



Dr. Gong Shu

Department of Cross-Border E-Commerce | Professor

Biography

Dr Gong Shu is a Professor and holds a doctoral degree. She is a full-time faculty member at the School of Computer Science, Guangdong University of Science and Technology, and also serves as a master's supervisor at Guangdong University of Finance and Economics and Dongguan University of Technology. Her research interests include intelligent information processing, fuzzy graphs and machine vision. Dr Gong has served as the principal investigator for a number of research projects, including projects funded by the Guangdong Basic and Applied Basic Research Foundation, the Innovation Team Project for Regular Higher Education Institutions in Guangdong Province, and the Research Capacity Enhancement Project for Key Disciplines in Guangdong Province. She has also participated, as a major contributor, in projects funded by the National Natural Science Foundation of China and the Natural Science Foundation of Guangdong Province. She has published a number of SCI- and EI-indexed papers and has been granted two invention patents and one utility model patent. In teaching and research, she has served as the principal investigator for a First-Class Undergraduate Course of Guangdong Province, participated in a project that won the Second Prize of the Guangdong Provincial Education and Teaching Achievement Award, and served as editor-in-chief of one planned textbook. Dr Gong has received honours including the Second Prize for Scientific and Technological Innovation from the China Association for Promotion of Private Sci-Tech, the Third Prize for Scientific and Technological Progress from the Computer Academy of

Guangdong, and the title of Outstanding Teacher in Private Education in Guangdong Province. She has also supervised students who have won awards in national competitions on multiple occasions.

Employment History

- Sep 2002 – Jul 2006 Bachelor of Engineering in Software Engineering, Nanchang University
- Sep 2006 – Jul 2009 Master of Science in Computer Software and Theory, Yunnan Normal University
- Aug 2019 – Dec 2022 Doctor of Engineering in Information and Communication Engineering (Research focus: Intelligent Information Processing), China University of Mining and Technology

Education

- Aug 2009 – Present: Full-time Faculty Member, School of Computer Science, Guangdong University of Science and Technology (During her 16 years at GDUST, she has been involved in degree assessments, audit evaluations, the application for two new programmes, and IEET accreditation for two programmes).

Research Achievements

Research Projects

1. Principal Investigator of the Guangdong Basic and Applied Basic Research Foundation Project (2021, Project No. 2021A1515110834), with funding of RMB100,000, completed.
2. Principal Investigator of the Innovation Team Project for Regular Higher Education Institutions in Guangdong Province (2023, Project No. 2023KCXTD046), with funding of RMB400,000, ongoing.
3. Principal Investigator of the Research Capacity Enhancement Project for Key Disciplines in

Guangdong Province (2024, Project No. 2024ZDJS067), with funding of RMB1.1 million, ongoing.

4. Principal Investigator of the Special Innovation Project for Regular Higher Education Institutions in Guangdong Province (2018, Project No. 2018KTSCX261), completed.

5. Principal Investigator of the Dongguan Science and Technology Project for Social Development (2017, Project No. 20185071541236), completed, with one utility model patent granted.

6. Principal Investigator of the Industry-commissioned Research Project with Guangdong Yunbai Technology Co., Ltd. (2024, Project No. GKY-2024HX-084), with funding of RMB1.2 million, ongoing.

7. Major Participant in the Natural Science Foundation of Guangdong Province Project (2019, Project No. 2020A1515010784), completed.

8. Major Participant in the National Natural Science Foundation of China Project (2017, Project No. 41761084), completed.

Research Papers

[1] Shu Gong*, Gang Hua, Fuzzy edge connectivity in bipolar fuzzy networks and the applications in topology design. International Journal of Intelligent Systems, 2022, 37, 8, 5425-5442.

[2] Shu Gong, Gang Hua*, Remarks on Wiener index of bipolar fuzzy incidence graphs. Frontiers in Physics, 2021, 9, 677882. (SCI, JCR 2)

[3] Shu Gong*, Gao W., Sun Toughness Conditions for P2 and P3 Factor Uniform and Factor Critical Avoidable Graphs[J]. Journal of Mathematics, 2021, 2021(1): 5526335. (SCI, JCR 2)

[4] Shu Gong, Gang Hua*, Topological indices of bipolar fuzzy incidence graph. Open Chemistry, 2021, 19(1): 894-903. (SCI)

