Combined CPT+NMR Tool for Enhanced Geotechnical Characterization of the Seabed

Report on OSIGp Technical Meeting
Held online (Teams)
Chair: Cathal Colreavy, OSIGp Committee

On Friday 23 May 2025, the SUT OSIGp community gathered online for a technical webinar featuring Dave Walsh, Founder and President of Vista Clara Inc. The session, titled "Combined CPT+NMR Tool for Enhanced Geotechnical Characterization of the Seabed", was chaired by Cathal Colreavy (OSIGp Committee Member), with support from Nicole Fiumana (OSIGp Vice Chair). The event was hosted on Microsoft Teams and attracted strong interest, with over 100 people registered from around the world.

Dave introduced an innovative tool that integrates Cone Penetrometer Testing (CPT) with Nuclear Magnetic Resonance (NMR) in a single CPT-pushable system. They walked the audience through the motivation for merging these technologies – namely the potential to improve geotechnical site characterisation while cutting down on time, costs, and laboratory testing requirements.

The presentation covered the development journey of the tool, including technical specifications and its various deployment scenarios – from land-based testing of unsaturated sediments to offshore seabed characterisation for wind cable route surveys. Throughout, Dave emphasised how this technology offers a more efficient path to understanding soil behaviour, particularly in offshore settings where logistics and costs are often limiting factors.

A lively Q&A session followed, with attendees engaging Dave on the practicalities and potential applications of the tool.

The OSIGp committee thanks Dave for sharing their insights and expertise, and for making time to present to our Perth-based audience – despite the time difference. Thanks also go to all who attended, especially those who joined live. As always, OSIGp is proud to host informative events that bring the offshore 4G (Geology, Geophysics, Geomatics and Geotechnical Engineering) community together.

Stay tuned for our next event!