

# Workshop on Sea Operations for Ocean Observatories 2019

25-26 September 2019, Toulon (France)

Centre Ifremer Méditerranée, ZI de Brégaillon, La Seyne sur Mer

## PROGRAM

### 25 SEPTEMBER 2019

08:30	<b>Registration</b>	
08:50	Welcome address	Juanjo Dañobeitia, DG of EMSO ERIC
09:00 – 12:45	<b>SESSION 1 Best practices for intervention on observatories using underwater robots</b> Chaired by Giuditta Marinaro, INGV, Italy	
	<b>1A - Methodologies for the installation and dismantling of heavy underwater infrastructures</b> During this session, participants will discuss methods, vehicles and tools for the installation of heavy underwater infrastructures comprising cables, junction boxes, branching units, seabed frames...	
09:00	Risk Management in Marine and Subsea operations	Klaus Leismuller, INFN LNS, Italy
09:20	Deployment of scientific equipment at EMSO Western Ionian Facility	Giuditta Marinaro, INGV, Italy
09:40	Installation of the MEUST-NUMerEnv infrastructure and its ORCA neutrino detector	Patrick Lamare, CPPM-IN2P3, France
	<b>1B - Methodologies for deployment, recovery and <i>in situ</i> maintenance of scientific equipment</b> During this session, the methods, vehicles and tools used for the installation, recovery and maintenance of scientific measurement systems will be discussed. Measurement systems will range from simple sensors to complex systems such as seismometers, benthic stations or robots.	
10:00	Installation and maintenance of cabled observatory infrastructure and scientific instrument packages	Adrian Round, ONC, Canada
10:20	Presentation of the Underwater Systems Unit in the French Oceanographic Fleet: capacities for intervention on underwater observatories	Jan Opperbecke, IFREMER, France
10:35	<b>Coffee break + Poster session</b>	
11:05	The EMSO-Azores deep-sea observatory – 10 years of operation	Julien Legrand, IFREMER, France
11:25	Simultaneous operation of an ROV and an ascent cable on the EMSO Azores observatory	Gilbert Damy, IFREMER, France
11:45	<b>Discussion:</b> Best Practices to be drawn from the previous talks	

12:45	<b>Lunch + Poster session</b>
14:00	<b>Transfer to IFREMER – La Seyne/mer</b>
14:45 – 16:45	<b>SESSION 2 Hands-on session on operational systems</b> Participants will split into two groups to follow two // sessions
	<b>2A - HROV Ariane demonstration</b> - Functional demonstration of Ifremer's HROV Ariane in a test basin. Intervention capabilities of the robot, equipped with specific tools for underwater intervention on a cabled observatory, will be shown (40') - Discussion about the HROV Ariane capabilities (15', CETSM room))
	<b>2B - SJB demonstration</b> - Presentation of the Scientific Junction Box (SJB) for the EMSO LIGURE OUEST Observatory, by Christian Marfia, IFREMER and Carl Gojak, CNRS INSU (15', CETSM room) - Functional demonstration of the SJB junction box dedicated to environmental sciences on the EMSO Western Liguria Observatory and its scientific equipment (40')
14:45	Group 1: Session 2A - HROV Ariane demonstration Group 2: Session 2B - SJB demonstration
15:40	<b>Coffee break</b>
15:50	Group 1: Session 2B - SJB demonstration Group 2: Session 2A - HROV Ariane demonstration
16:45	End of day one - <b>Transfer to Toulon city centre</b>

## 26 SEPTEMBER 2019

09:00 – 12:30	<b>SESSION 3 Best practices for intervention without robots on underwater observatories</b> <b>Chaired by Paris Pagonis, HCMR, Greece</b>
	<b>3A - Intervention procedures from ships</b> This sub-session is dedicated to intervention procedures from ships for the following operations: deployment and recovery of autonomous equipment (mooring lines, benthic stations, etc.)
09:00	Installation and maintenance of shallow water cabled observatories Adrian Round, ONC, Canada
09:20	Operations for the ALBATROSS line on the Ligurian western site EMSO Carl Gojak, CNRS INSU, France
09:40	Sea operations and feedback from the Portuguese ZEE real time monitoring observatory Inês Martins, IH, Portugal
	<b>3B - Intervention procedures with divers</b> This sub-session is dedicated to interventions on shallow water equipment (infrastructure and sensors), cabled or not.

10:00	Maintenance operations in the OBSEA observatory	Marc Nogueras Cervera, UPC, Spain
10:20	<b>Coffee break + Poster session</b>	
10:50	Cabled coastal observatory: the example of EMSO-Nice towards best practices	Michel Répécaud, IFREMER, France
11:10	Optimising Operations at the EMSO_SmartBay Observatory: Towards Best Practices	Conall O'Malley, MI, Ireland
11:30	<b>Discussion:</b> Best Practices to be drawn from the previous talks	
12:30	<b>Lunch + Poster session</b>	
13:45	<b>SESSION 4 Perspectives</b>	
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17:15	<p><b>4A – Technical innovation - Chaired by Jérôme Blandin, IFREMER, France</b>  During this session, participants will discuss the prospects for optimizing intervention operations on underwater observatories:</p> <ul style="list-style-type: none"> <li>- technical innovations for cost reduction</li> <li>- technical innovation for avoiding the use of disposable ballast</li> </ul>	
13:45	Shipboard and remote, real-time video archiving and annotation during ROV operations	Adrian Round, ONC, Canada
14:05	SIDENAV – A Flexible Solution for Deep Sea Positioning	Alfredo Martins, INESC TEC, Portugal
14:25	A Deep Seabed Observatory without Disposable Ballast: the MARHA project	Jean-Romain Lagadec, IFREMER, France
14:45	<b>Discussion:</b> integrating innovations into operations	
15:15	<b>Coffee break</b>	
	<b>4B – Mutualisation of heavy means for servicing observatories Chaired by Giuseppe Magnifico, EMSO ERIC, Italy</b>	
15:30	<u>Introductory talk:</u> Towards a coordinated access to vessels for observatory maintenance cruises	Hélène Leau, IFREMER, France
15:40	<u>EMB European Marine Board:</u> Working Group on Research Vessels – Position paper on Next generation European RV	JuanJo Danobeitia, EMSO ERIC
15:50	<u>EuroFLEETS+</u> project	Bernadette Ni Chonghaile, MI, Ireland
16:00	<u>ERVO European Research Vessel Operators</u>	Giuseppe Magnifico, EMSO ERIC
16:10	<b>Discussion</b>	
17:15	<b>End of workshop</b>	

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**POSTERS**

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*Title**Presented by*

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The FOCUS project: connecting a 6-km long fiber optic cable to the EMSO Catania seafloor observatory to observe seafloor deformation in-situ

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Marc-André Gutscher, Laboratoire Géosciences Océan, CNRS-UBO-UBS

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Acqua Alta oceanographic tower after (almost) 50 years of research activity

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Mauro Bastianini, CNR ISMAR

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Buoyed observatory for permanent, sustainable monitoring of geological hazards in the Sea of Marmara: The MAREGAMI Concept

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Loïc Dussud, IFREMER

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EMSO Western Ligurian node - A Unique Cabled Observatory for Environmental Sea Science and Astroparticle Physics

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Carl Gojak, CNRS INSU

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BathyBot – the deep-sea crawler to see the unseen of the NW Mediterranean Sea

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Carl Gojak, CNRS INSU

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PAP - Autonomous Telemetered Fixed Point Observatory

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Christopher L. Cardwell, UK Research and Innovation

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