

**DEPARTMENT OF MECHANICAL ENGINEERING****SEMINAR****Online**

Title: Dynamic obstacle avoidance for Quadrotors in unknown environment

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Date: 28 April, 2022 (Thursday)

Time: 2:30 p.m. (Hong Kong Time)

Zoom meeting: 1) Link to join the meeting:

<https://hku.zoom.us/j/94473734652?pwd=U3JYMWZZbXVtMU91THNtUWJxQm9oUT09>

2) Meeting ID: 944 7373 4652

3) Password: 972319

Abstract:

Nowadays, the detecting and planning algorithms can be run online under limited onboard computing resources. Therefore, controlling quadrotors to fly safely and successfully in unknown dynamic environments becomes possible, which was a hard nut for quadrotors previously due to the difficulty of predicting and avoiding the moving objects, especially high-speed moving objects, accurately and timely. In order to allow the UAV to move in an unknown dynamic environment successfully and smoothly, the entire algorithm includes multiple modules such as environment perception, dynamic obstacles' trajectory prediction, trajectory planning, and flight control. Our work focuses on predicting the obstacles' trajectory and planning a safe and smooth trajectory for drones to follow. In this process, the most crucial module is to classify the different obstacles and match them in different frames so we can predict their future trajectories in low latency, which will be introduced in this seminar.

ALL INTERESTED ARE WELCOME

For further information, please contact Dr. F. Zhang at 3917 7909.

Research areas: Robotics and Control