

AEROSPACE ENGINEERING AND ENGINEERING MECHANICS
ENGINEERING

RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

APPLICATION DEADLINE: April 3, 2026

PROJECT TITLE: Robot control for tracking and grabbing a moving object

Physical Requirement :

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

Project's Technical Skills Requirement :

Electrical Engineering or Mechanical Engineering

Project's Available Positions : 1

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Project Description

Design and implement control system for a small 4-DOF robotic arm. The position involves: (1) Derive an inverse kinematics solution for position control of the robot; (2) implement vision-based feedback control for tracking and grabbing a moving object; (3) verify the performance of the control method on Matlab environment; and (4) deploy the control software to a real-world robot prototype of the robot. Applicants should have introductory knowledge of robotics, either through coursework or hands-on experience. This position may lead to continued undergraduate research opportunities on a part-time basis within the IRAS Laboratory following the co-op term.