# Wu Xuyang

**Phone number:** (+86) 15034811515 (Home) | **Email address:** wuxusun@126.com | **Website:** tuxiaoyang.github.io | **Address:** Xi'an, China (Home)

## EDUCATION AND TRAINING

01/09/2023 – CURRENT Xi'an, China

**MASTER OF APPLIED STATISTICS** Xi'an Jiaotong University, School of Mathematics and Statistics

- Optimization and mathematical modeling
- Programming for data analysis and scientific computing
- Research focus: chance-constrained optimization and trajectory optimization

**Level in EQF** EQF level 7

01/09/2019 – 30/06/2023 Chengdu, China

**BACHELOR OF DATA SCIENCE AND BIG DATA TECHNOLOGY** University of Electronic Science and Technology of China, School of Mathematical Sciences

- Core mathematics coursework, machine learning fundamentals and data analytics
- Scientific computing and modeling (Python/MATLAB)
- GPA: 3.87/4.0

**Level in EQF** EQF level 6

## PUBLICATIONS

2025

**Chance-Constrained Trajectory Optimization for UAVs with Randomly Moving Obstacles**

Wu, Xuyang and Mei, Yu and Wang, Weijia and Liu, Jia, IEEE Transactions on Aerospace and Electronic Systems, Vol. 61, Number 6, pp. 19007-19020.

2025

**Two-sided Chance-constrained Penetration Trajectory Optimization for Unmanned Combat Aerial Vehicle**

Wu Xuyang, Zhang Peiwang, Liu Jia, Mei Yu, Wang Hao, Wang Weijia, Journal of Aircraft, Early Access.

## PROJECTS

09/2023 – CURRENT

### Chance-Constrained Trajectory Optimization under Uncertainty

- Designed chance-constrained trajectory optimization models under multiple sources of uncertainty (e.g., uncertain obstacles and uncertain control).
- Reformulated the original chance-constrained programs into tractable formulations, including mixed-integer linear programming (MILP) via sample average approximation (SAA) and second-order cone programming (SOCP) convex approximations.
- Implemented the end-to-end optimization and simulation pipeline in Python (including solver integration and scenario-based benchmarking), and contributed substantially to algorithm development and software delivery.

**Outcomes:** one paper published in IEEE Transactions on Aerospace and Electronic Systems and one paper accepted in Journal of Aircraft.

03/2024 – 05/2025

### DAG-Based Task Scheduling on Heterogeneous Processors

- Industrial project with a Chinese aerospace research institute; our team was responsible for the algorithmic design and delivery of a scheduling solution.
- Constructed a two-layer scheduling algorithm based on event scheduling and heterogeneous earliest finish time to address task scheduling in heterogeneous processor systems.
- Independently completed most of the programming (Python), testing, and technical documentation of the scheduling tool.

**Outcome:** Executable program.

## WORK EXPERIENCE

**INTERN RESEARCHER – AEROSPACE RESEARCH INSTITUTE (INNOVATION CENTER), CHINA** – 14/06/2023 – 30/11/2024 – XI'AN, CHINA

- Two non-continuous internship periods: Jun 2023–Aug 2023 and Jul 2024–Nov 2024 (total 6 months).
- Intern researcher in an aerospace R&D environment; developed Python-based planning/simulation workflows and supported scenario-based verification and documentation.
- Delivered technical reports/presentations and collaborated with supervisors to align research outputs with operational constraints.

## HONOURS AND AWARDS

2025

### Nominee, Excellent Graduate Student Model – Xi'an Jiaotong University

Top 38, Xi'an Jiaotong University's highest postgraduate honor

2025

### National Scholarship – Ministry of Education of the People's Republic of China

Awarded for outstanding academic performance and research achievements (2025).

2023

### "Huawei Cup" Mathematical Contest in Modeling, National Third Prize – China Graduate Mathematical Contest in Modeling Organizing Committee

Awarded for outstanding performance in graduate-level mathematical modeling and problem-solving.

2022

### Mathematical Contest in Modeling (MCM), Meritorious Winner – Consortium for Mathematics and its Applications

Awarded for outstanding performance in undergraduate-level mathematical modeling and problem-solving.

## SKILLS

Python (computer programming) | MATLAB | Latex | Gurobi

## LANGUAGE SKILLS

Mother tongue(s): **CHINESE**

Other language(s):

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken production | Spoken interaction | |
| **ENGLISH** | B2 | C1 | B2 | B2 | B2 |