



# Course Announcement (20-hours)

within the PhD Program in Information Engineering and  
the Master's Degree in Computer and Automation Engineering

**Every Day from April 8 to 11, 2025**  
**10:00–13:00 and 15:00–17:00**

**Engineering Faculty - Aula 160/2 &**  
**Dept. of Life and Environmental Sciences - Aula Azzurra**

## **MODELING AND CONTROL OF MULTIROTOR UAVs: A COMPREHENSIVE FRAMEWORK**

**Prof. Kimon P. VALAVANIS**  
**University of Denver – USA**


### Abstract

This 20-hour graduate-level course offers a complete framework for modelling, navigation, and control of multirotor Unmanned Aerial Vehicles (UAVs). It covers classical modelling approaches (Newton-Euler and Euler-Lagrange), control architectures, and advanced control strategies including Koopman-based and learning-based techniques. A simulation platform based on MATLAB/Simulink, ROS/Gazebo, and X-Plane is also presented.

### Short Bio

Kimon P. Valavanis is John Evans Professor at the University of Denver, a Fellow of AAAS and U.K. IMC. His research focuses on UAVs, robotics, autonomous systems, and intelligent control. He has authored over 400 journal and conference papers and several books in the field.

### Course Schedule

	TUESDAY APRIL 8	WEDNESDAY APRIL 9	THURSDAY APRIL 10	FRIDAY APRIL 11
10:00-13:00	160/2	AULA AZZURRA	AULA AZZURRA	AULA AZZURRA
15:00-17:00	160/2	AULA AZZURRA	AULA AZZURRA	160/2

### FULL COURSE PROGRAM

