

SUT South West Evening Meeting – Advances in Marine Measurements

Nov 29th 2018 – Plymouth University Lecture Theatre

The meeting was a great success with five excellent speakers and 63 attendees from across the UK and Europe.

The meeting was chaired by Dr. Edward Steele of the Met Office and an Alumnus of the University.

The first speaker was **Claire Cardy, a Director of Nortec UK** and an Oceanographer who had studied at the National Oceanographic Centre in Southampton before a career in metocean engineering and hydrodynamic modelling. Claire talked about the Acoustic Doppler Current Profilers (ADCPs) that Nortek supply in the UK and Ireland, which are of an advanced design and used to measure currents and waves in a variety of applications. Her presentation will be available on the SUT website.

Claire is also a strong supporter of SUT+, the group founded to address the needs of younger engineers and scientists within the SUT

The next speaker was **Dr. Tim Scott, Lecturer in Ocean Exploration at the University of Plymouth** and an expert on coastal erosion and geophysics. He enthralled the audience with the story of the development of commercial drones that can provide very detailed measurements of coastal conditions and dynamic measurement of sand deposition following storms. It was a fine example of how science can be fun at the beach. We await a copy of his presentation.

More fun at the beach with our next speaker, **Dr. Bob Brewin of the Plymouth Marine Laboratory**, who talked about remote satellite sensing of marine biogeochemistry. The sensors are mounted upon kayaks and surfboards using a “Smart Fin” and collect real time data from pleasurable activity. The result is a massive database of measurements of water quality and coastal conditions. His presentation will be available on the SUT website.

Dr. George Graham of the Marine Biological Association (MBA) told us about the devices towed behind marine vessels to monitor the impact of climate change on marine plankton and the health of our oceans. Their machine learning algorithms allow much more detailed and speedy assessment of results, leading to a greater understanding of the marine environment. His presentation is not available online, but he can be contacted for more information, at the MBA.

Finally, **Alexander Steele of Fugro Vision Technology Group** and another alumnus of Plymouth University, told us about their subsea augmented reality system as applied to ROV intervention in oil and gas and renewable energy projects worldwide. The images he was able to project in the lecture theatre were truly remarkable and gives us all hope for the future direction of AI technology development. His presentation is not yet available but the Fugro website has a lot of useful information about their services.

The meeting was very interesting, the networking was excellent, and we now know all there is to know about the fun of science, at the beach and beyond.

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