



INMARTECH 2023

BARCELONA 20TH-22ND JUNE 2023

INTERNATIONAL MARINE TECHNICIANS MEETING



CSIC

CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

 **UTM**

UNIDAD DE TECNOLOGÍA MARINA



**International Research
Ship Operators**

INMARTECH 2023 AGENDA

INMARTECH will be hosted by the Marine Technology Unit (UTM) from the Spanish Research Council (CSIC) from 20th to 22nd of June 2023 in Barcelona (Spain) at the World Trade Center.

The UTM provides the technical support and logistical management to the Spanish Research Council oceanographic vessels and Antarctic stations. It's about 40 marine technicians offers a wide range of onboard and onshore activities ranging from maintenance of equipment, instrumentation operation and technical assessment onboard (research cruises) and acquisition and archiving of oceanographic data.

World Trade Center Barcelona

WTC Barcelona's congress and meeting center comprises a total of 4,000m² of versatile, adaptable spaces bathed in Mediterranean light. It provides top-quality facilities equipped with leading-edge technology mean we're in a position to host any kind of event in Barcelona, ranging from inspiring workshops in one of several meeting rooms facing the sea, to large events at the Auditorium, the most representative venue at the business complex.

WTC is just ten minutes away from the airport and a few minutes from Barcelona's city center





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Monday 19th June 2023

INSCRIPTIONS on CMIMA Hall. 18:00h

CMIMA (Centro Mediterráneo de Investigaciones Marinas y Ambientales)

Paseo Marítimo de la Barceloneta 37-49

08003 Barcelona



ICE BREAKING 20:00h

Xiroi Ca La Nuria

Paseo Marítimo de la Nova Icaria, 38, 08005 Barcelona



Tuesday 20th June 2023

9:00- 9:05	Welcome Inés Galindo (Deputy Vice President of Organization CSIC)
Open Key Note (0915-0945)	Joaquin Tintoré (SOCIB)
10:00 - 10:20	Many-to-many sensor data collection with MQTT (E. Stevens) <i>Scripps. USA</i>
10:20 - 10:40	Coffee BREAK
10:40 - 11:00	Practical Cybersecurity Compliance for the US Academic Research Fleet (W. Drake & R.Kiser) <i>INDIANA UNIV. USA</i>
11:00 - 11:20	UTM Data Centre services useful for technicians. (S.Diez) <i>UTM-CSIC</i>
11:20 - 11:40	Mapping Equipment. (M. Lobecker) <i>KONGSBERG DISCOVERY</i>
11:40 - 12:00	The Multibeam Advisory Committee and Ocean Mapping Community Wiki (K. Jerram) <i>CCOM-UNH. USA</i>
12:00 - 12:20	Improving Data quality with the HydroOffice suite and MAC assessment tools (G. Masetti) . <i>CCOM-UNH. USA & DANISH HYDROGRAPHIC OFFICE</i> (K Jerram) <i>CCOM-UNH. USA</i>
12:20 - 12:40	Extending the Boundaries of Remote & Autonomous Operations (G. West) <i>SONARDYNE</i>
12:40 - 13:30	LUNCH
13:40 - 14:00	Effectively sharing large winches between institutions (D. Fishichella) <i>WHOI. USA</i>
14:00 - 14:20	Compact Winch Handling System. (T.Ringstadt). <i>ENTEC. NORWAY</i>
14:20 - 14:40	HiPAP Family Products. (J. Mart). <i>KONSGBERG DISCOVERY</i>
14:40 - 15:00	Development of the CTD Modem – “From Dial-up to Broadband” (T. Goodwin) <i>CSIRO. ASTRALIA</i>
15:00 - 15:20	Building hyper-realistic underwater virtual models for investigations using neural radiance fields (NeRF) and unmanned underwater vehicles (H. Ludvigsen) <i>SPAC NORWAY</i>
15:20 - 15:40	Coffee BREAK
15:40 - 16:00	A Flexible Shipboard CCTV System (T. Young) <i>UNIV HAWAII</i>
16:00 - 16:20	Recent Projects NIOZ (Y Witte) <i>NIOZ. NETHERLANDSSS</i>
16:20 – 16:40	Ocean Sonics Smart digital hydrophone array for research vessels - case studies with RV Investigator and RSV Nuyina (J.Guo) <i>OCEANSONICS. CANADA</i>

