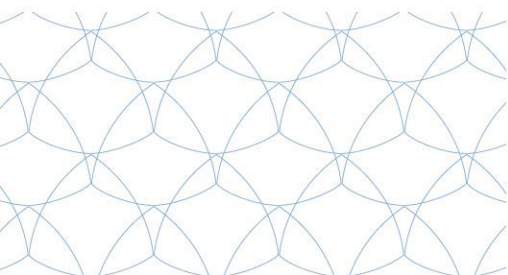


Deliverable D3.1

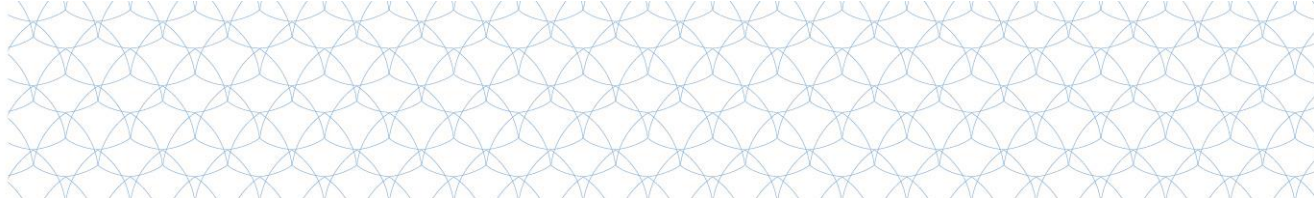
Proceedings of the EMRA workshop 1

Project Acronym:		EXCELLABUST
Grant Agreement number:		691980
Project title:		Excelling LABUST in marine robotics
Funding:		Horizon2020 Twinning
Call:		H2020-TWINN-2015
Type of action:		CSA
Start date of project:		1 st January 2016
Duration:		36 months
Project website:		http://excellabust.fer.hr/
Delivery date:		31 st June 2016
Version:		1.0
Lead participant		CNR
Dissemination level:		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691980.





DELIVERABLE DATA SHEET

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Deliverable number:	D3.1		
Deliverable title:	Proceedings of the EMRA workshop 1		
Work package:	WP3 – Broad networking events		
Type:	Delivery date	M6	Version: 1.0
Lead participant	National Research Council of Italy (CNR)		
Dissemination level:			
PU	Public		X
CO	Confidential, only for members of the consortium (including the Commission Services)		

Version log			
Revision no.	Date	Author (Partner)	Change

Deliverable summary
<p>This deliverable reports the description of the EMRA 2016 workshop and the related agenda.</p>



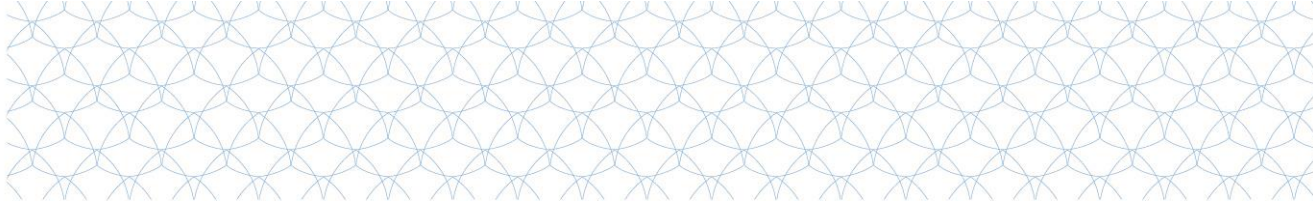


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1. INTRODUCTION

The 1st **EXCELLABUST workshop** was organized as a part of the **EMRA'16 - Workshop on EU-funded Marine Robotics and Applications**, which took place at Newcastle University, UK, from 14-15 June, 2015. This event followed on from the previous successful events held in Rome 2014 (CNR) and Lisbon 2016 (IST) and it kept a similar format to these events.

The EMRA 2016 workshop presented the latest developments from EU FP7 and H2020 projects on marine robotics and provided a platform for marine stakeholders to share and discuss current technological challenges and achievements. Together with speakers/ delegates from European industry and end users, future directions and challenges were highlighted. Through group and individual discussions, potential collaborations were identified and the need for closer industry-academic was highlighted.

The workshop brought together a total of 19 speakers from academia, industry and research institutes covering a wide range of topics in subsea robotic technology together with applications in marine science and industry, including deep sea mining, oceanography, geological surveying and oil & gas.

EMRA 2016 summary:

- **19** speakers
- **10** FP7 and H2020 projects represented
- Approximately **70** participants from across Europe and as far away as China.

Date: 14-15 June 2016

Location: Newcastle University, Newcastle, UK.

Website: <http://conferences.ncl.ac.uk/emra2016/index.html>



Workshop on EU funded
MARINE ROBOTICS AND APPLICATIONS



2. Report organization

The first part of the report describes the EMRA'16 organization, including the work program. This is followed by Appendix I (Collection of presentations -slides).

