

## EDUCATION

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### Beihang University

*Master student in Control Science and Engineering*

Sept. 2020 - now

Advisor: Prof. [Liang HAN](#)

### INSA Toulouse

*Exchange student, Ingénierie des Matériaux, Composants et Systèmes*

Sept. 2019 - Jan. 2020

### Beihang University

*Bachelor of Information and Computer Science, École centrale de Pékin*

Sept. 2016 - Jun. 2020

## RESEARCH INTERESTS

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My research includes formation control of Unmanned Aerial Vehicles (UAVs), path planning problems, and artificial intelligence applications in UAVs' decision-making and planning.

## PUBLICATION

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### Paper

1. [CAC'23] Huang, Jingyi and Tan, Qingke and Ma, Jiming and Han, Liang, "Path Planning Method Using Dyna-Q Algorithm under Complex Urban Environment", *Chinese Automation Congress (CAC)*, 2022.

## RESEARCH EXPERIENCES

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*Star Lab, Beihang University*

*Beijing & Hangzhou, China*

### Multi-Agent Decision Control Model for Information Gathering Task

Apr. 2023 - Sept. 2023

*Collision avoidance part*

*Guizhou, China*

- **Aim:** Develop a collision avoidance algorithm for multi-agent, avoid restricted zones and prevent collisions between agents in a given region.
- **Method:** Employ the method of artificial potential fields(APF) for collision avoidance among agents. Employ OpenCV to discretize the map into grids in the avoidance zone. Utilize the A\* algorithm to compute the collision-free path. In scenarios requiring simultaneous obstacle avoidance and collision evasion, determine the repulsive forces of the agents and the avoidance zone and apply APF.
- **Achievement:** This research is part of our team's participation in the 18th "Challenge Cup Jie Bang Gua Shuai" National College Student Curricular Academic Science and Technology Works Competition. And we got the Grand Prize!

## SKILL SUMMARY

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**Languages:** Chinese (Mother Tongue), English (IELTS Academic 7.0), French (TCF B1)

**Coding:** AI Prompt, Python, MATLAB, Git, L<sup>A</sup>T<sub>E</sub>X, Java (a little)

**Hobbies:** Photography [[homepage](#)], Badminton, Genshin Impact

## HONORS AND AWARDS

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Grand Prize of Challenge Cup "Jie Bang Gua Shuai"

2023

Beihang Academic Scholarship

2021 ~ 2022

Beihang Freshman Scholarship

2020

China Scholarship Council (CSC) scholarships

2019