

# 11th International Symposium on Antarctic Earth Sciences

10 to 15 July 2011  
University of Edinburgh, Scotland

[Home](#)

[Personal Details](#)

[Your Registration](#)

[New Abstract](#)

**Ref:712 Very recent sedimentation in the northwestern Ross Sea coastal areas**  
submitted on Thursday 31st March 2011 8.33am

**Ref:713 ROSSLOPE: Past and present sedimentary dynamic in the ROSS Sea: a multidisciplinary approach to study the continental SLOPE**  
submitted on Thursday 31st March 2011 12.35pm

[Abstract Submission Guidelines](#)

[Poster Printing Guidelines](#)

[ISAES 2011 Homepage](#)

[Change Password](#)

[Contact Us](#)

[Terms & Conditions](#)

[Log Out](#)

## Abstract Detail

### Abstract Title:

ROSSLOPE: Past and present sedimentary dynamic in the ROSS Sea: a multidisciplinary approach to study the continental SLOPE

### Session

Geological controls on the modern and past Antarctic bottom water and marine environment

### Authors:

[Ester Colizza](#)<sup>[1]</sup>, [Gualtiero Bohm](#)<sup>[2]</sup>, [Lucilla Capotondi](#)<sup>[3]</sup>, [Furio Finocchiaro](#)<sup>[1]</sup>, [Federico Giglio](#)<sup>[3]</sup>, [Gerhard Kuhn](#)<sup>[4]</sup>, [Paola Maffioli](#)<sup>[5]</sup>, [Elisa Malinverno](#)<sup>[6]</sup>, [Massimo Presti](#)<sup>[2]</sup>,

1. Dipartimento di Geoscienze-Università di Trieste-Italy
2. Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS – Trieste-Italy
3. Istituto di Scienze Marine – CNR Bologna-Italy
4. AWI – Bremerhaven-Germany
5. Dip. Scienze Geologiche e Geotecnologie Università Milano-Bicocca-Milano-Italy

### Presentation Type:

Poster

### Abstract:

The ROSSLOPE is an Italian Antarctic project approved in the framework of the PNRA. The investigation of the interactions among marine currents, sea floor morphology, sediment texture and benthic communities is crucial to understand the dynamics of depositional and erosive processes on present-day seafloor, and represents an important key to study the paleo-environmental variation of the southern antarctic and subantarctic areas.

This project aims to investigate the relation between present and past water mass circulation from modern and late-Cenozoic sedimentary sequences of the Ross Sea outer shelf and continental slope of the area of Adare and Central Basins, and the area to the east of Pennell-Iselin Banks. The study will be performed through the comparison and integration of data concerning the circulation of the present dense, cold water masses produced in the Ross Sea (HSSW e ISW), with 1) measurements of physical-chemical-biotic characteristics of surface sediments (water-sediment interface) and within the top 5 meters beneath the seafloor, 2) the geo-morphological features of these areas, 3) benthic acoustic facies typically related both to bottom-current activity (i.e. sediment drifts) and to down-slope mass processes within the stratigraphic section.

In these areas few and scattered geological, geophysical, oceanographic and morpho-bathymetric data exist. We propose to study these existing data. The data base is constituted of previous data of: 1) multibeam surveys collected during PNRA and USA geophysical cruises 2) single-channel and multichannel Italian and foreign seismic data available by the Seismic Data Library System 3) PNRA sediment box cores and cores of which most already studied for other purposes and others yet to be studied.

Moreover new morpho-bathymetric and sub-bottom acoustic data together with cores and box cores will be collected. All results will be compared in a multidisciplinary way with oceanographic knowledge to provide a depositional model of the modern continental slope processes as a basis for paleoceanographic reconstructions.



11th International Symposium  
on Antarctic Earth Sciences

Closing date for early registration:  
**Thursday 31 March 2011 (5pmGMT)**  
Closing date for registration: **Friday 08 July 2011**

If you have any queries please contact the  
conference administrator [isaes@intel-events.co.uk](mailto:isaes@intel-events.co.uk)