

Plenary and Parallel Session: Oral Presentation Friday 17 July

Plenary Lectures

09:00-09:45 **New insights on Interactions between the Solid Earth and the Cryosphere**
Terry Wilson, School of Earth Sciences, The Ohio State University, USA

09:45-10:30 **Ocean Iron Fertilization: an update from LOHAFEX**
SWA Naqvi, National Institute of Oceanography, Goa, India

10:30-11:00 **Coffee**

Parallel Session 26: Evolution of Antarctic topography and bathymetry: understanding links between landscapes, ice and palaeoclimate

Conveners: Stewart Jamieson, Karsten Gohl, Graeme Eagles

11:00-11:30 **Impact Of Topography and Bathymetry on Antarctic Ice Sheet Model Simulations**
Edward Gasson, University of Massachusetts, Amherst

11:30-11:50 **Did The Recent Geomorphic and Sedimentary Record off The Sabrina Coast, East Antarctica, Originate As Result of Past Sub glacial Water Outbursts and Ice Sheet Collapse?**
Rodrigo Fernandez, University of Texas Institute for Geophysics

11:50-12:10 **Seismic imaging of former grounding lines under Whillans Ice Stream, West Antarctica**
Tarun Luthra, Penn State University

12:10-12:30 **Bathymetry of Schirmacher Lakes as an Input for Geomorphological Studies**
Swain A. K., Geological Survey of India

12:30-12:50 **Subglacial conditions and ice flow across the Weddell Sea sector of West Antarctica: synthesis from recent aerogeophysical surveys**
Robert G. Bingham, University of Edinburgh

12:50-13:10 **Preliminary Interpretations of Seafloor Geomorphology from A Near-shore Multibeam Sonar Survey; Casey Station, East Antarctica**
Carson CJ, Geoscience Australia

13:00-14:00 **Lunch**

Parallel Session 31: Evolution of Antarctic topography and bathymetry: understanding links between landscapes, ice and Palaeoclimate

Conveners: Stewart Jamieson, Karsten Gohl, Graeme Eagles

14:00-14:20 **Relative Sea-Level Changes and Sediments Deposition: A First Step towards a Fully Coupled System**
Paolo Stocchi, NIOZ Royal Netherlands Institute for Sea Research, Den Hoorn, The Netherlands

14:20-14:40 **Weddell Sea Paleobathymetry Reconstruction from Pre-Glacial to Glacial Conditions and The Simulated Middle Miocene Weddell Gyre**
Xiaoxia Huang, Alfred Wegener Institute



- 14:40-15:00 **Pre-30 MA Glacial Erosion beneath Western Ross Sea, Antarctica?**
Sorlien, C. C., University of California Santa Barbara
- 15:00-15:20 **The Magia Mass-Wasting Complex. Morphology and Processes affecting the Central Bransfield Basin (Antarctica)**
David Casas, Instituto Geológico y Minero de España
- 15:20-15:40 **Inversion of the Mesozoic Victoria Basin and uplift of the Terra Nova Bay segment of the Transantarctic Mountains**
Frank Lisker, University of Bremen
- 15:40-16:00 **Landscape evolution of the Marie Byrd Land crustal block from aerogeophysics**
Young, Duncan A., University of Texas Institute for Geophysics
- 16:00-16:20 **The Geomorphology Of Rock Glaciers, Near Troll Station in the Jutulsessen, Antarctica**
E.M. Rudolph, Rhodes University

Parallel Session 27: Cryosphere - Solid Earth Interactions and Antarctic Geothermal Heat Flux, Subglacial Geology and Ice Dynamics

Conveners: Terry Wilson, Samantha Hansen, Wouter van der Wal, Chris Carson, Sridhar Anandkrishnan

- 11:00-11:20 **GPS and Grace Constrains on Present Day Antarctic Glacial Isostatic Adjustment (GIA)**
Sunil P, Sukumaran, Indian Institute of Geomagnetism
- 11:20-11:40 **Horizontal Crustal Motion Due to Postglacial Rebound above a Viscosity Contrast**
Paolo Stocchi, NIOZ Royal Netherlands Institute for Sea Research, Den Hoorn, The Netherlands
- 11:40-12:00 **Understanding Antarctic Ice Mass Change Using GPS Measurements of Horizontal Crustal Motion**
Stephanie Konfal, Ohio State University
- 12:00-12:20 **The Extent of the West Antarctic Rift System into the Amundsen Sea Embayment: New Indications, by Curie Depth Estimates and Geothermal Gradients**
Ricarda Dziadek, Alfred Wegener Institute Helmholtz-Centre for Polar and Marine Research
- 12:20-12:40 **Geological Boundary Conditions for the East Antarctic Ice Sheet in the Northern Wilkes Subglacial Basin**
Fausto Ferraccioli, NERC-British Antarctic Survey
- 12:40-13:00 **Geological Controls on the Behavior of an East Antarctic Outlet Glacier**
J. Paul Winberry, Central Washington University
- 13:00-14:00 **Lunch**

