2022 INTIMATE Lecture series

Where land, ocean and ice meet...

Thursday, April 28th at 11am CET

Marine records

Marit-Solveig Seidenkranz (Aarhus University)

Deglacial and Holocene changes in ocean conditions and interaction with the cryosphere based on marine sediment records from NE Greenland

The interaction between the cryosphere and the marine realm is very important in global climate. Here marine shelf and fjord records are essential for tracking changes in ocean circulation and testing the interaction with both sea ice and glacier ice. Such investigations however also hold a number of difficulties, among other due to difficult accessibility, potential uncertainties with dating and lack of modern data for comparison. Using ongoing investigations of marine sediment cores combined with sub-bottom profiler data from the NE Greenland shelf as an example, this presentation will give a short introduction to some of the issues that we deal with, but also provide some solutions. It will also present some brand-new results on changes ocean circulation and glacier retreat since the LGM from an otherwise near-virgin area of the Arctic.

Víctor Cartelle (Flanders Marine Institute - VLIZ)

Dynamic coastlines: sea-level change and sedimentary response during deglaciations

Continental shelves and coastal areas represent the dynamic transition zone between the land and ocean and preserve unique detailed archives of environmental change, recording the complex interaction among climate, sea level and sediment input from landmasses. The iterative reconstruction of palaeogeography and past sea-level changes is a useful tool to assess and generate high-quality sea-level indicators and to provide insight into the dynamic response of sedimentary systems to their driving mechanisms. I will illustrate the potential, interest and difficulties of performing these reconstructions in submerged continental shelves through examples from the North Sea and the Iberian Peninsula, focusing on the sea-level transgression that followed the Last and Penultimate Glacial periods.

INTIMATE
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