The Hydrographic Society UK

uniting the hydrographic community at home and overseas

The Hydrographic Society Southern Region Evening Meeting hosted by the Marine Autonomy & Technology Showcase

Wednesday 13th November 2019 17:00 – 19:30

17:00 - 17:15 | Welcome drinks reception in the MATS marquee

17:15 - 17:30 | Introduction to the evening event

17:30 - 18:00 | ***Ocean Infinity Presentation***

18:00 - 18:30 | ***'Monitoring Active Hazardous Submarine Sediment Flows', Lewis Bailey & Maarten Heijnen, National Oceanography Centre.***

Recent technological advances now enable direct measurement of powerful seafloor hazards, including avalanches of sediment called turbidity currents that can travel at fast speeds (up to 20 m/s) over long distances (>100s of km) and damage critical seafloor infrastructure. We will show exciting new measurements of these flows from a number of sites worldwide that enable more robust risk assessments for seafloor structures and shed light on one of the most important processes for transporting sediment, nutrients and carbon on our planet.

Lewis Bailey and Maarten Heijnen are specialists in characterising seafloor hazards and quantifying offshore sediment transport. Since October 2017, they have been enrolled as PhD students within the Marine Geohazards and Sedimentology Group at NOC and work with a range of international collaborators on research projects that aim to make direct measurements of powerful seafloor flows called turbidity currents. Both have a degree in Geology, Lewis from the University of Southampton, Maarten from Utrecht University, the Netherlands. Lewis' research focuses on how turbidity currents are initially triggered, using novel statistical approaches to better understand when and why flows occur. Maarten's focus is on the interaction of these flows with the seafloor, using time lapse surveys to document how offshore transport systems evolve through time.

18:30 - 19:00 | ***'Geophysical and Geoenvironmental Applications for Understanding and Protecting Underwater Archaeological Sites', Dr Claire Mellett, Megan Metcalfe & Danielle Wilkinson, Wessex Archaeology.***

Evidence of past human activity does not stop at the water's edge. Marine archaeological remains are an extensive resource that provide information about people of the past dating back thousands of years. Recent projects by Wessex Archaeology demonstrate the use of geophysical and geoenvironmental data in identifying significant archaeological sites ranging from the best known European prehistoric site to date, to timber shipwrecks and aircraft wrecks. Identification of these sites is critical in order to record them, protect the archaeological material and add to our understanding of past human activity.

Dr Claire Mellett is a Principal Marine Geoarchaeologist with Wessex Archaeology. Claire has over ten years' experience integrating marine geophysical data with geotechnical and palaeoenvironmental information to reconstruct submerged landscapes. She specialises in deposit modelling and sedimentology, Optical Stimulated Liminescence dating and multi-proxy palaeoenvironmental reconstruction.

Megan Metcalfe is a Marine Geophysicist with Wessex Archaeology. She has experience in the acquisition and interpretation of marine geophysical data as well as geotechnical data. Her particular interest in the interpretation of palaeolandscapes, including the assessment and integration of geotechnical logs with sub bottom profiler data.

Danielle Wilkinson (Presenter) is a Project Manager with the Coastal and Marine archaeological team at Wessex Archaeology. Dani worked as an archaeological consultant in Australia for six years before joining Wessex Archaeology last year. She has since managed various projects in the UK including scoping and desktop studies, dive support projects, post excavation projects and archaeological protocols.

19:30 on wards | A social event will follow the evenings proceedings at a local venue (details TBC) which everyone is welcome to join.

Please note that registration is compulsory for attendance, Click Here **to register.**