

Tutorial 7: Blended Learning: Modelling, Simulation & Control of ROVs.

Abstract

The tutorial uses innovative teaching methods (blended learning concept) to explain key topics related to modelling, simulation and control of Remotely Operated Vehicles (ROVs). The concept consists of onsite lectures and remote live demonstrations.

Onsite lectures consist of 3 steps:

- 1) Modelling – based on differential equations describing system dynamics,
- 2) Solution – describing how to create generic simulation diagrams to solve equations,
- 3) Implementation – showing how to implement generic solutions using simulation tools.

Finally, remote live demonstrations consist of a connection to the remote site at the University of Limerick (UL) Lab and validation of the previous steps using real equipment not available in the lecture room.