

# BREAKING THE SURFACE 2017

1st - 8th October  
BIOGRAD NA MORU, CROATIA

## 9th INTERNATIONAL INTERDISCIPLINARY FIELD WORKSHOP OF MARINE ROBOTICS AND APPLICATIONS

	SUNDAY 01.10.	MONDAY 02.10.	TUESDAY 03.10.	WEDNESDAY 04.10.	THURSDAY 05.10.	FRIDAY 06.10.	SATURDAY 07.10.
09:00 - 09:45		<b>OPENING SESSION</b> Mislav Grgić, Zoran Vukić, Nikola Mišković	<b>Startup How To</b> Vladimir de Franceschi	<b>Localization and mapping in dynamic underwater environments</b> Eduardo Silva	<b>FOCE – Long Term In Situ Ocean Acidification Instrumentation</b> William Kirkwood	<b>Ex Machina – Integrating maritime robots into human endeavours</b> John Potter	
09:45 - 10:30		<b>Human-robot interaction under water</b> Nikola Mišković	<b>The Scaling of Innovation Tools</b> Thomas Curtin	<b>Technology, archaeology and student challenges: Finding a best practice for presenting maritime archaeology</b> Andreas Kallmeyer Bloch	<b>Extreme seafloor ecology: use of ROVs and AUVs to evaluate biodiversity and ecosystem function in the world's most remote ecosystems</b> Craig R. Smith	<b>Subterranean Groundwater Discharge and Marine Ecosystems</b> Renee E. Bishop Pierce	
10:30 - 10:45		COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	
10:45 - 11:30		<b>Shipwrecks discovered along the western coast of Turkey</b> A. Harun Özdaş	<b>Rich &amp; Famous with Underwater Robotics? Attempt of an objective assessment</b> Tom Runge	<b>Relevance of UMS for Below the Surface (BTS) Tasks</b> Richard J. Nagle	<b>Late Quaternary and Holocene Submerged Landscapes of the Eastern Adriatic Sea</b> Slobodan Miko	<b>Navigation and Control of Unmanned Vehicles: A Fuzzy Logic Perspective</b> Kimón P. Valavanis	
11:30 - 12:15		<b>DexROV: 2017 trials results and perspectives</b> Jeremi Gancet	<b>Paths to market – getting university innovation into the right hands</b> Vlatka Petrović	<b>Cetaceans and sea turtles of the Adriatic – the next step</b> Draško Holcer	<b>Contemporary Underwater Archaeology in Portugal. New challenges, new ideas</b> Augusto Salgado	<b>Breaking the surface of the seafloor: Studying the traces of earthquakes underwater</b> Javier Escartin	FIELD TRIP
12:15 - 13:00		<b>A Methodology for Accurate and Quick Photogrammetric Recording of Underwater Cultural Heritage</b> Kotaro Yamafune	<b>Financing of Early Stage Technology Startups</b> Gerardo Morales-Hierro	<b>The Great Maya Aquifer</b> Guillermo de Anda	<b>Towards persistent AUVs for seabed inspection</b> Marc Carreras	<b>COMPANY PRESENTATION Evologics</b>	
13:00 - 14:30		LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	
14:30 - 15:00		<b>COMPANY PRESENTATION BluEye Robotics</b>	<b>Breaking the corporate</b> Marin Bek	<b>T2 intro: Parallel Computing with CUDA made (almost) simple</b> University of Limerick	<b>COMPANY PRESENTATION Norbit</b>	<b>COMPANY PRESENTATION Blueprint subsea</b>	
15:00 - 15:30		<b>T1 intro: Omnidirectional Vision for Underwater Robots</b> University of Girona	<b>Soft Sensing and Simulation</b> Alex Alspach	<b>T3 intro: Underwater Camera Calibration with the Pinax model</b> JACOBS Bremen	<b>T4 intro: Teleoperation of a simulated ROV and arm</b> ISME	<b>T5 intro: POP ART (PORTable Pelagic Autonomous Robotic Technology) concept &amp; field demonstration</b> CNR	
15:30 - 16:00	<b>DEMO subCULTron Group 1</b>	<b>T1 hands-on Group 2</b>	<b>DEMO Blueye Group 3</b>	<b>Bridging the gap between academic research and commercially viable technology</b> Cesare Fantuzzi	<b>From research to business: some experiences at the University of Calabria</b> Fabio Bruno		
16:00 - 16:30				<b>T2 hands-on Group 1</b>	<b>T3 hands-on Group 2</b>	<b>DEMO DexROV 1 Group 3</b>	
16:30 - 16:45							
16:45 - 17:30	<b>DEMO subCULTron Group 2</b>	<b>T1 hands-on Group 3</b>	<b>DEMO Blueye Group 1</b>				
17:30 - 18:00	<b>DEMO subCULTron Group 3</b>	<b>T1 hands-on Group 1</b>	<b>DEMO Blueye Group 2</b>	<b>ROUND TABLE UWR Technologies: The Road Ahead - On Creativity, Innovation and Entrepreneurship</b> moderated by Kemal Dalić	<b>T2 hands-on Group 2</b>	<b>T3 hands-on Group 3</b>	<b>DEMO DexROV 1 Group 1</b>
18:00 - 18:30					<b>T2 hands-on Group 3</b>	<b>T3 hands-on Group 1</b>	<b>DEMO DexROV 1 Group 2</b>
18:30 - 19:30					<b>T4 hands-on Group 1</b>	<b>DEMO Norbit Group 2</b>	<b>DEMO DexROV 2 Group 3</b>
19:30 - 20:30					<b>T4 hands-on Group 2</b>	<b>DEMO Norbit Group 3</b>	<b>DEMO DexROV 2 Group 1</b>
20:30 - 21:00					<b>T4 hands-on Group 3</b>	<b>DEMO Norbit Group 1</b>	<b>DEMO DexROV 2 Group 2</b>
From 21:00		<b>NORWEGIAN PARTY</b>	<b>EXCELLABUST PARTY</b>		<b>BTS KARAOKE PARTY</b>	<b>HAWAII POOL PARTY</b>	

### SESSION COLORS

	Lectures
	Innovation tuesday
	Social events
	Company programme
	Tutorial
	Demonstration

### LECTURE CATEGORIES:

	MAROB		MARSEC		COMPANY PRESENTATION
	MARBIO		MARGEO		
	MARCH		INNOVA		

### LOCATIONS:

	LECTURES HALL @ HOTEL ADRIATIC (PURPLE) Programme: ALL lectures and presentations		TUTORIAL ROOM @ HOTEL ADRIATIC (PURPLE) Programme: tutorial, mission planings, data analyses		BELVEDER BAR Social events: BTS Karaoke, Excellabust Party
	DEMO POOL & OPEN WATERS NEARBY Programme: equipment demonstrations		LAVENDER BAR @ HOTEL ADRIATIC (PURPLE) Programme: Welcome Drink		

**Organized by** University of Zagreb – UNIZG  
Faculty of Electrical Engineering and Computing – FER  
Laboratory for Underwater Systems and Technologies – LABUST  
Centre for Underwater Systems and Technologies – CUST

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