Wednesday 21st June 2023

	21st June
09:20 - 10:20	Towards an Armada strategy - sensor, platforms and data flow. (Y.Ladroit) KONGSBERG DISCOVERY
10:20 - 10:40	Increasing glider capabilities at NOC Unmanned vehicles (B.Alsup) NOC. UK
10:40 - 11:00	EIVA ROTVs: Stabilized sensor platforms for studying the water column and underwater topography. (S. Steimetz) EIVA DENMARK
11:00 - 11:20	COFFEE Break
11:20 - 11:40	Shipboard ADCP Acquisition, Processing and Monitoring with UHDAS (A. Frambach) UNIV HAWAII
11:40 - 12:00	ROV and AUV Solutions for Unparalleled Underwater Filming and Exploration (B. King) BOX FISH RESEARCH. NEW ZEALAND
12:00 - 12:20	NIOZ fleet Renewal (Y Witte) NIOZ. NETHERLANDSS
12:20 - 12:40	NOC's New Tethered Underwater Vehicle MPUS. (E. Mutlu) NOC UK
12:40 - 13:30	LUNCH
13:40 - 14:00	RVIDAS- Novel Additions to OpenRVDAS on the R/V Investigator. (E. Pietraroia) CSIRO. AUSTRALIA
14:00 - 14:20	HiSeasNet - Evolution of Satellite Connectivity for the US Academic Research Fleet (T.Lockwood) UCSD. USA
14:20 - 14:40	Performance evaluation of a combined ADCP-scientific echosounder system (C.Molina) Nortek Group .NORWAY
14:40 - 15:00	Coastal Observatory Xunta de Galizia. (C. Almécija) . CETMAR. SPAIN
15:00 - 15:20	Vertical Microstructure Profilers within National Marine Facilities (NMF) (B.Platt) NOC.UK
15:20 - 15:40	Coffee BREAK
15:40 - 17:30	POSTER SESSION:

1. Science capabilities of Vessels operated by WHOI **(S.Fuller)** WHOI.USA
2. ADCP Troubleshooting Operation **(A. Heather)** WHOI.USA
3. Ruggedized Demersal Trawl Net Mounted SBE19 Plus V2 CTD System **(H.Engel)**. DFFE. SOUTH AFRICA
4. Compact Winch Handling System. **(T.Ringstadt)**. ENTEC. NORWAY
5. A tale of two ships. **(M. Worship)**. DFFE. SOUTH AFRICA
6. UTM-CSIC Data Service CDI Generator **(E.Martínez)** UTM-CSIC. SPAIN
7. Lander Deployment System **(D. Huijsman)** NIOZ. NETHERLANDS
8. 3D-T: Half a cubic hectometer mooring array of 3000 temperature sensors in the deep sea **(R.Bakker)** NIOZ. NL
9. The UNOLS Community **(A. Doyle)** UNOLS.USA
10. Development of a Low-Cost Deep-Sea Advanced High Autonomy Time-Lapse Camera. **(JM Rodríguez)** IEO-CSIC. SPAIN
11. Continuous GNSS logging for future science research with RV ISABU, KIOST in transit **(Y. Park, H. Sok Kim)**, KIOST. REPUBLIC OF KOREA
12. A Multisampler for mesopelagic nets **(A. Castellón)** UTM-CSIC. SPAIN
13. Eurofleets + Joint Research Activities: Equipment innovations for deep sea operations from vessels **(A. Castellón)** UTM-CSIC. SPAIN
14. A sensor robot for monitoring multiple units in a marine mesocosm setup **(J. Goes)** VLIZ. BELGIUM
15. Applicability of aquavoltaics in an offshore multi-use setting in the Adriatic Sea **(N.Vladimir)** FBS.CROATIA
16. Fix and Mobile Platforms for Real Time Data **(S.Andrade)** ALAKALUF. CHILE
17. Highlighting the decommissioning of R/V Oceanus, including how used sensors were distributed to the US Academic Research Fleet, and how ship cyber infrastructure is now used for training on land. **(S. Richards)**. OREGON STATE UNIV. USA
18. Research Vessel Based Hydrophone-Array Applications. **(J.Guo)** OCEANSONICS. CANADA
19. ASED - Acoustic Sediment Meter **(Y.De Hoo)** NIOZ. NETHERLANDSS

