



SUT
PERTH

APRIL EVENING TECHNICAL MEETING

15 APRIL 2026 | 5.30pm - 8.30pm | Parmelia Hilton Perth

Beneath the Surface: Uncovering Maritime Mysteries Through Underwater Technology

The SUT April ETM will showcase how advancements in underwater technology are redefining maritime archaeological research and underwater exploration. Improved autonomous and remotely operated surveys capable of reaching deeper waters, enhanced high-resolution imaging, and improved 3D modelling techniques now enable precise search and characterisation of underwater sites. Beyond improving technical quality, these tools help uncover the stories embedded within these submerged landscapes. This session will highlight the intersection between engineering, science, archaeology and underwater exploration, demonstrating how technological innovations are progressing investigations of our submerged cultural heritage, support more engaging communication to the public and how these methods can translate into broader industry applications.

INTRODUCTION

Deb Shefi + Patrick Morrison, WA Museum

Western Australia is home to more than 1,500 recorded maritime archaeological sites, yet only approximately 300 have been physically located to date. Addressing this disparity requires innovative, scalable, and cost-effective approaches to research, survey and discovery. By integrating desktop assessments of open source multibeam bathymetry and other remote sensing datasets with archival research and community engagement, maritime archaeologists are able to laterally utilise geological datasets for cultural heritage management purposes. Through a series of case studies, this presentation will inform on the practical workflows and interpretive strategies that support site detection and prove a positive result.

VISUALISING SHIPWRECK SITES

Andrew Woods, Curtin University

The team at the Curtin HIVE has worked on creating visualisations of more than 50 underwater cultural heritage sites around Australia and around the world. Using photogrammetry techniques to create detailed digital 3D models of sites allows experts to analyse site formation processes, and to communicate the important stories of these sites with the general public. This presentation outlines recent improvements in capture and processing technologies aimed improving the quality of 3D models, demonstrate some recent high-quality shipwreck visualisations, and illustrate how these technologies can be applied to industrial applications.

RESPONDING TO MARITIME INCIDENTS IN THE INDIAN OCEAN

Charitha Pattiaratchi, University of Western Australia

Maritime accidents (oil, chemical and plastic spills) are rare, but extreme events that require real-time model forecasts to develop a variety of responses over a relatively short period. In many countries of the Indian Ocean, high resolution coastal models including bathymetry data generally does not exist. There have been many major maritime accidents in the Indian Ocean including: (1) disappearance of the Malaysian Airlines flight MH370; (2) oil spill along the eastern coast of Mauritius (MV Wakashio) that affected local coral reefs and mangrove systems; and, (3) plastic pellets ('nurdles') spill along the western coast of Sri Lanka (X-Press Pearl) that severely affected the whole coastline of Sri Lanka and other countries. This presentation will outline the establishment of the local hydrodynamic models for these incidents and the results from model outputs. In particular, the X-Press Pearl incident released 78,000 tonnes of nurdles that will influence the coastlines of the northern Indian Ocean for many decades into the future. The transport of nurdles were influenced by the local monsoon currents as well as ocean fronts, a continental shelf wave generated by a tropical cyclone in the Bay of Bengal.

USE OF AUTONOMOUS UNDERWATER VEHICLES IN THE DISCOVERY AND IDENTIFICATION OF THE WWII DESTROYER USS EDSALL

Hannah Lee, Royal Australian Navy

In March 1942, the World War II US Navy destroyer USS Edsall (DD-219) fought against two Japanese battleships and two heavy cruisers, successfully evading over 1,400 shells and attacking aircraft before being sunk by Japanese dive bombers. There were no survivors. The wreck of the USS Edsall, known as the "dancing mouse," was discovered in late 2023 by the Royal Australian Navy at a depth of approximately 5.5 km in the Indian Ocean, south of Java. The presentation will demonstrate the technology used during the initial search, along with the processes, risk mitigation strategies, and technological failsafe's that enabled the successful identification of the wreck.

REGISTER NOW

Registration Cost	Earlybird (ends 8 April)	Regular (from 9 April)	Onsite
Single ticket: Members (Individual/Corporate)	\$40	\$50	\$55
Single ticket: Non-Members	\$60	\$70	\$75
Students	\$25	\$25	\$25
Group Booking: 5pax - Corporate Members	\$160	\$230	-
Group Booking: 10pax - Corporate Members	\$290	\$230	-
Season Pass: 5 tickets - Members	\$175		
Season Pass: 5 tickets - Non-Members	\$290		

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