

Martech23

10th INTERNATIONAL WORKSHOP ON MARINE TECHNOLOGY

Universitat Jaume I, Castellón de la Plana, Spain

Escuela Superior de Tecnología y Ciencias Experimentales (Building TD)

June 19th, Monday

8:00 - 9:00	Reception and Registration (Hall Building TD ESTCE)
9:00 - 9:15	Opening of the Conference (Building TD 3 rd Floor, TD0301CC Salón de Actos)
Plenary 9:15 – 10:15	Advances in Underwater Robotics Operations Prof. Dr. Pere Ridaó, Universitat de Girona, Spain
10:15 – 10:45	Coffee break (Hall Building TD ESTCE)
Session 1.1 Special Session on Marine Technology Applications 10:45 - 12:00 (TD0301CC Salón de Actos)	ID16 New advances in AI-based electronic monitoring (EM) technologies for automatic, real-time catch data collection: the iObserver2.0 Luis T. Antelo, Instituto de Investigaciones Marinas (IIM-CSIC), Spain
	ID21 Arduino controlled valvometry equipment for mussel raft monitoring Miguel Gilcoto, Instituto de Investigaciones Marinas (IIM-CSIC), Spain
	ID22 Model type II regression for lagrangian validation of HF Radar velocities in the NW Iberian Peninsula. Adrián Martínez Fernández, Instituto de Investigaciones Marinas (IIM-CSIC), Spain
	ID23 A window to the sea: RAIA Observatory tool for assessing environmental risks in the NW Iberian coastal upwelling system Paula C. Pardo, Instituto de Investigaciones Marinas (IIM-CSIC), Spain
	ID44 The BlueNetCat – The Catalan reference network for the knowledge transfer in Blue Economy Pablo Bou, BlueNetCat - UPC, Spain
Session 1.2 Special Session on Marine Technology Applications 10:45 - 12:00 (Sala de Grados TD0112FR)	ID07 Modular acoustic platform to develop underwater bidirectional tags Gerard Batet, SARTI - Universitat Politècnica de Catalunya, Spain
	ID14 Development of an autonomous submersible profiler with the ability to stop at specific depths for measurement of marine parameters Isabel Pilar Morales Aragón, Technical University of Cartagena, Spain
	ID20 KOSTASystem, a multipurpose coastal videometry system Asier Nieto, AZTI, Spain
	ID24 Pathways of economically relevant demersal species in the Ibiza Channel from a Lagrangian backtracking approach Juan Manuel Sayol, University of Alicante, Spain
	ID27 Operational oceanography applied to the management of offshore aquaculture on the Basque coast (SE Bay of Biscay) Luis Ferrer, AZTI, Spain

Session 2.1
Special Session
on Marine
Technology
Applications

12:00 – 13:30
(TD0301CC
Salón de Actos)

ID29 Enhancing Marine Ecosystem Monitoring through the Integration of Pop-up Buoys with Wireless Communication and Satellite Connectivity

Marc Nogueras, SARTI - Universitat Politècnica de Catalunya, Spain

ID31 CIM-UVIGO mesocosms facilities: a realistic experimental approach for grand challenges in oceanography

Jose González, CIM - Universidade de Vigo, Spain

ID39 LOW COST GREENHOUSE GAS SENSOR: GIDA-GEI

Iván Ibáñez Felip, Universitat Jaume I, Spain

ID41 A Data Management e-Infrastructure for the OBSEA Cabled Observatory

Enoc Martínez, SARTI - Universitat Politècnica de Catalunya, Spain

ID42 Low cost USV development to study spring ponds

José Enrique Tent-Manclús, Universidad de Alicante, Spain

Session 2.2
Special Session
on Marine
Technology
Applications

12:00 – 13:30
(Sala de Grados
TD0112FR)

ID02 Validating combined navigational sensor packages for small vehicle platforms

Cristobal Molina, Nortek AS, Norway

ID08 BenthosSearcher: A Machine Learning Based Tool to Ultra-Fast, Automatic Characterization of Vulnerable Marine Ecosystems

