Dr. Zhang Longqing

Department of Cross-Border E-Commerce | Associate Professor

Biography

Dr Zhang Longqing is a Suzhou Bay Leading Professional, holds a doctorate and has postdoctoral research experience. He is an Associate Professor, Master's Supervisor at South China Normal University, Distinguished Associate Research Fellow, Guanxiang Talent, Senior Member of the China Computer Federation ("CCF"), Committee Member and Young Editorial Board Member of the China Simulation Federation, Deputy Secretary-General of the Artificial Intelligence Committee of the Guangdong Association for Private Education, reviewer for the CSCIED Technology Core Evaluation Datas, IEEE Member, IEEE Young Professionals member, expert in the Shenzhen Science and Technology Expert Database, G20 Young Entrepreneurs' Alliance Elite Talent, member of the Western Returned Scholars Association, and a global Top 40 finalist in the Create@ Alibaba Cloud Global Contest.

He was Workshop Chair of the IOTCIT 2024 International Conference, Technical Chair of MICCIS, and Publicity Chair of IEEE WOCC 2025. He is also Associate Editor-in-Chief of two international journals and a reviewer for two international journals. Dr Zhang has published more than 50 papers in China and abroad, including 12 SCI-indexed papers, two papers in Nature Portfolio journals, one paper in a top-tier journal, one ESI Highly Cited Paper, more than 30 EI-indexed papers, three papers in Chinese core journals, and several papers in international and

provincial journals. He has served as Principal Investigator for or participated in two projects funded by the National Natural Science Foundation of China and three provincial-level projects. He has also served as Principal Investigator for two provincial youth research projects, three municipal-level projects, one Ministry of Education collaborative education project, and two Ministry of Education employment-oriented education projects. Dr Zhang won a silver award in the China International College Students "Internet+" Innovation and Entrepreneurship Competition organised by the Ministry of Education, standing out from 4.3 million participants and 780,000 teams. He also won the Third Prize in the Central and Southern China Division of the National Experimental Teaching Case Design Competition for Fundamental Electrical and Electronic Courses in Higher Education, organised by the Ministry of Education; an Excellence Award in the Tsinghua University i-Space Guangdong-Hong Kong-Macao Greater Bay Area Youth Innovation and Entrepreneurship Competition; and the Outstanding Cultural Award from Macau University of Science and Technology. He has been granted one international invention patent, three domestic invention patents, three utility model patents and six software copyrights. He has served as Associate Editor-in-Chief of two artificial intelligence textbooks and one Internet of Things textbook. He has received the Scientific and Technological Progress Award of the Computer Academy of Guangdong as principal investigator, a Best Paper Award at an international conference, and the Outstanding Presentation Award at the Global Youth Science and Technology Innovation Forum. He has supervised students in winning more than 30 national awards and more than 70 provincial awards.

Professional Qualifications

Engineering Education Accreditation Expert, China Engineering Education Accreditation Association

Employment History, including Postdoctoral Appointments

- Founding Director of the Teaching and Research Office of Intelligence and Technology, a university in Guangdong

➢ Postdoctoral Researcher in Information and Communication Engineering, University of Science and Technology of China

Education

➢ Bachelor's Degree in Mechanical Design, Manufacturing and Automation, China University of Petroleum (Beijing)

➢ Master's Degree in Computer-based Agricultural Informatics, Central South University of Forestry and Technology

➢ Doctoral Degree in Intelligent Science and Systems, Macau University of Science and Technology

Research Interests

Internet of Things and artificial intelligence, AIGC and large models

Social Service

Workshop Chair of the IOTCIT 2024 International Conference, Technical Chair of MICCIS, *Publicity Chair* of IEEE WOCC 2025, Associate Editor-in-Chief of two international journals and a reviewer for two international journals.

Honours and Awards

1. Member of the Academician Expert Database, International Academician Science and Technology Innovation Center; External Master's Supervisor, South China Normal University

2. Suzhou Bay Leading Professional; Guanxiang Talent; shortlisted for the Guangdong Youth

Science and Technology Innovation Award, ranked sixth in Dongguan

3. Senior Member, China Computer Federation (“CCF”), a first-level academic society

4. Review expert for high-quality doctoral dissertations, China Simulation Federation, a first-level academic society

5. G20 Young Entrepreneurs’ Alliance Elite Talent

6. Finalist in the National Final of the 2nd Postdoctoral Innovation and Entrepreneurship Competition

7. National Silver Award, China International College Students “Internet+” Innovation and Entrepreneurship Competition

8. Global Top 40, 2023 Create@ Alibaba Cloud Global Innovation and Entrepreneurship Contest

9. Senior Artificial Intelligence Engineer; Deputy Secretary-General, Artificial Intelligence Committee, Guangdong Association for Private Education

