Zhuoyong Shi 🏠 ⓘD ✉

Research Interest: Intelligent Wearable Devices, UAVs, Machine Learning

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

G *Google Scholar Citations*: *105*

[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***)

[J8] Nan Li, **Zhuoyong Shi***, Jiahui Jin, 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

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

DOI: 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

[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

[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

[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

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 Reviewer:
- IEEE Transactions on Aerospace and Electronic Systems
- IEEE Sensors Journal
- Contemporary Mathematics
- Discover Applied Sciences
- Computational Economics
- Aerospace
- Applied sciences
- Electronics
- Energies
- Sustainability

Conference Reviewer:
- IAST 2025
- ASIM 2024