu, Gang Li & Guandong Xu 2021, 'Causal Optimal Transport for Treatment Effect Estimation', IEEE Transactions on Neural Networks and Learning Systems, pp. 1–13, doi:10.1109/tnnls.2021.3118542 (Refereed Journal Article)

2. Beliakov, G., James, S. & Li, G. 2011, 'Learning choquet-integral-based metrics for semisupervised clustering', IEEE Transactions on Fuzzy Systems, vol. 19, no. 3, pp. 562-574 (Refereed Journal Article

3. Beliakov, G., Li, G., Vu, H.Q. & Wilkin, T. 2015, 'Characterizing compactness of geometrical clusters using fuzzy measures', IEEE Transactions on Fuzzy Systems, vol. 23, no. 4, pp. 1030-1043 (Refereed Journal Article)

4. Zhu, T., Xiong, P., Li, G. & Zhou, W. 2015, 'Correlated differential privacy: Hiding information in Non-IID data set', IEEE Trans- actions on Information Forensics and Security, vol. 10, no. 2, pp. 229-242 (Refereed Journal Article)

5. Zhu, T., Li, G., Zhou, W. & Yu, P.S. 2017, 'Differentially Private Data Publishing and Analysis: A Survey', IEEE Transactions on Knowledge and Data Engineering, vol. 29, no. 8, pp. 1619-1638 (Refereed Journal Article)

6. Wang, Z., Li, Q., Li, G. & Xu, G. 2019, 'Polynomial representation for persistence diagram', Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition, vol. 2019, pp. 6116-6125 (Fully Refereed Conference Proceeding)

7. Tao Xue, Yu Wen, Bo Luo, Gang Li & Yingjiu Li et al. 2022, 'SparkAC: Fine-Grained Access Control in Spark for Secure Data Shar- ing and Analytics', IEEE Transactions on Dependable and Secure Computing, pp. 1–1, doi:10.1109/tdsc.2022.3149544 (Refereed Journal Article)

8. Qian Li, Zhichao Wang, Shaowu Liu, Gang Li & Guandong Xu 2022, 'Deep treatment-adaptive network for causal inference', The VLDB Journal, vol. 31, no. 5, pp. 1127–1142, doi:10.1007/s00778-021-00724-y (Refereed Journal Article)

9. Li, Q., Wang, Z., Li, G., Pang, J. & Xu, G. 2021, 'Hilbert Sinkhorn Divergence for Optimal Transport', Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition, pp. 3834-3843 (Fully Refereed Conference Proceeding)

10. Xin Han, Ye Zhu, Kai Ming Ting, De-Chuan Zhan & Gang Li 2022, 'Streaming Hierarchical Clustering Based on Point-Set Ker- nel', Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, doi:10.1145/3534678.3539323 (Fully Refereed Conference Proceeding)