Luis T. Antelo, Instituto de Investigaciones Marinas (IIM-CSIC), Spain

ID13 The video-based EGIM development

Marco Francescangeli, SARTI - Universitat Politècnica de Catalunya, Spain

ID38 Towards sampling of the circalittoral benthos for monitoring impacts on marine communities limitations and next steps

Victor Tena-Gascó, IMEDMAR-UCV, Spain

13:30 - 15:00

Lunch break (Cafetería Facultad Jurídicas y Económicas, Floor 0)

Plenary

15:00 – 16:00
(TD0301CC
Salón de Actos)

Marine Technology in the field of Energy

Matilde Santos, Universidad Complutense de Madrid, Spain
María Tomás-Rodríguez, City University of London, United Kingdom

Session 3.1
Special Session
Renewable
Marine Energy

16:00– 17:30
(TD0301CC
Salón de Actos)

ID03 Optimization of a Small-Scale, N-Pendulum, Wave Energy Converter for Drifter Applications based on OrcaFlex Simulation

Joaquín Del Río, SARTI - Universitat Politècnica de Catalunya, Spain

ID06 Fuel consumption reduction in tuna purse seiners using oceanographic data and genetic algorithms

Fernando Gonda, Marine Instruments, Spain

ID09 Consumption Evaluation of a Relaxation Oscillator as a Control Sampling Circuit for Fast-Tracking FOCV-MPPT Circuits in Wave Energy Converters

Joaquín Del Río, SARTI - Universitat Politècnica de Catalunya, Spain

ID10 Tuning structural control devices with Genetic Algorithms for a floating wind turbine

Matilde Santos, Universidad Complutense de Madrid, Spain

ID11 Frequencies Identification of NREL 5MW ITI Barge Wind Turbine: First Approach

Jesús Enrique Sierra-García, Universidad de Burgos, Spain

ID30 THE CIM UVIGO PLUG-IN HYBRID PROPULSION VESSEL FOR COASTAL OCEANOGRAPHIC RESEARCH: A TOOL FOR THE ECOLOGICAL TRANSITION

Daniel Rey, Centro de Investigación Mariña, Universidade de Vigo, Spain

Session 3.2
Special Session
Renewable
Marine Energy

16:00– 17:30
(Sala de Grados
TD0112FR)

ID28 Uncrewed Surface Vehicles Network in support to EOOS: The EuroSea project

Carlos Barrera, PLOCAN Spain

ID32 An approach to the application of additive manufacturing for water environments: A case study to measure dissolved carbon dioxide

Iván Ibáñez Felip, Universitat Jaume I, Spain

ID33 Long Baseline (LBL) Positioning System for the Crawler Tele-operated Underwater Vehicle in OBSEA Observatory

Ainhoa Idiondo Molina, SARTI - Universitat Politecnica de Catalunya, Spain

ID34 Automatic System for 3D Photogrammetry of Small Artificial Biotopes Using the Crawler Remote Operating Vehicle at OBSEA Observatory

Maria Meishan Oliver De Urmeneta, SARTI - Universitat Politecnica de Catalunya, Spain

ID35 Experiments on zebrafish using mini robot fish prototypes to identify stressors

Andrea Pino Jarque, Universidad Jaume I, Spain

ID43 On the development and application of intrusive sensors for two-phase flows characterization in complex environments

Guillem Monrós Andreu, Universidad Jaume I, Spain

Cultural Visit
19:00 – 20:00

Guided Visit to Castellón City Center

Gala Dinner
20:00

Real Casino Antiguo de Castellón
(Plaza Puerta del Sol, 1, 12001 Castellón de la Plana, Castellón)

June 20th, Tuesday

8:15 - 9:00 Reception and Registration

9:00 - 9:15 Welcome Reception of the students and professors of the Erasmus Mundus Master MIR (TD0301CC Salón de Actos)

Plenary
9:15 – 10:15 **Marine Robotics to serve society**
Giovanni Indiveri, Genoa University, Italy

