CHANG LIU

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EDUCATION

Nanjing University of Aeronautics and Astronautics — Nanjing, Jiangsu, China
Master of Transportation Engineering — Sep. 2021–Apr. 2024
GPA: 3.6/5.0
Supervisor: Professor Yanjun Wang

Nanjing University of Aeronautics and Astronautics — Nanjing, Jiangsu, China
Bachelor of Air Transportation (Air Traffic Management and Dispatch) — Sep. 2017–Jun. 2021
GPA: 3.5/5.0

RESEARCH INTERESTS

Domain:
Air Traffic Management; Slot Allocation; Airspace Capacity Allocation; Urban Air Mobility
Methodologies:
Stochastic Programming; Chance-constrained Programming; Distributionally Robust Optimization; Machine Learning

PROGRAMMING SKILLS

Python; Gurobi; Matlab

LANGUAGES

- Chinese (Native)
- English (IELTS overall: 6.5, Listening: 6.5, Reading: 7.0, Writing: 6.0, Speaking: 6.0)

PUBLICATIONS

- Wang, Y., **Liu, C.**, Wang, H., and Duong, V., 2023. Slot allocation for a multiple-airport system considering airspace capacity and flying time uncertainty. **Transportation Research Part C: Emerging Technologies**, 153, 104185. (JCR:Q1, SJR: Q1)
- **Liu, C.**, Liao, C., Hang, X., Wang, Y., and Delahaye, D., 2024. Slot allocation in a multi-airport system under flying time uncertainty. **Transactions of the Japan Society for Aeronautical and Space Sciences**, 67(3), 127-135. (JCR: Q4, SJR: Q3)
- **Liu, C.**, Wang, Y., Wu, S., and Delahaye, D., 2022. Slot allocation in a multi-airport system under flying time uncertainty. **International Workshop on ATM/CNS (IWAC) 2022**, 20.
- Nie, J., **Liu, C.**, and Wang, Y., 2023. Integrated method for strategically allocating capacity resources in a multiple airport system (in Chinese). **Journal of Transportation Engineering and Information**, 21(4), 115-128.

WORKING PAPERS

- **Liu, C.**, Wang, Y., and Wang, H. Distributionally robust optimization approaches to schedule intervention in a multiple-airport system. (In preparation)

PATENTS

- Wang, Y., **Liu, C.**, Wang, Z., and Wang, M. An approach to flying time scenario generation for a multiple airport system using p-medium theory. (in Chinese)
- Wang, Y., **Liu, C.**, Wang, Z., and Wang, M. An approach to air traffic flow allocation in a multiple airport system based on market demand. (in Chinese)
- Wang, Y., **Liu, C.**, Wang, M., Liao, C., Hang, X., Wang, X., and Wang, D. An integrated approach to capacity allocation of airport and airspace. (in Chinese)

PROJECTS

- **Research on the Technology and Method of Slot Allocation for the Multiple Airport System**, National Nature Science Foundation of China 2021–2024
- **Green Air Traffic Operations**, Ministry of Industry and Information Technology Sino-European Aviation Technology Cooperation Project 2022–2024
- **Slot allocation for the Guangdong-Hong Kong-Marco Multiple Airport System**, Central-South Air Traffic Management Bureau 2021–2023

MAJOR COURSES

- Operations research
- Transportation information management engineering
- Advanced technologies on aircraft simulation
- Technologies on air traffic management optimization and decision-making

CONFERENCE TALKS

- **2022 International Workshop on ATM/CNS**, Tokyo, Japan Oct. 25–27, 2022
  Slot allocation in a multiple airport system, Paper presentation (virtual)
- **SESAR Innovation Days 2023**, Sevilla, Spain Nov. 27–30, 2023
  Robust slot allocation, Poster presentation (virtual)
- **14th POMS-HK International Conference**, Hong Kong SAR, China Jan. 5–6, 2024
  UAM Airspace Design and Management: Challenges and Opportunities, Oral Presentation

AWARDS AND SCHOLARSHIPS

- **National Scholarship for Graduate Students**, Ministry of Education of the People's Republic of China, 2023
- **First Prize in "MathorCup" The 12th University Mathematical Challenge Contest in Modeling**, China Society for Optimization, Overall Planning, and Economic Mathematics Research, 2022
- **Second Prize in "MathorCup" The 12th University Mathematical Challenge Contest in Modeling-Big Data Contest**, China Society for Optimization, Overall Planning, and Economic Mathematics Research, 2022
- **Second Prize in "Huawei Cup" The 18th China Post-Graduate Mathematical Contest in Modeling**, Chinese Society of Academic Degrees and Graduate Education, 2021