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

   Scholarship: National Scholarship for Graduate Students, Academic First Class Scholarship, School First Class Scholarship, Outstanding Graduate Student

   Dissertation: Research on Task Allocation and Path Planning for Multi-UAV Systems Cluster.

Xian Jiao tong University City College   Sep. 2018 – Jun. 2022

   Major& GPA& RANK: Electronic Information (Bachelor)   3.31   3/108

   Scholarship: Scholarship from the School of Electronic Information (twice)

   Dissertation: Design of quadcopter UAV trajectory prediction system based on neural network (Outstanding Graduation Thesis)

RESEARCH INTEREST

Deep Learning, Machine Learning, UAV, Deep Reinforcement Learning, Intelligent Agent Collaborative Control, Signal Processing, Mathematical Modeling

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. (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. (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. (Authorized)
Patent No: CN202310946630.7

[7] 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

[8] Meng Xie, Ze Hui, 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. (Peer Review)

[3] **Zhuoyong Shi**, Guoqing Shi, et al. Design of UAV Safety Monitoring System Based on LABVIEW [J], IEEE Sensors Journal. (Peer Review)

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

SCIENTIFIC COMPETITIONS

"Electrical Cup" China Undergraduate Mathematical Contest in Modeling	2021.8
National **Top Prize**, Team Award (**team leader**)	
The National Undergraduate Mathematics Competitions	2021.11&2020.11
National **First Prize**, Individual Award (**twice**)	
Interdisciplinary Contest In Modeling(ICM)	2021.5
Honorable Mention, Team Award (**team leader**)	
National Student Statistical Analysis of Data Competition	2023.7
National Second Prize, Team Award (**team leader**)	
China Undergraduate Mathematical Contest in Modeling(CUMCM)	2019.9
Shaanxi Province First Prize, Team Award (**team leader**)	
National Graduate Student Electronic Design Competition	2023.7
Northwestern Regional First Prize, Team Award	
Shaanxi Higher Mathematics Competition for College Students	2019.10
Shaanxi Province First Prize, Individual Award	

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)

Skills Certificate:
- Artificial Intelligence Development Certification from Huawei
- Big Data Analysis Technology Certification from the Ministry of Industry and Information Technology in China
- Mathematical Modeling Skills Certification from the Ministry of Industry and Information Technology in China

- Computer Technology and Software Professional Technical Qualification Certification from the Ministry of Industry and Information Technology in China

Passion for Sports:

After class, I enjoy the joy of sports and enjoy sports such as table tennis, long-distance running, badminton, etc. Won twice male singles championships in table tennis during college; During my graduate studies, I won a runner up in table tennis men's singles and a championship in men's doubles, and finished in the 2023 Shaanxi University Marathon.

SKILLS AND SELF-EVALUATION

Strong Programming Skills:
- Proficient in mainstream programming languages such as MATLAB and Python
- Participated in writing the textbook "*MATLAB Programming and Application*" ISBN:9787121449376
- Served as a teaching assistant in "*MATLAB programming and application*" courses
- Achieved the highest performance in the 2023 AI summer camp based on the Python programming

Abundant Experience in Machine Learning and AI:
- Achieved the highest performance in the 2023 AI summer camp
- Published papers in machine learning
- Participant several Scientific Research Program in Shannxi
- Implementation of a machine vision-based hazardous materials sorting project using yolov5 in the postgraduate electronic design competition

Good at Mathematic:
- Participated the First prize in National Undergraduate Mathematics Competitions in 2020&2021
- Participated several mathematical modelling competitions and achieved excellent results, including the national first prize.
- Achieved distinction in all mathematics courses.

Good English Ability for Reading and Speaking:
- Participated in two conferences and made oral presentations
- Read hundreds of original papers in the field
- Reviewed more than 40 manuscripts in the field as a reviewer

Strong Ability in Teamwork, and Strong Ability in Execution and Planning:
- To serve as team leader, led teams in more than ten competitions
- To serve as student leader, implementation of scientific research projects