Zhuoyong Shi

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EDUCATION

Northwestern Polytechnical University Sep. 2022 – Present
  Major& GPA& RANK: Electronic Science and Technology (MPhil) 3.82 1/54
  Thesis: Research on Multi-UAV Task Allocation and Path Planning for System Clusters.
Xian Jiao tong University City College Sep. 2018 – Jun. 2022
  Major& GPA& RANK: Electronic Information (Bachelor) 3.31 3/108
  Thesis: Design of quadcopter UAV trajectory prediction system based on neural network.

RESEARCH INTEREST

Machine Learning, UAV, Pattern Recognition, Mathematical Modeling, Deep Learning, Signal Processing.

HONORS & PRIZE

ITU Generation Connect Youth Envoy (4 individuals in China)	Mar. 2024
China National Scholarship for Graduate Students (<2%)	Dec. 2023
Academic First Class Scholarship (<5%)	Oct. 2023
School First Class Scholarship (<5%)	Oct. 2023
Outstanding Graduate Student (<10%)	Sept. 2023
Outstanding Thesis (<5%)	Jun. 2022
Academic Second Class Scholarship (Twice)	Sept. 2020 & 2021

PUBLICATIONS

[1] 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 JCR Q1 IF=4.4)
DOI: 10.1109/TAES.2023.3303854

[2] **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 JCR Q1 IF=4.3)
DOI: 10.1109/JSEN.2023.3346880

[3] **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

[4] **Zhuoyong Shi***, et al. Autonomous Security Evaluation Model for UAV Based on Airborne Information [C], 2023 6th International Conference on Information Communication and Signal Processing.
DOI: 10.1109/ICICSP59554.2023.10390620

[5] Anli Zhang, **Zhuoyong Shi**, et al. Design of Wireless Motion Sensor Node Monitoring System Based on LabVIEW [J], Foreign Electronic Measurement Technology. (PKU IF=1.74)
DOI: 10.19652/j.cnki.femt.2103232

[6] Anli Zhang, **Zhuoyong Shi**, et al. An Evaluation Method for Aircraft Atmospheric Data Security Monitoring System [P], Invention Patent in China.
Patent No: CN202310946630.7

[7] Anli Zhang, **Zhuoyong Shi**, et al. Unmanned aerial vehicle track prediction method based on flight mode identification [P], Invention Patent in China.
Patent No: CN202311576511.3

[8] Anli Zhang, Meng Xie, **Zhuoyong Shi**, et al. Design of Intelligent Elevator Control System Based on Space Occupancy Determination [J], Application of Electronic Technique. (PKU IF=1.11)
DOI: 10.16157/j.issn.0258-7998.201037

[9] 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 JCR Q1 IF=5.7)
DOI: 10.1016/j.cja.2024.03.009

[10] Meng Xie, Zehui Zeng, Anli Zhang, **Zhuoyong Shi**. Design of Intelligent WIFI Car Control System Based on LabVIEW [J]. Automation & Instrumentation. (PKU IF=1.03)
DOI: 10.19557/j.cnki.1001-9944.2020.12.005

PREPRINT

[1] **Zhuoyong Shi***, et al. UAV flight states recognition and trajectory prediction based on trajectory feature construction [J], IEEE Transactions on Signal Processing. (Peer Review)

[2] Anli Zhang, **Zhuoyong Shi***, et al. Design of motion pattern recognition system based on feature construction [J], Chinese Journal of Sensors and Actuators. **(Accepted)**

[3] **Zhuoyong Shi**, Guoqing Shi, et al. Design of UAV Flight State Recognition System for Multi-sensor Data Fusion [J], IEEE Sensors Journal. (Peer Review)

[4] **Zhuoyong Shi**, Guoqing Shi, et al. Design of UAV Safety Monitoring System Based on LABVIEW [J], Scientific Reports. (Revision submit)

[5] Anli Zhang, **Zhuoyong Shi***, Yafei Song. An Intelligent Decision System for Airport Taxi Based on LabVIEW [J], Chinese Journal of Engineering Mathematics. (Peer Review)

COMPETITIONS

"Electrical Cup" China Undergraduate Mathematical Contest in Modeling National **Top Prize**, Team Award (**team leader**)	Aug. 2021
The National Undergraduate Mathematics Competitions National **First Prize**, Individual Award (**twice**)	Nov. 2021 & 2020
Interdisciplinary Contest In Modeling(ICM) Honorable Mention, Team Award (**team leader**)	May 2021
National Student Statistical Analysis of Data Competition National Second Prize, Team Award (**team leader**)	Jul. 2023
China Undergraduate Mathematical Contest in Modeling(CUMCM) Shaanxi Province First Prize, Team Award (**team leader**)	Sep. 2019
National Graduate Student Electronic Design Competition Northwestern Regional First Prize, Team Award	Jul. 2023
Shaanxi Higher Mathematics Competition for College Students Shaanxi Province First Prize, Individual Award	Oct. 2019

PROJECT EXPERIENCE

The Key R&D Projects in Shaanxi Province (No. 2022GY-089)   Sep. 2022 – Present
- Acting as a student leader in the project and published one paper

The Natural Science Basic Research Program of Shaanxi (No. 2022JQ-593)   Jun. 2022 – Present
- Participated in the project and published one paper

The Shaanxi Provincial Sports Scientific Research Project (No. 2021382)   Sep. 2021 – Sep. 2022
- Acting as a student leader in the project and published one paper

Intelligent Elevator System Design (Innovation and Entrepreneurship Project) Jan. 2021 – Sep. 2021
- Led the project and published a paper with the mentor
- Led the projects to participate in Maker China and Innovation Competition respectively

CAMPUS EXPERIENCE

Academic Expeditions:
- 2023 Future AI Masters and Global IT Training Camp (Achieved first place in course grades)
- Northwest University of Technology Summer Camp (Excellent Camper)

Programming Skills:
- Served as a teaching assistant in "MATLAB programming and application" courses
- Participated in writing the textbook "MATLAB Programming and Application" ISBN:9787121449376

Planning Capability:
- Leadership in multiple competitions and projects leading teams to achieve assignments
- Division of research tasks into sub-tasks in scientific research according to systems engineering thinking.