PENGLI ZHAO

web ⋄ https://zhaoph2008.github.io/
No.29, Jiangjun Avenue, Jiangning, Nanjing, 211106
(+86)156 5165 3296 ⋄ zhaopengli@nuaa.edu.cn

RESEARCH INTERESTS

Arrival Management, Air traffic Simulation, Trajectory analysis and Airport Operation.

EDUCATION

Nanjing University of Aeronautics and Astronautics, Nanjing *September 2017 - Present*
M.S. Candidate, Air traffic control automation and intelligence, College of Civil Aviation
Research focus: Arrival Sequencing and scheduling.
Advisor: Prof. Junfeng Zhang

Nanjing University of Aeronautics and Astronautics, Nanjing *September 2013 - June 2017*
Bachelor of Engineering, Air Traffic Management

PROJECT EXPERIENCE

DST for AMAN under CDO December 2017 July 2019
Collaboration with Boeing (China) Research and Technology and COMAC

This project was aiming to develop a decision support tool for ANAN under Continue Descent Operation (CDO). It could receive real-time data from radar simulator and make real time sequencing and scheduling. My work focus on function and Human Interface development.

- Developed sequencing and scheduling function, go-around function.
- Developed insight and vivid Human Machine Interface.
  - Display the sequencing information and Aircraft position in real-time.
  - Proposed indicators of terminal status and visualized them with charts.
- Experimented on AMAN to verify the function.

AMAN Performance Evaluation December 2017 - November 2019
Collaboration with Central South Air Traffic Management Bureau, CAAC

This project was aiming to analysis historical radar data to evaluate the potential improvement after using AMAN in ZGHA. My work focus on Radar Data decoding and data visualization.
- Studied the CAT062 (SDPS Track Messages)
- Developed a tool to parser data automatically.
- Developed a tool to replay the trajectory data for analysis.

PMS (Point Merge System) Flight Procedure evaluation May 2019 - November 2019
Collaboration with Airspace Management Center, ATMB, CAAC

This project was aiming to use radar simulator to evaluate a flight procedure designed for PMS in ZSPD. My work focus on trajectory data decoding and Vilification.
- Captured the ADS-B data from OpenSky Database to find the PMS operation in Europe;
- Decoded the Radar Data in order to compare the operation performance and simulation result.
- Learned two ways to query the database(SQL query and Python API).

PUBLICATIONS

Zhang, Junfeng,**Pengli Zhao**, Yu Zhang, Ximei Dai, and Dong Sui. "Criteria selection and multi-objective optimization of aircraft landing problem." Journal of Air Transport Management 82 (2020): 101734.

Zhao, Pengli, Junfeng Zhang,Songwei Liu,Dong Sui and Rong Hu. "Scheduling Landing Aircraft with Multiple Objectives under Continuous Descent Operation" In TRB 2020 (Accepted)

Zhao, Pengli, Junfeng Zhang, and Lubao You. "A Composite Dispatching Rule-Based Method for Multi-Objective Aircraft Landing Problem." In CICTP 2019, pp. 4902-4913. 2019.

Zhang, Junfeng, Zhixiang Zheng, **Pengli Zhao**, and Rong Hu. "Multi-objective integrated arrival departure aircraft sequencing under the influence of sequential flights." In 2018 Integrated Communications, Navigation, Surveillance Conference (ICNS), pp. 3B3-1. IEEE, 2018.

SKILLS

Programming Language	C++;MATLAB;Python
Tools	Qt;Git;Google Earth

LANGUAGE

Chinese & **English**

TOFEL: 93(R28 L23 S20 R22)

GRE V:142 Q:168 AW:3.0

COURSE TAKEN

Flight Procedure Design, Air Navigation Study, Human Factors, Aeronautical Meteorology, etc.
Mathematical Optimization Modeling, Operations Research, etc.

PERSONAL TRAITS

Highly Motivated and eager to learn new thing
Strong determination and enforcement
A stable personality and high sense of responsibility

AWARD

Third-class Scholarship for Graduate Freshmen 2017