



**Project student:** Luis Pedro Melo de Almeida (Pedro)

**Supervisors:** Gerd Masselink, Paul Russell and Mark Davidson (University of Plymouth)

**Project Title:** Dynamics of Coastal Systems During Storms

**Project outline:** This project will focus on the collection, analysis and modelling of extreme storm response data from a number of coastal sites that are important to the UK energy supply (e.g. Hinkley Point, Heysham, Sellafield, Sizewell and Bradwell). Data will be collected during storm events in a variety of coastal systems (e.g. tidal flat, mixed sandy and gravel beaches and soft rock) by using the University of Plymouth's Coastal Response Unit. The unit consists of a large van equipped with video surveillance tower, terrestrial laser scanner, quad-bike with mounted RTK-GPS system and self-logging water level monitoring instruments, and can be mobilized within a very short time to monitor the coast.

**Student Biography:** Pedro has a BSc in Oceanography and MSc in Geomatics (University of Algarve – Portugal). He has extensive experience in surveying coastal areas with different types of techniques: *in situ* (e.g. GPS, pressure transducers, current meters, adcp) and remote sensing instrumentations (e.g. X-band radar, video and laser-scanner). During the last 3 years he was working on a European Project (Micore – [www.micore.eu](http://www.micore.eu)) where research was dedicated to surveying and modelling the impact of storms in coastal areas and the development of an Early Warning System for storm impacts. His main research interests are the study of the storm hydrodynamics and morphodynamics on coastal environments combining field surveying and modelling.