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D7.4.1 Proceedings of the 1st CADDY workshop

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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)	

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1 Introduction

1st CADDY Workshop was organized as a part of the EMRA'14 - Workshop on EU-funded Marine Robotics and Applications. Founders of this new workshop are coordinators of four FP7 projects related to marine robotics: [CADDY](#), [MORPH](#), [ARROWS](#) and [PANDORA](#).

Workshop was held at Consiglio Nazionale delle Ricerche, Rome Italy from 9th-10th June 2014.

The underlying motivation of this new workshop is to increase the efficiency in orchestration and dissemination across EU marine research. We have observed a close coupling between individual FP7 projects and their intended application audience, yet many of the technologies developed are applicable beyond their motivating problem. Currently, for a marine technology stakeholder to fully digest EU marine research requires attending too many overly technical and overly specific individual workshops. We hope EMRA2014 will condense an exciting range of cutting edge research developments into a single manageable event.

EMRA'14 in numbers:

- **4** FP7 projects
- **7** speakers from industry
- **9** speakers from academia
- more than **100** participants from all over Europe



EMRA'14

Workshop on EU-funded
Marine Robotics and Applications

Figure 1 EMRA 2014 workshop logo

Date: 9-10 June 2014

Location: CNR, Rome, Italy

Website: http://www.issia.cnr.it/wp/?page_id=3490

Download the **programme** [here](#).

Download the **poster** [here](#).



2 EMRA 2014 programme and people

2.1 Programme

9th June 2014, Monday

08:30 – Registration

09:00 – Opening Talk

09.30 – CADDY Project Presentation, Nikola Mišković, *University of Zagreb, Croatia*

10.00 – T1.1: Invited Talk – Nando Boero, *National Research Council of Italy*,
Challenges for Mediterranean Biodiversity

10.30 – Coffe Break

11.00 – T1.2: Invited Talk – Massimo Garbo, *CNS International*,
Current Trends in Commercial Diving and Robotics Development

11.30 – T1.3: Invited Talk – Alessio Turetta, *GRAALTech, Italy*,
FOLOGA and UMA: two stories from Research to Market

12.00 – Open Discussion

12.30 – Lunch

14.00 – MORPH Project Presentation, Antonio Manuel dos Santos Pascoal,
Instituto Superior Tecnico, Portugal

14.30 – T2.1: Invited Talk – Vegard Evjen Hovstein, *Maritime Robotics, Norway*
Unmanned systems fo maritime operations – trends and opportunities

15.30 – Coffe Break

16.00 – T2.3: Invited Talk – Peter Weiss, *COMEX*,
From Sea to Space: Subsea robotics at COMEX

16.30 – Open Discussion



10th June 2014, Tuesday

08:30 – Registration

09.00 – ARROWS Project Presentation, Benedetto Allotta, *University of Florence, Italy*

09.30 – T3.1: Invited Talk – Irena Radic Rossi, *University of Zadar, Croatia*,
The “Breaking the Surface” Workshop – A Path of Collaboration and Mutual Understanding

10.00 – T3.2: Invited Talk – Justin Manley, *Teledyne*,
Advancing unmanned marine vehicle through networking and modularity

10.30 – Coffee Break

11.00 – T3.3: Invited Talk – Laura Gallimberti, *ENI Norge, Norway* ,
The Oil&Gas Industry Requirements for Marine Robots of the 21st century

11.30 – T3.4: Invited Talk – John Hale, *University of Luisville, USA*,
Mapping a Submerged Preclassic Maya Site in Lake Atitlàn, Guatemala

12.00 – T3.5: Invited Talk – Raffaele Grandi, *L3 Calzoni, Italy*
Research Activities in Maritime Robotics for Mobility and Manipulation: Industrial and Academic Perspectives

Claudio Melchiorri, *University of Bologna, Italy*

A Three-Fingered Cable-Driven Gripper for Underwater Applications

12.30 – Lunch

14.00 – PANDORA Project Presentation, Marc Carreras, *University of Girona, Spain*

Seyed Reza Ahmadzadeh, *Italian Institute of Technology, Italy*

14.30 – T4.1: Invited Talk – Jeronimo Dzaack, *ATLAS Elektronik*,
Innovations for Maritime Security

15.00 – Coffe Break

15.30 – T4.2: Invited Talk – Sebastian Eckstein, *Technische Universität Ilmenau*,
Strategies for Robust Mission Planning of Distributed Maritime Systems

16.00 – Open Discussion



2.2 Programme committee

List of programme committee members:

- **Nikola Mišković**, *University of Zagreb, Croatia* – CADDY project coordinator
- **Joerg Kalawa**, *Atlas Elektronik, Germany* – MORPH project coordinator
- **David Lane**, *Heriot-Watt University, United Kingdom* – PANDORA project coordinator
- **Benedetto Allotta**, *University of Florence, Italy* – ARROWS project coordinator

2.3 Organizing committee

List of organizing committee members:

- **Massimo Caccia**, *Institute of Intelligent Systems for Automation (ISSIA-CNR), Italy*
- **Marco Bibuli**, *Institute of Intelligent Systems for Automation (ISSIA-CNR), Italy*

2.4 Workshop secretariat

List of secretariat members, all are all from Institute of Intelligent Systems for Automation (ISSIA-CNR), Italy:

- **Grazia Cicirelli**
- **Micaela Palestini**
- **Lorella Becchi**
- **Pierpaolo Soria**



