

## **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.

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++).