10. Advanced Individual in Teaching and Education, 2022 academic year

11. Senior Engineer in Blockchain Application Development Technology

12. Category I Key Teacher in Intelligent Science and Technology; Founding Director of the Teaching and Research Office; Programme Leader

13. First-Class Undergraduate Course of Guangdong Province, ranked second

14. Outstanding Teacher of Year 2022, 2023 and 2024

15. Technical Chair, MICCIS 2025 International Conference, serving as the de facto conference lead and liaison

16. Publicity Chair, IEEE WOCC 2025; Chair, IOTCIT International Conference; Reviewer, IEEE SMC 2025

17. Best Paper Award winner, MICCIS International Conference

18. Excellent Presentation Award, Global Youth Science and Technology Innovation Forum

(Singapore)

19. Supervise students in winning provincial bronze awards in the China International College Students “Internet+” Innovation and Entrepreneurship Competition, in the 6th and 10th editions

20. Supervised students in the 12th and 13th “Lan Qiao Cup” National Software and Information Technology Professional Talent Competition, winning First Prize in Guangdong Province, Second Prize nationally, and the Outstanding Teacher Award

21. Supervised students in winning First Prize in Guangdong Province and Third Prize nationally in the China Robotics and Artificial Intelligence Competition, a Class A competition

22. Speaker at the Overseas Experts Visit to Guangdong (Zhongshan), covered by media including Nanfang Daily; guest at the Exhibition of Scientific and Technological Exchange and Cooperation Achievements between China and Portuguese-speaking Countries

23. Supervised students in winning more than 30 national awards and 40 provincial awards, according to incomplete statistics

Research Achievements

Publications (English and Chinese publications, including journal rankings, such as JCR quartiles for international journals, as well as conference papers)

Selected recent publications are as follows:

1. **Zhang L,** Bai L, Zhang X, et al.: Cultivated Land Monitoring System Based on Dynamic Wake-Up UAV and Wireless of Distributed Storage, Computers, Materials & Continua, Vol. 61, No. 2, pp.817-828, 2019. (SCI JCR Q1, IF3=4.890)

2. **Zhang L,** Bai L, Zhang X, et al. Multi-factor indicator of THIC intelligent lighting system with BP neural network[J]. Journal of Supercomputing, 2022(8):78. (SCI JCR Q2, IF=2.56)

3. **Zhang L,** Bai L, Zhang X, et al.: Comparative Variance and Multiple Imputation Used for Missing Values in Land Price DataSet, Computers, Materials & Continua, Vol. 61, No. 3, pp.1175-1188, 2019. (SCI JCR Q1, IF3=4.890)

4. Zhan J, Meng Y, **Zhang L,** et al. Research on computer vision in intelligent damage monitoring of heritage conservation: the case of Yungang Cave Paintings[J]. npj Heritage Science, 2025, 13(1): 50. (SCI JCR Q1, TOP Journal)

5. **Zhang L,** Zhang X, Dong, X. et al.: Integrating Advanced Convolutional Neural Networks and Support Vector Machines with Hybrid Feature Extraction for Enhanced Skin Cancer Diagnosis, Big Data Mining and Analytics (In Press, SCI CAS Q1, IF=13.6)

6. **Zhang L,** Zhang X, Yang, L. et al.: Hierarchical Supervised Learning Models for Skin Cancer Classification: Combining CNN, RF, and SVM with Multi-Layered Feature Fusion, Scientific Reports (In Press, SCI Q1, Nature Portfolio)

7. Yu Meng, Zhan J, **Zhang L,** et al.: A rapid and precise algorithm for maize leaf disease detection based on YOLO MSM[J]. Scientific Reports, 2025, 15(1): 6016 (SCI JCR Q1, **Nature Portfolio**)

8. Tian L, Li J, **Zhang L,** et al. TCPW BR: A Wireless Congestion Control Scheme Base on RTT[J]. Computers, Materials and Continua, 2019, 61(3):233-244. (SCI JCR Q1, IF3=4.890)

9. Li J, Feng L, **Zhang L,** et al. Identifying Game Processes Based on Private Working Sets[J]. Computers, Materials and Continua, 2020, 65(1):639-651. (SCI JCR Q1, IF3=4.890)

10. Yang L, Feng L, **Zhang L,** et al. Predicting freshmen enrollment based on machine learning[J]. The Journal of Supercomputing, 2021: 1-13. (SCI JCR Q2, IF3=2.367)

11. Gan, J., **Zhang, L.,** Chen, H., Bai, L., Zhang, X., Yang, L., & Zhang, Y. (2023). Underground Garage Patrol Based on Road Marking Recognition by Keras and Tensorflow. Applied Sciences, 13(4), 2385. (SCI JCR Q2, IF3=2.838)