[5] Shu Gong*, Gang Hua, Wei Gao, Domination of bipolar fuzzy graphs in various settings. International Journal of Computational Intelligence Systems, 2021, 14(1): 1-14. (SCI)

[6] Shu Gong*, Gang Hua, Connectivity analysis of bipolar fuzzy networks. Mathematical

Problems in Engineering, 2022, 5, 6398599. (SCI)

[7] Shu Gong*, W Gao. Fuzzy Topological Graphs in Bipolar and Related Settings. IAENG International Journal of Applied Mathematics, 2023, 53(4). (SCI)

[8] Liu Y, Hao Y, Gong S*, et al. Blind-aided target detection algorithm based on cascading feature pyramids with lightweight dual-path downsampling[J]. IEEE Access, 2025. (SCI)

[9] Shu Gong*, X Huang, C Qiu, et al. Locally Ontology Relaxed Stability Analysis in Various Ontology Learning Settings. IAENG International Journal of Applied Mathematics, 2022, 52(2). (EI)

[10] Shu Gong*, G Hua. Decision making analysis of traffic accidents on mountain roads in Yunnan province[C]//International Conference on Machine Learning for Cyber Security. Cham: Springer Nature Switzerland, 2022: 228-237. (EI)

[11] Shu Gong*, Tian L, et al. Primal dual based ontology sparse vector learning for similarity measuring and ontology map[J]. Journal of Intelligent & Fuzzy Systems, 2018, 35(4): 4525-4531. (EI)

Intellectual Property

1. Invention patent: Method, apparatus, device and storage medium for logistics node selection (Patent No.: ZL202310535760.1,) 2 February 2024

2. Invention patent: Method, apparatus, network device and storage medium for target detection (Patent No.: ZL202310535038.8), 2 February 2024

3. Utility model patent: Vehicle-mounted driving behaviour warning device based on multi-source information fusion (Patent No.: 201820442055.1), 30 March 2018

4. Teaching and Research Achievements

5. Principal Investigator of the First-Class Undergraduate Course of Guangdong Province, *Fundamentals of Large-Scale Databases*, in 2023, ongoing.

6. Member of the teaching team for *Reform and Innovation of the “Dual-track and Multi-directional” Talent Cultivation Model for Software Engineering Guided by Job Requirements*, which won the Second Prize of the Guangdong Provincial Education and

Teaching Achievement Award (Higher Education Category) (R6).

7. Participant in the 2017 Guangdong Higher Education Teaching Reform Project *Engineering “Maker” Education Supported by SPOC* (R2).

8. Participant in the 2017 Guangdong Provincial Quality Resource-Sharing Course *ORACLE Database Technology* (R2).

9. Editor-in-Chief of the planned textbook *Fundamentals and Applications of Oracle Database* (ISBN: 9787536157095), Aug 2016, Guangdong Higher Education Press.

Honours and Student Awards

1. Second Prize for Scientific and Technological Innovation awarded by the China Association for Promotion of Private Sci-Tech, a national-level association, in 2025 (R1).

2. Third Prize for Scientific and Technological Progress awarded by the Computer Academy of Guangdong, a provincial-level association, in 2024 (R2).

3. Third Prize for Outstanding Paper awarded by the Computer Academy of Guangdong in 2023 (R1).

4. Outstanding Teacher in Private Education in Guangdong Province in 2025.

5. Model Teacher in Teaching and Student Development of Guangdong University of Science and Technology in 2024.

6. Outstanding Party Member of Guangdong University of Science and Technology in 2024.

7. Rated “Excellent” in the annual performance assessment of Guangdong University of Science and Technology for 14 consecutive years since 2009, and awarded the university-level title of “Outstanding Teacher”.

8. Outstanding Instructor, 9th “Lanqiao Cup” National Software and Information Technology Professionals Competition.

9. First Prize, Guangdong University of Science and Technology Teaching Competition, 2011.

10. Third Prize, 5th Guangdong Provincial University Teacher Innovation Competition (R2).

11. Supervised a student project that won First Prize at the provincial level in the Intelligent Driving category of the 27th China Robotics and Artificial Intelligence Competition (R1).
12. Supervised a student project that won Second Prize at the national level in the Lunar Exploration category of the 27th China Robotics and Artificial Intelligence Competition (R1).
13. Supervised a student project that won Second Prize at the national level in the 2020 National College Student Computer Design Competition (R1).
14. Supervised student projects that won two Second Prizes at the national level in the 2018 National College Student Computer Design Competition (R1).