

MOQESM'14 is organized by



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Monitoring Quantitatif de l'Environnement Sous-Marin
*International Conference on
Quantitative Monitoring of Underwater Environment*

In the framework of the 9th Sea Tech Week

Le Quartz Center, Brest, France
October 14-15, 2014

Hydrography : From sensors to products

Marine robotics

PROGRAM



Invited Speakers

Carole NAHUM

Manager domain environment and géosciences, DGA/MRIS

Pr Edson Prestes e Silva Junior

Leader of Phi Robotics Research Group at UFRGS
Federal University of Rio Grande do Sul - Porto Alegre - Brésil

Vincent RIGAUD,

Head of the underwater systems Unit, IFREMER Toulon

Organizing Committee

ENSTA Bretagne, Lab-STICC UMR CNRS6285

Luc JAULIN, Isabelle QUIDU, Benoît ZERR, Benoît CLEMENT,
Nathalie DEBESE, Annick BILLON-COAT

GDR Robotique

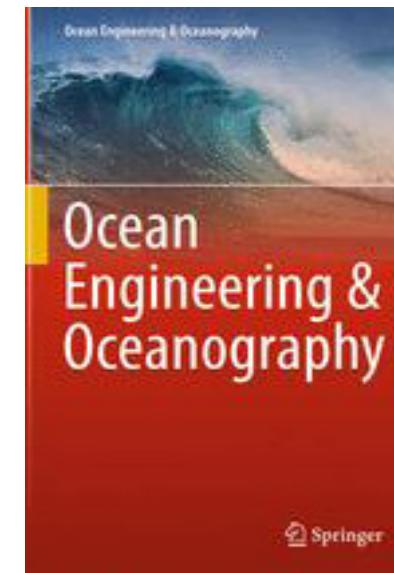
Vincent CREUZE

CIDCO

Coralie MONPERT, Nicolas SEUBE, Jean LAFLAMME

Proceedings

Proceedings of MOQESM'14 will be published by Springer in the serie «Ocean Engineering & Oceanography»





Going to the airport :

By taxi

Taxis 806 : +33 (0)2 98 806 806

Taxis Brestois : + 33 (0)2.98.801.801 or + 33 (0)2.98.80.43.43

Taxi-Brest.com : +33 (0)6 62 81 29 29

Taxi des Korrigans : +33 (0)6 99 97 80 00 or + 33(0)2 98 43 91 30

By trawway + shuttle

Airport Shuttle operates a correspondence with the tram line at the station Porte de Guipavas. This service is provided from 5:30 to 23:00, 7 days 7, all year (except May 1st).

Some ideas for visiting Brest

Museum of Tour Tanguy

Hystory of Brest through the centuries

Visit only on wednesday, thursday and the week-end,
2: 00 - 5 : 00 PM

Maritime museum castle

A great part of French naval history is to be found
at the Castle of Brest

Oceanopolis

With Oceanopolis ,discover the magic of tropical, temperate and
polar marine worlds

The Conservatoire Botanique National of Brest

MOQESM'14 - Session 1

14 October 2014

Hydrography : From sensors to products



Chairman : Hervé BISQUAY, Genavir

2 : 00 - 2 : 10 PM Opening session of MOQESM'14

Benoît ZERR, Hervé BISQUAY

02 h 10 - 02 H 45 - Plenary talk

Environment and Geosciences domain - Carole NAHUM,, DGA/MRIS

02 h 45 - 03 h 05

Real-time sounding uncertainly estimation in phase-measuring bathymetric sonars
Francisco J. Gutierrez , Kongsberg GeoAcoustics Ltd – Norfolk UK

03 h 05 - 03 h 30

New developments in precise offshore GNSS positioning
Kees de Jong, Matthew Goode, Xianglin Liu, Mark Stone, Fugro Intersite, The Netherlands

3 : 30 - 3 : 55

Automatic boresight calibration of hydrographic survey systems
Sebastien Levily, ENSTA Bretagne, Nicolas SEUBE, CIDCO Canada

3 : 55 – 4 : 20 Coffee break

4 : 20 – 4 : 45

Optimizing survey deployment and processing times using sparse-LBL
positioning - Yann Cazamajou, Sébastien Pennec, IXBLUE Brest

