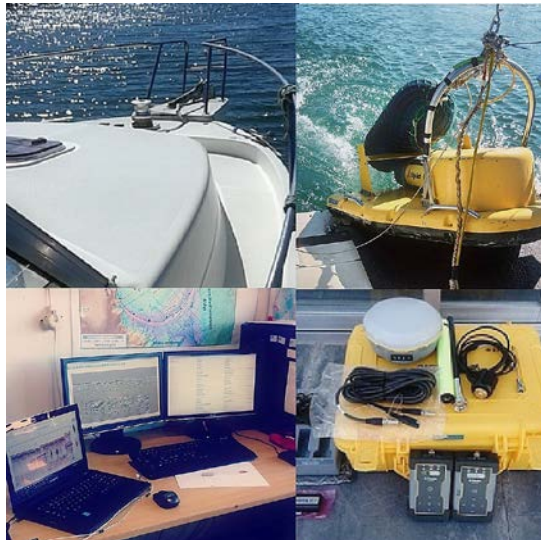


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Orientation: Sustainable Use of Marine Resources
Specialization Area: Management and Use of Resources
Research Area: 2.4 Assessment of geological resources

PhD project: Shallow Gas in Lagoon Coastal Environments, using Geophysical Methods

Supervisors: Dr. Luis Menezes Pinheiro (University of Aveiro)
Dr. Soledad García-Gil (University of Vigo)

Summary: A set of reasons exist to study these natural gas occurrences. It is an important energy source often used in human societies, especially methane, which is an important contributor to climate change, and it can be a problem for the geotechnical stability of underwater operations.

The coastal lagoons are an excellent natural laboratory to investigate the mechanisms of natural gas generation, accumulation, migration and escape.

The purpose of this PhD study is to identify natural gas occurrences in the sediments of Terminal Norte which is one of the port infrastructures located in the Ria de Aveiro, in Portugal and San Simon bay in the Ria de Vigo.

The presence of gas in sediments is well detected by high resolution seismic surveying due to the change of acoustic impedance between media with and without gas.

The main objective is to map and characterize the different gas appearances in the study areas and to understand the process of gas formation within the context of the geological evolution of these areas.