

Research Interest: Intelligent Wearables, Embodied Intelligence, AI for Science, UAVs

EDUCATION

National University of Singapore

Jul. 2025 – Present

Ph.D. Science. Intelligent Electronic System

Full Funded by NUS Research Scholarships

- Advisor: Prof. Liu Xiaogang, Fellow of the Singapore National Academy of Science

Northwestern Polytechnical University

Sep. 2022 – Apr. 2025

M.Eng. Electronic Science and Technology

3.82/4.0 GPA & 1/267 RANK

- Advisor: Prof. Wu Yong
- ITU Generation Connect Youth Envoy; China National Scholarship (Twice)
- BaoGang Outstanding Student Scholarship (<0.01%); Academic First-Class Scholarship (Twice)
- Distinguished Graduate; Outstanding graduate students

Xi'an Jiaotong University City College

Sep. 2018 – Jun. 2022

B.Eng. Electronic Information

85/100 GPA & 3/108 RANK

- Advisor: Prof. Zhang Anli
- Excellent graduation thesis; Distinguished Graduate; Academic Second-Class Scholarship

PUBLICATIONS

 *Google Scholar Citations: [147](#)*

[J₁] Jiandong Zhang, **Zhuoyong Shi***, Anli Zhang, et al. UAV Trajectory Prediction Based on Flight State Recognition [J], IEEE Transactions on Aerospace and Electronic Systems. (**SCI Q1 IF=5.7**)

[DOI: 10.1109/TAES.2023.3303854](#)

[J₂] **Zhuoyong Shi**, Jiandong Zhang, Guoqing Shi*, et al. Design of a UAV Trajectory Prediction System Based on Multi-Flight Modes [J], Drones. (**SCI Q1 IF=4.8**)

[DOI: 10.3390/drones8060255](#)

[J₃] **Zhuoyong Shi**, Guoqing Shi, Jiandong Zhang*, et al. Design of UAV Flight State Recognition System for Multi-sensor Data Fusion [J], IEEE Sensors Journal. (**SCI Q1 IF=4.5**)

[DOI: 10.1109/JSEN.2024.3394883](#)

[J₄] **Zhuoyong Shi**, Jiandong Zhang, Guoqing Shi*, et al. Autonomous UAV Safety Oriented Situation Monitoring and Evaluation System [J], Drones. (**SCI Q1 IF=4.8**)

[DOI: 10.3390/drones8070308](#)

[J₅] **Zhuoyong Shi**, Yetao Jia, Guoqing Shi*, et al. Design of motor skill recognition and hierarchical evaluation system for table tennis players [J], IEEE Sensors Journal. (**SCI Q1 IF=4.5**)

[DOI: 10.1109/JSEN.2023.3346880](#)

[J₆] Yongchao Zhang, Wei Xu, Helin Ye, **Zhuoyong Shi***. A Two-Stage Optimization Framework for UAV Fleet Sizing and Task Allocation in Emergency Logistics Using the GWO and CBBA [J], Drones. (**SCI Q1 IF=4.8**)

[DOI: 10.3390/drones9070501](#)

[J₇] Qian Zhang, Feng Wang, Shimei Zhang, Lingling Luo, **Zhuoyong Shi***. Data-Driven Optimization of C4 Olefin Synthesis: A Gradient Boosting and Particle Swarm Optimization Framework [J], Contemporary Mathematics. (**SCI Q1 IF=2.5**)

[DOI: 10.37256/cm.6420257205](https://doi.org/10.37256/cm.6420257205)

[J₈] Nan Li, **Zhuoyong Shi***, et al. Design of Intelligent Firefighting and Smart Escape Route Planning System Based on Improved Ant Colony Algorithm [J], Sensors. (**SCI Q2 IF=3.5**)

[DOI: 10.3390/s24196438](https://doi.org/10.3390/s24196438)

[J₉] Meng Xie, **Zhuoyong Shi***, et al. Fault Diagnosis and Prediction System for Metal Wire Feeding Additive Manufacturing [J], Sensors. (**SCI Q2 IF=3.5**)

[DOI: 10.3390/s24134277](https://doi.org/10.3390/s24134277)

[J₁₀] Jiandong Zhang, Dinghan Wang, Qiming Yang, **Zhuoyong Shi**, et al. Loyal wingman task execution for future aerial combat: A hierarchical prior-based reinforcement learning approach [J], Chinese Journal of Aeronautics. (**SCI Q1 IF=5.7**)

[DOI: 10.1016/j.cja.2024.03.009](https://doi.org/10.1016/j.cja.2024.03.009)

[C₁] **Zhuoyong Shi**, et al. Autonomous Security Evaluation Model for UAV Based on Airborne Information [C], 2023 6th IEEE International Conference on Information Communication and Signal Processing.

[DOI: 10.1109/ICICSP59554.2023.10390620](https://doi.org/10.1109/ICICSP59554.2023.10390620)

[C₂] **Zhuoyong Shi**, et al. Design of motion pattern recognition system based on artificial intelligence methods [C], 2023 International Conference on Cyber-Physical Social Intelligence.

[DOI: 10.1109/ICCSI58851.2023.10303805](https://doi.org/10.1109/ICCSI58851.2023.10303805)

[P₁] Anli Zhang, **Zhuoyong Shi**, et al. An Evaluation Method for Aircraft Atmospheric Data Security Monitoring System [P], Invention Patent in China.

[Patent No: CN116662937B](https://www.cnipr.com/patent/CN116662937B)

PROJECTS

Postgraduate Innovation and Practice Fund Project (No. 06080-24GH01020101)

Apr. 2024 – Dec. 2024

- *Pattern Recognition; Effectiveness Evaluation*

(Project Leader)

The Key R&D Projects in Shaanxi Province (No. 2022GY-089)

Sep. 2022 – Sep. 2024

- *UAV; Multimodal Recognition; Situational Awareness*

(Project Leader in Students)

The Natural Science Basic Research Program of Shaanxi (No. 2022JQ-593)

Jun. 2022 – Jan. 2024

- *Reinforcement Learning; Intelligent Decision Making*

(Project Participants)

The Shaanxi Provincial Sports Scientific Research Project (No. 2021382)

Sep. 2021 – Sep. 2022

- *Monitoring Systems; Big Data Analysis*

(Student Leader)

PROFESSIONAL SERVICE

Verified Activities from Web of Science: 

Journal Editors:

Journal of Intelligent Aeronautical Systems and Sustainable Flight Technologies

Intelligence & Robotics

Journal Reviewers:

- Springer Nature: Scientific Reports, Journal of Intelligent & Robotic Systems, Energy Informatics, Computational Economics, Discover Applied Sciences
- IEEE: IEEE Transactions on Aerospace and Electronic Systems, IEEE Sensors Journal
- MDPI: Aerospace, Applied sciences, Electronics, Sustainability, Energies
- Wiley: Modelling and Simulation in Engineering, International Journal of Rotating Machinery
- Others: Contemporary Mathematics

Conference Reviewer:

- IAST 2025
- ASIM 2024