3. EMRA 2016 organization

Work program

Day 1 (14th June 2016)

8:30	Registration open	Coffee and other refreshments served in breakout area.
9:30	Welcome	Jeff Neasham, School of electrical & Electronic Engineering, Newcastle University
9:45	Opening address	Nick Wright, Pro Vice Chancellor of Research, Newcastle University
10:00	CADDY Year 2: What we learned from first validation trials	Nikola Miskovic, Laboratory for Underwater Systems and Technologies, University of Zagreb
10:30	3D Survey of Areas with Strong Relief Using Hovering Capable AUVs	Pere Ridao, Vision and Robotics Research Institute, University of Girona
11:00	Break	Coffee and other refreshments served in breakout area.
11:30	DexROV: dexterous ROV interventions operated from an onshore control center	Jeremi Gancet, Space Applications Services NV/SA
12:00	Seismic exploration with a swarm of 16 AUVs: from the system design to the first survey at sea	Alessio Turetta, Graal Tech s.r.l
12:30	Lunch	Buffet lunch served in break out area
13:30	Subcultron: a learning, self-regulating, self-sustaining underwater society/culture of robots	Ronald Thenius, Artificial Life Lab - University of Graz
14:00	Flow sensors for robotics and environmental monitoring	Maarja Kruusmaa, Centre for Biorobotics, Tallinn University of Technology
14:30	Towards bio-inpiration for underwater vehicles	Maryam Haroutunian, School of Marine Science and Technology, Newcastle University
15:00	Break	Coffee and other refreshments served in breakout area.
15:30	Underwater mining	Eduardo Silva, ISEP / INESC TEC
16:00	OceanRINGS: Current State of Development and Future Work	Edin Omerdic, Mobile & Marine Robotics Research Centre, University of Limerick
16:30	DexROV: enabling effective dexterous ROV operations in presence of communication latencies	Guiseppe Casalino, University of Genova (ISME)
17:00	Reception	Wine, soft drinks and canape served in break out area
18:00	Close	



Day 2 (15th June 2016)

9:00	Arrival	Coffee and other refreshments served in breakout area.
9:30	Marine Autonomous Systems development at NOC: an overview	Maaten Furlong, National Oceanography Centre
10:00	The Scottish Marine Robotics Facility: Marine observation spanning atmosphere, ocean and ice	Fraser Macdonald, Scottish Association for Marine Science
10:30	Water surface height determination with a GPS Wave Glider: A demonstration in Loch Ness, Scotland	Miguel Morales Maqueda, School of Marine Science and Technology, Newcastle University
11:00	Break	Coffee and other refreshments served in breakout area.
11:30	ROBUST: Robotic subsea exploration technologies	Guisepppe Casalino, University of Genova (ISME)
12:00	The WiMUST H2020 project: Widely scalable Mobile Underwater Sonar Technology	Giovanni Indiveri, University of Salento (ISME)
12:30	Lunch	Buffet lunch served in break out area
13:30	Low power and low cost underwater acoustic communication & positioning	Jeff Neasham, School of Electrical & Electronic Engineering, Newcastle University
14:00	ROBOCADEMY ITN: What's Hot and So What - Building Links to Relevant EU Projects	David Lane, Ocean Systems Laboratory, Heriot-Watt University
14:30	Pushing the state of the art through competitions and high level educational programmes	Fausto Ferreira, NATO STO CMRE
15:00	Break	Coffee and other refreshments served in breakout area.
15:30	Open discussion - future directions and opportunities in marine robotics	
16:45	Closing address	Jeff Neasham, School of electrical & Electronic Engineering, Newcastle University
17:00	Reception	Wine, soft drinks and canape served in break out area
18:00	Close	

Programme committee

List of programme committee members:

- Jeff Neasham, *Newcastle University, UK* (chair)
- Nikola Mišković, *University of Zagreb, Croatia* – CADDY project coordinator
- Massimo Caccia, *CNR, Italy*
- Antonio Pascoal, *Instituto Superior Técnico (IST), Lisbon, Portugal*

Organizing committee

List of organizing committee members, all from Newcastle University, UK:

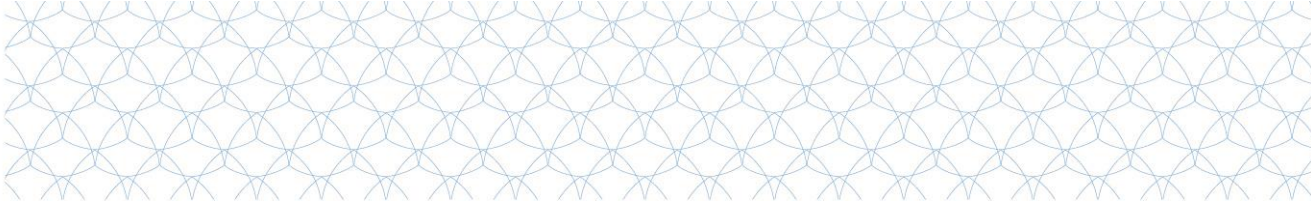
- Jeff Neasham (Chair)
- Gerry Goodfellow
- David Graham

Workshop secretariat

List of secretariat members, all from Newcastle University, UK:

- Susan Lawson
- Sarah Hunt
- Claire Dougherty





(a) EMRA'16 participants



(b) EXCELLABUST partners