12. Zhang Y, Sun F, Tian L, **Zhang, L.** et al. Difference of Visual Information Metric Based on Entropy of Primitive[J]. Computers, Materials & Continua, 2020, 62(2): 817-31. (SCI JCR Q1, IF3=4.890)

13. **Zhang L,** Zhang X, Yang L. Research on interior office comfort system combined with two factors[C]//2023 IEEE 3rd International Conference on Power, Electronics and Computer Applications (ICPECA). IEEE, 2023: 1792-1795

14. **Zhang L,** Wang Z, He J, et al. New image processing: VGG image style transfer with gram matrix style features[C]//2023 5th International Conference on Artificial Intelligence and Computer Applications (ICAICA). IEEE, 2023: 468-472.

15. **Zhang L,** Liu B, Zhang X, et al. Dual IV Design Scheme: An Improved AES Encryption Approach[J].

Research Projects Undertaken by Dr Zhang as Principal Investigator or Participant (Roles and project status are indicated below)

1. Participant, National Natural Science Foundation of China project: Modelling, Control and Scheduling Optimisation of Automated Assembly Equipment with Complex Constraints.

2. Participant, National Natural Science Foundation of China–Macao Science and Technology Development Fund project: Cooperative Control and Operational Optimisation of Tree-structured Multi-combination Equipment, RMB2.8 million.

3. Macao Science and Technology Development Fund project: Scheduling and Operational Optimisation of Multi-robot Production Systems Based on Discrete Event System Theory.

4. Principal Investigator, IoT-based Farm Product Traceability System, industry-commissioned project, RMB450,000.

5. Principal Investigator, Guangdong Provincial Young Innovative Talent Project: Research on UAV Trajectory Planning Based on Twin Delayed Deep Deterministic Policy Gradient and Non-line-of-sight Link Identification.

6. Principal Investigator, Featured Innovation Project for Regular Higher Education Institutions in Guangdong Province: Design and Optimisation of Smart Contract-based Air-Ground Integrated Radio-wave Swarm Anti-jamming Communications.

7. Principal Investigator, Dongguan Science and Technology Bureau project: Research on Traditional Chinese Medicine Digital Therapeutics Based on Downstream-task Training-driven CareGPT and Multimodal Knowledge Graphs.

8. Principal Investigator, community technology project of Dongguan Science and Technology

Bureau: Elder Companion — Community-based Online and Offline Customised Elderly Care Services.

9. Deputy Director, Dongguan Key Laboratory of Intelligent Manufacturing Industrial Software, 2023.

10. Principal Investigator, Suzhou Bay Leading Talent Project: Research, Development and Industrialisation of an Integrated Medical Management Platform Based on Training-driven MediGPT and Multimodal Knowledge Graphs; also selected as an "Investment and Talent Attraction" entrepreneurship project.

11. 17 other projects of various types.

Patent Application

1. Granted international patent: Device for Tracing Product Information Based on Near Field Communication. Patent No.: F/PT/NC/0/2025/17032.

2. Granted invention patent: Blockchain-based Computer Data Security Protection System.

3. Granted invention patent: Automated Defence System for Computer Network Security in Higher Education Institutions.

4. Granted invention patent: Cybersecurity Threat Detection and Response Method Based on Artificial Intelligence Technology.

5. Authorised Invention Patent: A Computer Management-Based Operating Status Monitoring Method and System

6. Granted utility model patent: Near Field Communication-Based Product Information Traceability System.

7. Granted utility model patent: Radio Frequency Card Acquisition Controller.

8. Granted utility model patent: Easily Adjustable Computer Monitor.

Books and Book Chapters

1. *Introduction to Artificial Intelligence*. Textbook. ISBN: 978-7-5763-1461-8.

2. *Internet of Things Technology and Applications*. Textbook. Associate Editor-in-Chief.

3. Commercialisation of Scientific and Technological Achievements: Participated in and completed a number of patent application and commercialisation projects, with experience in translating research outcomes into commercial products.

Other Achievements

Software Copyrights and Registration Certificates:

1. MRI Multi-sequence Placenta Accreta Risk Assessment and Decision Support System V1.0, registered as an Anhui provincial scientific and technological achievement and software copyright.

2. WeChat Mini Program-based Placenta Accreta Risk Prediction System V1.0, registered as an Anhui provincial scientific and technological achievement and software copyright.

3. Smart Wellness and Elderly Care Integrated Service Software.

4. WeChat Mini Program-based Auxiliary Medical Diagnosis System.

5. Holographic Medical Emotion Recognition and Interpretation System.

6. Community-based Customised Elderly Care Service System Using C#.

7. NFC-based Freshwater Fish Quality and Safety Traceability System.

8. Handicraft Workshop Display and Merchandise Purchasing Platform Based on WeChat Mini Program.