



ulisses.ulisboa.pt

UNIVERSITY OF LISBON
INTERDISCIPLINARY STUDIES
ON SUSTAINABLE ENVIRONMENT AND SEAS



Co-funded by the
Erasmus+ Programme
of the European Union



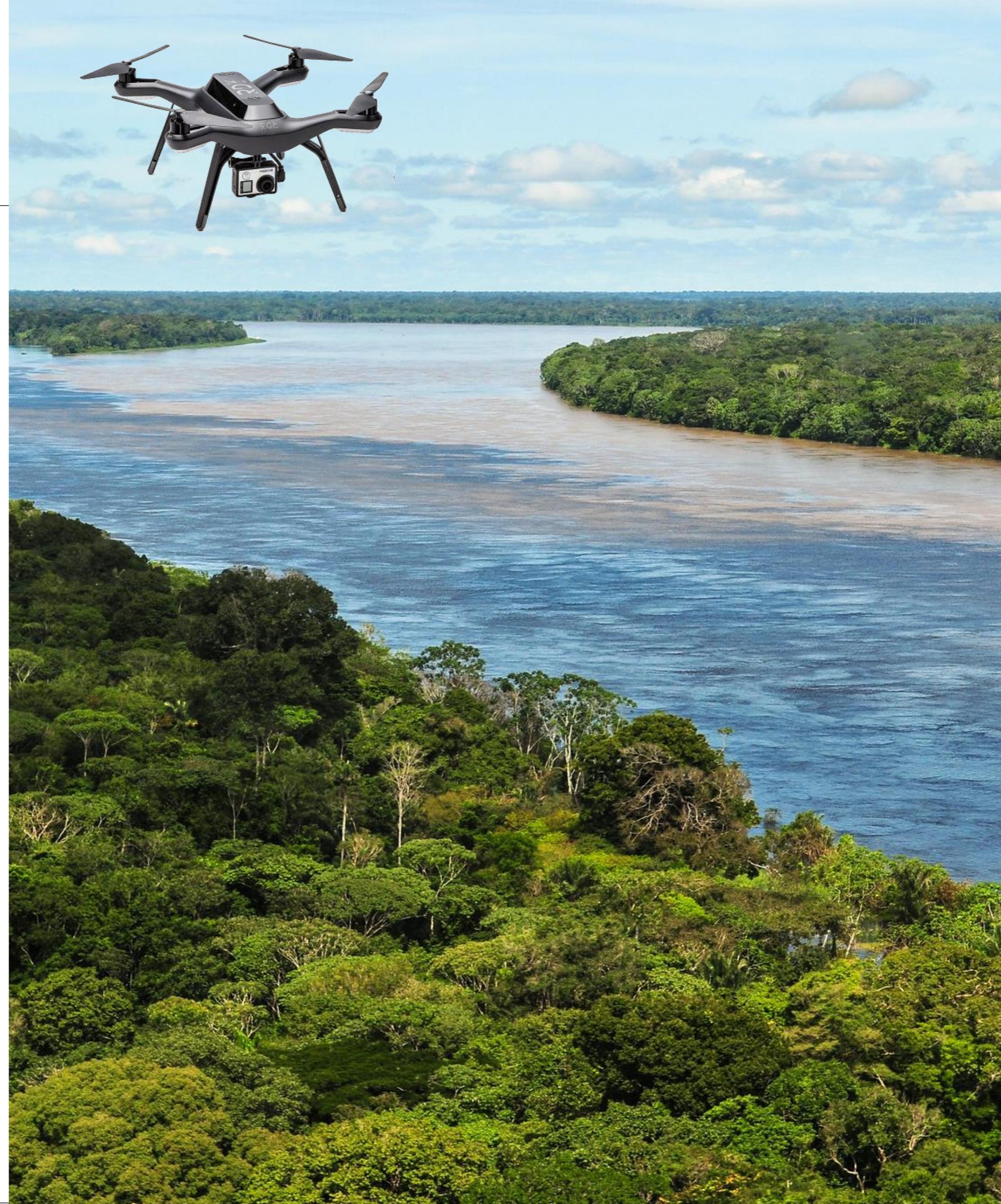
Unmanned Aerial Vehicles for Environmental Monitoring

Alexandra Moutinho

Control, Automation and Industrial Informatics
Mechanical Engineering Department
Instituto Superior Técnico, Universidade de Lisboa

Module contents

1. Introduction to Unmanned Aerial Systems
 - a) **How do drones work?**
 - b) Comparison of UAVs for environmental monitoring
2. UAVs payload: sensors for environmental monitoring
3. UAVs operation
4. Examples of application of UAVs for environmental monitoring



Video “How do drones work?” (please activate the captions in the video)

Credits to MOOC Técnico course “Simulation and Control of Drones”

Alexandra Moutinho, José Raul Azinheira

courses.elearning.tecnico.ulisboa.pt

Video “The aerodynamics of flying wings”

Credits to RCModelReviews YouTube channel

Tutorial “Dynamics of flight”

Credits to NASA Glenn Research Center webpage

Video “What happened to blimps?”

Credits to CNBC YouTube channel

The background of the image is an underwater scene. A large green sea turtle is swimming in the foreground, looking towards the camera. In the water above it, there is a significant amount of plastic waste, including a large plastic bag and several plastic bottles of various colors (blue, green, yellow). The water is a deep blue, and the surface is visible in the background where sunlight is filtering down. The overall theme of the image is environmental concern, specifically plastic pollution in the ocean.

Ulisses

UNITE!
University Network for
Innovation, Technology
and Engineering

U LISBOA | UNIVERSIDADE
DE LISBOA