10:15 – 10:45 Coffee break (Hall Building TD ESTCE)

Session 4.1
Special Session
on Robotics,
Artificial
Intelligence,
Sensors and
Communications
10:45 - 11:45
(TD0301CC
Salón de Actos)

ID37 Further Teleoperated Experiments with an Underwater Mobile Manipulator via Acoustic Modem: Modem Characterization
Joaquín González, Universidad Jaume I, Spain

ID15 Modelling and Identification of an Autonomous Surface Vehicle
Thalia A. Morel, Universidad Loyola Andalucía, Spain

ID18 Underwater Autonomous Event-Driven Profiler and Data Retrieval System
João Pereira, LSTS - Universidade do Porto, Portugal

ID45 Marine Ecosystems Observation by a cooperative AUV in the PLOME project
Marc Carreras, Universitat de Girona, Spain

ID46 Shared Autonomy for Mapping and Exploration of underwater environments using an HROV
Sebastian Realpe, Universitat de Girona, Spain

Session 4.2
Special Session
on Robotics,
Artificial
Intelligence,
Sensors and
Communications
10:45 - 11:45
(Sala de Grados
TD0112FR)

ID40 Towards Automatic Hole Detection of a Net for Fish Farms by means of Robotic Intelligence
Salvador López-Barajas, Tecnológico de Monterrey, Escuela de Ingeniería y Ciencias, Mexico

ID04 Towards Hash Similarity and Geometric-based Image Filtering to Lighten Underwater Photo-Mosaicing
Pol Baños Castelló, University of the Balearic Islands, Spain

ID05 Mesopelagic Crustacean Habitat Identification and Analysis Using Deep Learning
Francisco Jesús Bonin Font, University of the Balearic Islands, Spain

ID25 Calibrating the Movement of an Underwater Crawler Using Pulse Width Modulation (PWM)
Ahmad Falahzadeh, SARTI - Universitat Politècnica de Catalunya, Spain

ID26 Multisensor Acoustic Tracking Benthic Landers to Evaluate Connectivity of Fishes in Marine Protected Areas
Daniel Mihai Toma, SARTI - Universitat Politècnica de Catalunya, Spain

<p>Session 5</p> <p>Special Session on Robotics, Artificial Intelligence, Sensors and Communications</p> <p>11:45 – 12:45 (TD0301CC Salón de Actos)</p>	<p>ID17 Bridging heterogeneous networks in challenging and disruptive maritime environments Manuel Ribeiro, LSTS - Universidade do Porto, Portugal</p> <p>ID19 A novel and multi-purpose ASV for the Basque Coast: design, experimental testing, and main challenges Irene Ruiz, AZTI, Spain</p> <p>ID36 Processing acoustic images for the exploitation of fish farms Fernando Gómez-Bravo , Universidad de Huelva, Spain</p> <p>Seaber's YUCO-SCAN first trials at Graó de Castelló Oswaldo López(INNOVA oceanografía litoral) and Alejandro Palmeiro (Nautilus Oceánica), Spain</p> <p>Seaber's YUCO-SCAN first trials at Graó de Castelló Alejandro Palmeiro (Nautilus Oceánica) and Oswaldo López(INNOVA oceanografía litoral), Spain</p>
<p>12:45 - 13:15</p>	<p>Closing Ceremony and Best Papers' Awards</p>
<p>13:30 – 15:00</p>	<p>Lunch</p>
<p>15:00 - 17:00</p>	<p>Visiting CIRTESU (Research Center on Robotics and Underwater Technology) Pere Ridaó, Universitat de Girona Alejandro Solis, Universidad Jaume I de Castellón</p>
<p>Tutorial</p> <p>15:00 – 16:00 (TD0301CC Salón de Actos)</p>	<p>Programming Artificial Intelligence Algorithms in Underwater Robots (Recommended for MIR students participating in Competition) Salvador López, Instituto Tecnológico de Monterrey Raúl Marín, Universidad Jaume I de Castellón</p>