



Grant Agreement No. 611373



FP7-ICT-2013-10

### **D7.4.2 Proceedings of the 2<sup>nd</sup> CADDY workshop**

Due date of deliverable: 30 June 2015

Actual submission date: 27 July 2015

Start date of project: 01 January 2014

Duration: 36 months

Organization name of lead contractor for this deliverable: IST

Revision version 1

Dissemination level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

## Table of Contents

1. Introduction.....	2
2. Report Organization .....	3
3. EMRA 2015 organization.....	3
3.1 Work program .....	3
3.2 Program committee .....	5
3.3 Organizing committee .....	5
3.4 Workshop secretariat .....	5
Appendix I – Announcement and call for participation	
Appendix II – Collection of presentations (slides)	

## 1 INTRODUCTION

The **2nd CADDY Workshop** was organized as a part of the **EMRA'15 - Workshop on EU-funded Marine Robotics and Applications**, which took place at the Instituto Superior Técnico (IST), Lisbon, Portugal, from 18-19 June, 2015. The scope and format of EMRA'15 were greatly inspired by those of the successful EMRA'14 Workshop that was held at the Consiglio Nazionale delle Ricerche, (CNR), Rome, Italy from 9th-10th June 2014.

The 2<sup>nd</sup> EMRA workshop summarized current EU FP7 and H2020 projects on marine robotics and provided a platform for marine stakeholders to share and discuss current technological challenges and achievements. To researchers, EMRA2015 offered the opportunity to disseminate current work and highlight new application areas that warrant further R&D effort. To marine stakeholders, EMRA2015 allowed for the cross-fertilization of ideas and offered novel approaches to meet future challenges in ocean ocean exploration and exploitation.

The workshop brought together a total of 11 speakers that briefed the audience on the progress witnessed in the scope of 11 EU Projects; 14 representatives from the industry and academia gave invited talks addressing a number of issues that are at the crossroads of marine technology, science, and commercial applications, including deep sea mining, offshore wave/energy, marine habitat mapping, oceanography, security, and marine megafauna tracking.

The EMRA'15 in numbers:

- **11** FP7 and H2020 projects
- **8** invited speakers from the industry
- **6** invited speakers from the academia
- more than **100** participants from across Europe

**Date:** 18-19 June 2015

**Location:** IST, Lisbon, Portugal

**Website:** <http://dsor.isr.ist.utl.pt/emra2015/>



The EMRA'15 workshop logo

## 2. REPORT ORGANIZATION

The first part of the report describes the EMRA´15 organization, including the work program This is followed by Appendix I (Announcement and call for participation) and Appendix II (Collection of presentations -slides)

## 3. EMRA 2015 ORGANIZATION

### 3.1 WORK PROGRAM

11 Project presentations (referred to as EU projects)

14 Invited lectures from the academia and the industry – titles in italic

#### DAY 1 - JUNE 18, 2015

ROBOACADEMY (EU project)

*Thomas Vögele, DFKI, Berlin, DE*

*Mapping the seafloor in rough terrain with AUVs: mission planning versus real-time responses*

*Dana Yoerger, WHOI, USA*

NOPTILUS (EU project)

*Fernando L. Pereira, FEUP, Porto, PT*

*Challenges of seabed mining in a sustainable world: let's do it right!*

*Jorge Relvas, Fac. Sciences University of Lisbon (FCUL), PT*

EURATHLON (EU project)

*Gabriele Ferri and Fausto Ferreira, CMRE, La Spezia, IT*

*UAVs for Marine Applications*

*Francisco Almeida, TEKEVER, Lisbon, PT*

PANDORA (EU project)

*David Lane, Herriot-Watt Univ., Edinburgh, UK*

*The future of autonomous marine vehicles in Ultra High Resolution Seismic reflection surveys (UHRS)*

*Henrique Duarte, GEOSURVEYS, Aveiro, PT*

WiMUST (EU project)

*Giovanni Indiveri, Univ. Salento, Lecce, IT*

*Easily deployable autonomous hydro-acoustic assets for highly mobile and flexible arrangements (underwater sensor networks, testbeds, and integrated USV and AUV robotic components)*

*Konstantin Kebkal and Oleksiy Kebkal, EVOLOGICS, Berlin, DE*

*Marine Megafauna Telemetry Systems*

*Pedro Afonso, IMAR/DOP, Horta, Faial, Azores, PT*

*SPARC: Report from the EU Robotics Board, Future Possibilities in H2020 Robotics PPP*

*David Lane, Edinburgh Centre for Robotics and Ocean Systems Laboratory, Heriot-Watt University (EU Robotics Board Member 2013-15)*

## DAY 2 - JUNE 19, 2015

*MORPH (EU project)*

*Joerg Kalwa, ATLAS Elektronik, Bremen, DE*

*Marine Technology: Challenges and Opportunities in relation to Marine Renewable Energy*

*António Sarmiento, WavEC, Lisbon, Portugal*

*CADDY (EU project)*

*Nikola Miskovic, Univ. Zagreb, HR*

*Developments in robust acoustic positioning and communications*

*Robin Sharphouse, Blueprint, Ulverston, UK*

*Jeff Neasham, Newcastle University, UK*

*The Light Autonomous Underwater Vehicle - Past, Present & Future*

*Ricardo Martins, Oceanscan, Porto, PT*

*DexROV (EU project)*

*Diego Urbina, Space Applications Services, Zaventem, BE*

*Intervention AUVs: Experiences and Challenges*

*Pere Ridao, Univ. Girona, Girona, ES*

*Marine UAS (EU project)*

*Tor Johansen, NTNU, Trondheim, NO*

*Antonio Pascoal, IST, Lisbon, PT*

*ARROWS (EU project)*

*Benedetto Allotta, Univ. Florence, IT*

*AUV Technology: from concept to commercialization*  
*Alessio Turetta, GraalTech, Genova, IT*

*Measuring small island-induced processes: Tech- savvy approaches*  
*Rui Caldeira, CIIMAR, Porto, PT*

*SubCULTron (EU project)*  
*Thomas Schmickl, University of Graz, AT*

*An introduction to real-time data processing in autonomous survey operations*  
*Niels Nijhuis, CARIS EMEA, NL*

### **3.2 PROGRAM COMMITTEE**

List of programme committee members:

- Nikola Mišković, *University of Zagreb, Croatia* – CADDY project coordinator
- Joerg Kalwa, Atlas Elektronik, Germany – MORPH project coordinator
- Giovanni Indiveri, Univ. Salento, Lecce, Italy – WiMUST project coordinator
- Benedetto Allotta, University of Florence, Italy – ARROWS project coordinator
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### **3.3 ORGANIZING COMMITTEE**

List of organizing committee members, all from the *Instituto Superior Técnico (IST), Lisbon, Portugal*:

- António Pascoal (Chair)
- João Pedro Gomes
- Luís Sebastião
- Paulo Oliveira

### **3.4 WORKSHOP SECRETARIAT**

List of secretariat members, all from the *Instituto Superior Técnico (IST), Lisbon, Portugal*:

- Filipa Almeida
- Ana Mateus
- Pedro Abreu