Thrust Vectoring Multi-rotor UAV-Environment Interactive Control

Project Description: In recent years, the contact-based operation control technology of industrial unmanned aerial vehicle (UAV) systems has emerged as a prominent and cutting-edge field in academic research. This project delves into the exploration of essential control technologies tailored for the novel thrust vectoring multi-rotor UAV in contact-based operational scenarios. The investigation encompasses crucial aspects such as the tracking control mechanism, control allocation and more.

Job Description: We are seeking a highly skilled and motivated research fellow specializing in UAV control systems to contribute to our cutting-edge research initiatives. The ideal candidate will have a strong background in robotics, control theory, and a passion for advancing the capabilities of unmanned aerial vehicles. The research fellow will play a key role in designing, implementing, and optimizing control algorithms for UAVs. Collaborating closely with a diverse team of researchers and engineers, you will actively contribute to the development and submission of research papers in decent reputable journals. Throughout the experience as a Focused Research Extended Experience (FREE) research fellow, you will be able to cultivate the relevant research and practical skills in a focused and extensive manner such that enhancing your chances for advancing graduate studies or getting a long term well-paid industrial job.

This position commences in or after early 2024, with individuals anticipated to initiate their responsibilities no later than Spring 2024. The term of employment spans two years, and the contract is structured for annual renewal.

Qualifications:

- Master's or Bachelor's degree in Mechanical, Electrical or Aerospace Engineering or a related field with a focus on control, mechatronics, and autonomous system.
- Experience with control algorithm design, simulation and implementation.
- Proficiency in tools commonly used in UAV control research (e.g. MATLAB/Simulink, ROS, C++).

For questions regarding this position, please contact Dr. Qi (Michael) Lu, at qi.lu@scu.edu.cn.