3 Presentations

3.1 List of presentations

Table 1 List of speakers, their institutions and presentations titles

Speaker	Institution	Presentation
Nikola Mišković	University of Zagreb, Croatia	CADDY project presentation
Ferdinando Boero	University of Salento, National Research Council of Italy	Challenges for Mediterranean Biodiversity
Massimo Garbo	CNS International	Current trends in Commercial Diving and Robotics development
Alessio Turetta	GRAALTech, Italy	FOLOGA and UMA: two stories from research market
Antonio Pascoal	Instituto Superior Technico, Portugal	MORPH Project Presentation
Vegard Evjen Hovstein	Maritime robotics, Norway	Unmanned systems for maritime operations - trends and opportunities
Peter Weiss	COMEX	From sea to Space: Subsea robotics at COMEX
Benedetto Allotta	University of Florence, Italy	ARROWS Project Presentation
Irena Radić Rossi	University of Zadar, Croatia	The "Breaking the surface" Workshop - A Path of Collaboration and Mutual Understanding
Justin Manley	Teledyne	Advancing unmanned vehicle through networking and modularity
Laura Gallimberti	ENI Norge, Norway	The Oil&GAS Industry Requirements for Marine Robots of the 21st century
John Hale	University of Luisville, USA	Mapping a Submerged Preclassic Maya Site in Lake Atitlan, Guatemala
Raffaele Grandi	L3 Calzoni, Italy	Research Activities in Maritime Robotics for Mobility and Manipulation: Industrial and Academic Perspectives
Claudio Melchiorri	University of Bologna, Italy	A Three-Fingered Cable-Driven Gripper for Underwater Applications
Marc Carreras	University of Girona, Spain	PANDORA Project Presentation
Jeronimo Dzaack	ATLAS Elektronik	Innovations for Maritime Security
Sebastian Eckstein	Technische Universität Ilmenau	Strategies for Robust Mission Planning of Distributed Maritime Systems

Presentations are collected in the related annex II.

3.2 Photos of speakers



Figure 2 Nikola Mišković, University of Zagreb



Figure 3 Massimo Caccia, CNR-ISSIA



Figure 4 Ferdinando Boero, CoNISMa, University of Salento



Figure 5 Massimo Garbo, CNS International



Figure 6 Alessio Turetta, GRAAL Tech



Figure 7 Antonio Pascoal, IST



Figure 8 Vegard Evjen Hovstein, Maritime robotics



Figure 9 Peter Weiss, COMEX



Figure 10 Benedetto Allotta, University of Florence



Figure 11 Irena Radić-Rossi, University of Zadar



Figure 12 Justin Manley, Teledyne



Figure 13 Laura Gallimberti, ENI Norge



Figure 14 John Hale, University of Luisville



Figure 15 Raffaele Grandi, L3 Calzoni



Figure 16 Marc Carreras, University of Girona



Figure 17 Jeronimo Dzaack, ATLAS Elektronik

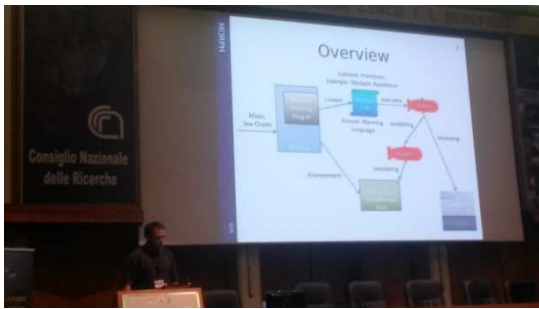


Figure 18 Sebastian Eckstein, Technische Universität Ilmenau



Figure 19 Massimo Caccia, CNR-ISSIA



Figure 20 Marco Bibuli, CNR-ISIA

4 ANNEXES

4.1 Workshop poster

**EU funded
Marine Robotics
and Applications**

Researchers and users of marine robotic technology are invited to EMRA2014. The WORKSHOP shall summarize current EU FP7 marine robotics research, and provide a platform for marine stakeholders to share their current technological challenges.

**ROME ITALY
JUNE 9-10, 2014**

National Research Council of Italy

For researchers, EMRA2014 will offer dissemination opportunities for existing work, and highlight new application areas for consideration in future work. For marine research stakeholders, EMRA2014 will offer novel approaches to solve marine challenges, and a platform for directing future research threads.

info and registration on www.issia.cnr.it

EMRA'14
Workshop on EU-funded
Marine Robotics and Applications

ORGANIZING COMMITTEE

Massimo Caccia
Institute of Intelligent Systems for Automation (ISSIA-CNR), Italy

Marco Bibuli
Institute of Intelligent Systems for Automation (ISSIA-CNR), Italy

CADDY
Cognitive Autonomous Diving Buddy

MORPH

Pandora

ARROWS
TECHNOLOGICAL ROBOT SYSTEM FOR THE WORLD'S SEAS

PROGRAMME COMMITTEE

Nikola Miskovic
University of Zagreb
Croatia
Coordinator of CADDY project

Joerg Kalwa
ATLAS ELEKTRONIK
Germany
Coordinator of MORPH project

David Lane
Heriot-Watt University
United Kingdom
Coordinator of PANDORA project

Benedetto Allotta
University of Florence
Italy
Coordinator of ARROWS project

4.2 Presentations

Presentations from the 1st CADDY Workshop are included in a separate file.

