Zhang WEN

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EDUCATION

MSc, Cranfield University **(September 2022-September 2023)**

- **Major:** MSc in Aerospace Vehicle Design (Avionics System Design)
- **Degree:** Merit
- **Course:** Control Systems, Inertial and Satellite Navigation Systems, Design of Airframe Systems, etc..

BEng, Harbin University of Science and Technology **(September 2017 - June 2021)**

- **Major**: BEng in Automation (Control System)
- **GPA**: 80/100

• **Graduation Design**: The Design of Control System for an Automated Guided Vehicle Based on PLC.

CAREER HISTORY

Daqing Oilfield Company, China National Petroleum Corporation **(August 2021 - October 2022)**

- The assistant engineer of Daqing Oilfield Limited Company, CNPC.
- Managed water information of production area and maintained the database of oil production.
- Completed the water quality survey of the Oil Production Company in 2022.

ACADEMIC PROJECTS

Project HADO (High-intensity Autonomous Drone Operations) **(January 2023 – September 2023)**

This project was funded by UKRI in the Future Flight Challenge Phase Three, Project ID: 10024815. Project HADO aims to develop and test fully automated Unmanned Aircraft System (UAS) operations at London Heathrow Airport.

- Built a Co-simulation Framework for Testing Lane-based UTM Systems.
- Built a high-fidelity digital environment for the Cranfield University Campus.
- Achievement of drone air mobility.

Longitudinal Stability System for the A-22 'Aether' LH2 Fueled Civil Airliner **(October 2022 – May 2023)**

- Completed linear and non-linear modeling of the longitudinal stability augmentation system for the A-22 Civil Airliner.
- Used DATCOM+ to complete A-22 stability analysis.
- Used MATLAB and Simulink to complete the A-22 longitudinal control system design.

The 6th "Omron Cup" Automation Control Application Design Competition **(July 2019 – November 2019)**

- **Design Topic**: The Intelligent Logistics Systems based on the Genetic Algorithm of Two-dimensional Packing Problem.
- Used MATLAB to implement a two-dimensional arrangement
- Won the National Second Prize of the Ministry of Education, China.

The College Students' Innovative Entrepreneurial Training Plan Program **(May 2019 – June 2021)**

- **Design Topic**: PLC comprehensive practical training platform based on Internet+.
- Used Siemens S7-200 PLC as the core, covering sensing technology and configuration technology.
- Worked as a leader in the team.

PUBLICATIONS

A Co-simulation Digital Twin with SUMO and AirSim for Testing Lane-based UTM Systems Concept
2024 IEEE Aerospace Conference

- Accepted by the 2024 IEEE Aerospace Conference on 13th November.
- Lead author.
- This project designed the Digital Twin environment of Cranfield University and the Co-simulation framework of SUMO and AirSim.

Wearable Temperature Sensor based on Conductive Nano-modified Textile Fiber Materials
Materials Today Communications (SCI)

- Under peer review.
- Second author.
- This project used dry-jet wet spinning to fabricate nano-electronic sensors combined with textiles.

SKILLS, INTERESTS & EXTRACURRICULAR ACTIVITIES

- **Languages**: English (Fluent), Chinese (National), and Japanese (Basic).
- **Skills**: Python, C, MATLAB, Simulink, AutoCAD, CATIA, Omron Sysmac Studio, Microsoft Office.