Hai Yu

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🎓 Education

College of Artificial Intelligence, Nankai University <div align="right">Since Sep. 2020</div>

Integrated Master's and Ph.D. Program in Control Science & Engineering

College of Communication Engineering, Jilin University <div align="right">Sep. 2016 -- Jun. 2020</div>

Bachelor student in Automation, Rank: $5^{th}/149$

👥 Project Experience

Research on Control Methods for Precise Release of Cargo with a Dual Underactuated Aerial Transportation System onto Mobile Vessels <div align="right">May 2024 -- Dec. 2025</div>

Principal Investigator, First NSFC Basic Research Program for PhD Students

- Built the experimental platform for system verification.
- Conducted research on several control algorithms.

Research on Control and Planning for Aerial Transportation Robots <div align="right">Sept. 2020 -- Jun. 2026</div>

Doctoral Research Topic

- Designed trajectory tracking control algorithms.
- Conducted research on visual servoing-based autonomy enhancement.
- Developed fault-tolerant control methods for blade damage scenarios.

🏆 Awards and Honors

- Young Talent Support Project (First Cohort of PhD Program), CAST — Jan. 2025 -- Jun. 2026
- National Scholarship for Doctoral Students — Dec. 2024
- Nankai University Annual Figure Nomination Award — Nov. 2024
- Outstanding Student of Tianjin — Nov. 2024
- First-Class Gongneng Scholarship of Nankai University — Oct. 2024
- Outstanding Student of Nankai University — Oct. 2024
- *1st Prize*, AI & Robotics Creative Design Competition, Five Northern Provinces — Nov. 2024
- *1st Prize*, Tianjin IP Innovation & Entrepreneurship Competition - Invention & Design Track — Dec. 2024
- *1st Prize*, National Postdoctoral Forum on Indigenous Computing & AI — Dec. 2022

📖 Selected Publications

- Visual Servoing-Based Anti-Swing Control of Cable-Suspended Aerial Transportation Systems With Variable-Length Cable, *IEEE Transactions on Automation Science and Engineering*, 2025.
- Fault-Tolerant Control for Multirotor Aerial Transportation Systems With Blade Damage, *IEEE Transactions on Industrial Electronics*, 2024.
- Adaptive Trajectory Tracking Control for the Quadrotor Aerial Transportation System Landing a Payload Onto the Mobile Platform, *IEEE Transactions on Industrial Informatics*, 2024.
- Fuzzy-Based Antiswing Control for Variable-Length Cable-Suspended Aerial Transportation Systems Considering the Hook Effect, *IEEE Transactions on Fuzzy Systems*, 2025.
- Collaborative Control for Aerial Transportation of Cargo With Dual Quadrotors, *IEEE Transactions on Industrial Informatics*, 2025.

⚙ Skills

- Skilled in Python, MATLAB, ROS, and control algorithm development.