4 : 45 – 5: 10

New tools for seabed monitoring using multi-sensors data fusion
Claire Noël, Christophe VIALA, Simon MARCHETTI, Eric BAUER, Jean-Marc TEMMOS
SEMANTIC TS Sanary sur mer

5 : 10 – 5 : 35 The European Marine Data and Observation Network (EMODnet):

Your Gataway to European marine data and coastal data

Phil WEAVER, Jan-Bart CALEWEART, EMODnet Oostende Belgium

5 : 35 – 6 : 00 Surveying in Hostile and Non Accessible areas with the Hydroball

system - Mathieu Rondeau, Nicolas SEUBE, CIDCO Canada

06h 45 - Departure by bus for the welcome drink at Oceanopolis

MOQESM'14 - SESSION 2

15 October 2014

Marine Robotics



Chairman : Vincent CREUZE, GDR Robotique

8 : 45 – 8 : 55 AM Welcome

Vincent Creuze, GDR Robotique et Luc JAULIN, ENSTA Bretagne

8 : 55 – 09 : 30 **Pleenary talk 1**

When Interval Analysis meets Probability - a new approach for global localization in underwater robotics.

Edson PRESTES, Universidade Federal do Rio Grande do Sul – Porto Alegre – Brésil

9 : 30 – 9 : 55

Guaranteed localization of an underwater robot using bathymetry data and interval analysis: a preliminary study

Jérémie NICOLA¹, Sébastien PENNEC¹, Luc JAULIN², IXblue Brest¹, ENSTA Bretagne²

09 : 55 – 10 : 25 **Coffee Break**

10 : 25 – 10 : 50 **Pleenary talk 2**

A new cost effective and innovative 2500m Hydrid ROV-AUV for sciences and industry
Vincent Rigaud, Ewen Raugel, IFREMER La Seyne sur Mer

10 : 50 – 11 : 15

Low-Power Low-Cost Acoustic Underwater Modem

Christian RENNER, Alexander GABRECHT, Benjamin MEYER, Christoph OSTERLOH,
Erik MAEHLE, Institute of Computer Engineering, Universität zu Lübeck, Germany

11 : 15 – 11 : 40

IMOCA: a Model-Based Code Generator for the Development of Multi-Platform Ma-
rine Embedded Systems

Goulven GUILLOU, Jean-Philippe BABAU, UBO Lab-STICC

11 : 40 – 12 : 05 Visual Serving for motion control of Coralbot Autonomous
Underwater Vehicle

Eduardo TUSA JUMBO, Neil Robertson & David Lane, Heriot-Watt University,
Scotland, UK

12 : 05 – 12 : 30 Modeling and Control of an Complex shaped Underwater Vehicle
Rui YANG^{1,2}, Benoît CLEMENT², Ali MANSOUR², Ocean University of China¹, ENSTA
Bretagne²

MOQESM'14 - SESSION 2

15 October 2014

Marine Robotics



2 : 00 – 2 : 25 PM

Acoustic obstacle detection for safe AUV surfacing
Imen KAROUI, Isabelle QUIDU, ENSTA Bretagne

2 : 25 – 2 : 50 SAMDIS: a new SAS imaging system for AUV
Myriam CHABAHI, Nicolas BURLET, Thales Underwater Systems Brest

2 : 50 – 3 : 15

Unmanned platform in support of Maritime Search and Rescue Operations
Sébastien TAUVRY, ECA Robotics

3 : 15 – 3 : 40

Construction of a mosaic from an underwater video using proprioceptive sensors ;
an interval analysis approach.

Matheus Laranjeira¹, Luc jaulin², Sébastien Taurvry³, Clément Aubry⁴. Universidade
Federal da Bahia¹, ENSTA Bretagne², ECA Robotics³, Ecole Navale⁴

3 : 45 – 4 : 10 **Coffee Break**

4 : 10 **Round table**

Big sensors : Robotics for collecting measurements
Benoît ZERR, Luc JAULIN , ENSTA Bretagne

7 : 00 Conference Dinner at the Quartz Congress center

8 : 30 Concert of Ibrahim Maalouf at the Quartz Congress center