Parallel Session 32: Southern Ocean Paleoclimatology and Lake Sediment Records of Past Changes in Sea level and climate during the Late Quaternary

Conveners: Manish Tiwari, Rahul Mohan, Elie Verleyen, Anish Kumar Warriar, Mahesh B.S

- 14:00-14:20 **Inverted sediments in coastal Antarctic Lake: Evidence of paleostorm?**
Rajeev Saraswat, CSIR-National Institute of Oceanography
- 14:20-14:40 **Holocene Palaeoenvironmental Changes: Evidenced from Fresh Water Lakes in Schirmacher Oasis, East Antarctica**
Pawan Govil, Birbal Sahni Institute of Palaeobotany



- 14:40-15:00 **Southern Ocean Mixed-Layer Depth Variability and Its Response to Atmospheric Forcing**
Siddhartha Chatterjee, Allahabad University
- 15:00-15:20 **Enhanced Productivity at the Subtropical Front during the Past Periods of High Aeolian Dust Flux**
Manish Tiwari, ESSO-National Centre for Antarctic and Ocean Research
- 15:20-15:40 **Glacial-interglacial Variability in Antarctic Sea-ice Extent and Southern Ocean Frontal Systems**
Abhilash Nair, ESSO-National Centre for Antarctic and Ocean Research

Parallel Session 28: General Antarctic Earth Science

Convener: Simon Cox

- 11:00-11:20 **Chemical Environment of a Lake with Unusual Optical and Thermal Properties on Bharti Island, Larsemann Hills, East Antarctica**
Pawan Kumar Bharti, Shriram Institute
- 11:20-11:40 **Investigation of the Effects of Cosmic Ray Input on Clouds and Climate in Antarctica**
Anil Kumar C.P., Indian Institute of Geomagnetism
- 11:40-12:00 **Early Jurassic Silicic Volcanism in the Transantarctic Mountains: Tectonic Setting and Relations to the Gondwana Plate Margin**
Elliot, D.H., Ohio State University
- 12:00-12:20 **Seasonal Variation of Surface Electrical Parameters Measured at Maitri and Vostok, Antarctica**
Jeni Victor N, Equatorial Geophysical Research Laboratory
- 12:20-12:40 **Review and Application of Needle Ice Creep Models on Sediment Movement, Marion Island, Sub-Antarctic**
Carl-Johan Borg, Department of Geography, Rhodes University

13:00-14:00 Lunch

Parallel Session 29: General Antarctic Earth Science

Convener: Simon Cox

- 14:00-14:20 **Bathymetry as a Control on Surface Sediment Distribution within Fjords and Implications for Paleoenvironmental Interpretations: An Example from Flandres Bay and Vicinity, Antarctic Peninsula**
Julia Wellner, University of Houston
- 14:20-14:40 **Multibeam Bathymetry Compilation of the Drake Passage (Antarctica-South America): Batdrake V1.0**
Fernando Bohoyo, IGME Geological Survey of Spain
- 14:40-15:00 **Deriving Sea Ice Parameters Using Satellite Data to Support Ship Navigation during Antarctic Expeditions**
Rajak D. Ram, Space Applications Centre (ISRO)



Parallel Session 30: New Frontiers in Remote Sensing in Antarctic Earth Sciences: Cross-disciplinary advances

Conveners: Shridhar Jawak, Alvarinho J. Luis, Eugene Mikhalsky

- 15:00-15:30 **Very High Resolution Satellite Imagery for Cryospheric Geoscientific Information Extraction**
Shridhar D. Jawak, ESSO-National Centre for Antarctic and Ocean Research
- 15:30-15:50 **Antarctic sea ice variability and trends in the context to physical forcing**
Avinash Kumar, ESSO-National Centre for Antarctic and Ocean Research
- 15:50-16:10 **Extracting Outcrop Extents in Antarctica: Current problems, new solutions and a complete dataset for the Antarctic Peninsula**
Alex Burton-Johnson, British Antarctic Survey
- 16:10-16:30 **Investigations on Dynamical Coupling Processes in the Antarctica Middle Atmosphere**
Subrahmanyam K V, Space Physics Laboratory (ISRO)
- 16:30-16:50 **Synthetic Aperture Radar (SAR) Data in Mapping and Study of Compacted Snow Dune Complexes and Active Lineament Tectonics in Antarctica**
Misra A, Centre for Glaciology, Wadia Institute of Himalayan Geology
- 16:50-17:10 **Decadal Variations of Ice-Albedo Feedback Controlling Factors Over Amundsen-Bellinghousen Seas Sector**
Oza, S. R., Space Applications Centre (ISRO)
- 17:10-17:30 **Monitoring fast ice deformation near Indian Research Stations using multi-temporal / multi-mode RISAT-1 data**
P Jayaprasad, Space Applications Centre (ISRO)