

AEROSPACE ENGINEERING AND ENGINEERING MECHANICS
ENGINEERING

RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

APPLICATION DEADLINE: April 3, 2026

PROJECT TITLE: CubeSat cold-gas propulsion and attitude control

Physical Requirement :

In the Intelligent Robotics and Autonomous Systems Lab (IRAS Lab)

Project's Technical Skills Requirement :

Aerospace Engineering

Project's Available Positions : 1

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Project Description

This project will design and implement a cold-gas propulsion and attitude control system for CubeSats. The work involves a trade study of available commercially available cold-gas propulsion products using digital simulations of the new system. Simple attitude control software design and simulation-based verification and performance study. If time allows, the resulting prototype system will be tested in an existing air-bearing testbed at the IRAS Lab. This work may lead to further undergraduate research work at the IRAS Lab in part-time basis after the co-op term.