

OSIGp Evening Technical Meeting: RIGSS, DIGs and Safely Engineering Around Geohazards

Wednesday, 12th October 2016 – Parmelia Hilton Hotel (Swan Room), Mill St. Perth

Onsite Registration 5.30 pm: Presentations 6.00 pm – 7.30 pm Networking over drinks and finger food 7.30 pm – 8.30 pm

To register for the event visit www.trybooking.com/KMBC

Chaired by: Kevin Day, Consultant, Ten Point Interpretation

Remote Intelligent Geotechnical Seabed Surveys – technology emerging from the RIGSS JIP

Sam Stanier, Research Fellow & David White, Shell EMI Professor of Offshore Engineering, UWA

The Remote Intelligent Geotechnical Seabed Surveys (RIGSS) project is a Joint Industry Project (JIP) led by UWA that is advancing geotechnical site investigation technology. The JIP is developing new types of tools with improved control and instrumentation, and new engineering design methods that apply the data more directly to geotechnical design. This presentation will give an overview of the JIP and illustrate these emerging tools, via laboratory tests, numerical simulations and field trials. We are using modern robotics, intelligent control and a little bit of creativity to create new in situ geotechnical tests that can underpin more efficient geotechnical design. The JIP is supported by Benthic, Fugro, Shell, Total and Woodside.

DIG: Diagnostic Integrated Geosciences. Blending wholesome cocktails of geoscience data to confidently diagnose what's actually going on with the seabed

Stella Kortekaas, Senior Geologist & Sam Ingarfield, Geotechnical Engineer, Fugro AG

For the development of any subsea infrastructure it is important to know what is going on at the seafloor and below. What are the expected soil conditions? Are there any geological features or processes that may pose a hazard? What is the risk associated with these hazards to the field development or installation? The DIG approach relies on the integration of a multitude of data including geological, geophysical, geotechnical and metocean data to assess site conditions and diagnose key issues. The process starts with the creation of a preliminary ground model, which not only evolves with the project as more data is made available, but also provides critical input to assist decision making on what additional information is required. This presentation will give examples of real projects and geohazards such as submarine mass movement, turbidity currents and bedform mobility.

Mitigating the consequences of geohazards on subsea infrastructure

Alex Bandini-Maeder, Senior Geologist, NGI Perth

Recent advances in hardware and software enable faster interpretation, high-definition 3D visualisation, greater data integration, and improved modelling capabilities. These advances transform the way regional shallow geohazards are assessed by enhancing the identification of stratigraphic discontinuities and associated geological events such as slope failures and turbidity currents. In addition, the combination of regional qualitative geohazard assessments with quantitative modelling of geohazards enables consistent scenarios of these events to be recreated, allowing improved risk quantification. This presentation will draw on case studies from the North West Shelf and international developments to examine the way likelihoods and consequences of geohazards are assessed in order to enable the safe engineering of subsea developments.

REGISTRATION FEES: SUT Members \$25: Non-Members \$45* (additional \$5 if register at the door)

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