Thursday 22nd June 2023

	22nd June
10:00 - 10:20	Dredging for Rocks (J. Manger) <i>SCRIPPS. USA</i>
10:20 - 10:40	The NSF Marine Rock and Sediment Sampling Facility (P. Walczak) <i>OREGON STATE UNIV. USA</i>
10:40 - 11:00	OBS clock synchronization from ambient seismic noise. (R. Cabieces) . <i>ROA. SPAIN</i>
11:00 - 11:20	COFFEE
11:20 - 11:40	Fix and Mobile Platforms for Real Time Data (S.Andrade) <i>ALAKALUF. CHILE</i>
11:40 - 12:00	Origin ADCPs - Delivering in situ customization, optimization and access (M. Barnett) <i>SONARDYNE</i>
12:00 - 12:20	Seatex Products (J.L. Guilabert) <i>KONGSBERG DISCOVERY</i>
12:20 - 12:40	NSF's Regional Class Research Vessels: Technology Overview (D. Baley) <i>OREGON STATE UNIV. USA</i>
12:40 - 13:30	LUNCH
13:40 - 14:00	Unique challenges of operating in Polar Regions. (E. Roth) . <i>UNIV. ALASKA. USA</i>
14:00 - 14:20	Falkor (Too)- A New Global Research Vessel (S.Alesandrini) . <i>SCHMIDT OCEAN. USA</i>
14:20 - 14:40	Fish out of water: Options for moving your vehicle to and from deck (J. Koch) <i>UNIV HAWAII</i>
14:40 - 15:00	HUGIN family / USV (A. Gran) <i>KONGSBERG DISCOVERY</i>
15:00 - 15:20	UNOLS - Shared resources across an extended Fleet (A. Doyle) <i>UNOLS. USA</i>
15:20 - 15:40	CLOSING INMARTECH

WORKSHOPS & DEMOS

WORKSHOP 1: MAC ASSESSMENT TOOLS

14:20-15:20 Main Room 20th June 2023

Kevin Jerram (CCOM-UNH / JHC)

Giuseppe Masetti (CCOM-UNH/JHC & Danish Hydrographic Office)

This workshop with the Multibeam Advisory Committee will demonstrate software tools for assessing multibeam hardware health and performance. The MAC will highlight examples of common challenges experienced in recent Sea Acceptance and Quality Assurance Testing. Technicians are invited to bring questions to the workshop for discussion, provide data examples from recent field programs for follow-up, and share their expertise through the Ocean Mapping Community Wiki

<https://mac.unols.org/resources/>

WORKSHOP 2: SHIPBOARD ADCP PROCESSING WITH CODAS, TUTORIAL

11:40-12:40 Side Room 21st June 2023

Jules Hummon (Univ. Hawaii- UH Currents Group)

Andrew Frambach (Univ. Hawaii – UH Currents Group)

This tutorial will introduce the open-source shipboard ADCP processing software, "CODAS", developed at the University of Hawaii. Examples of data processing using VmDAS LTA (STA) and ENR data will be shown, along with editing, calibration, and visualization. Participants are not expected to download any software prior to this tutorial. Documentation for CODAS is here:

https://currents.soest.hawaii.edu/docs/adcp_doc/index.html

WORKSHOP 3: Marine Facilities Planning working group (MFP)

14:20-15:20 Side Room 21st June 2023.

Miguel Angel Ojeda (UTM-CSIC)

Beiko Maas (Maas Software Engineering)

This workshop will deal with the use MFP (Marine Facilities Planning) by marine technicians and how this tool could help them with the daily tasks such instrument logistics, personnel logistic and cruise organization.

WORKSHOP 4: OCEANSONICS

11:20-12:20 Side Room 22nd June 2023.

Jackie Gou (OCEANSONICS)

This workshop will be focused on the Basics of hydrophone: hardware, software and field development tips. Hydrophone applications. Case studies on deploying hydrophone (arrays) to get best acoustic data from the following development platforms /Research vessels, Buoy, ROV, Glider, AUV, seabed Mounted lander). SATURN and also a case study on Underwater Noise from vessel, to develop ISO standard on URN

Demo 1: Blue Insight.

Yoann Ladroit (KONGSBERG DISCOVERY)

Demo 2: Box Fish Research (TO BE CONFIRMATED).

Vera Bonza & Ben King (BOX FISH RESEARCH)



Gala DINNER on 22nd June 2023

The CHIPIRON

Moll d'Espanya, 5, 08039 Barcelona

In front of Word Trade Center (Maremagnum Mall)





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