

# **8th IFAC Conference on Control Applications in Marine Systems 2010**

**Rostock, Germany  
15 – 17 September 2010**

ISBN: 978-1-61782-555-2

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2010) by Elsevier Limited  
All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact the publisher, Elsevier Limited  
at the address below.

Elsevier Limited  
The Boulevard, Langford Lane  
Kidlington OX5 1GB, United Kingdom

Phone: +44 (0)1865 844640  
Fax: +44 (0)1865 843912

Email: [eurobkinfo@elsevier.com](mailto:eurobkinfo@elsevier.com)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## Content List

<b>We1.1</b>	Kurhaus Hall
<b>Roll Damping, PT1</b> (Plenary Session)	
Chair: Giron-Sierra, Jose M	Univ. Complutense de Madrid
08:50-09:50	We1.1.1
<i>Ship Roll Motion Control</i> N/A	
Perez, Tristan	The Univ. of Newcastle
Blanke, Mogens	Tech. Univ. of Denmark
<b>We2.1</b>	Kurhaus Hall
<b>Autonomous Vehicles I</b> (Regular Session)	
Chair: Casado, Manuel Haro	Univ. of Cadiz
Co-Chair: Vukic, Zoran	Univ. of Zagreb
10:20-10:40	We2.1.1
<i>Certification of Unmanned Underwater Vehicles and Working Machines - Safety and Reliability under Deep-Sea and Offshore Conditions</i> , pp. 13-16.	
Hinz, Stephan	Germanischer Lloyd AG
Hagenah, Karsten D.	Germanischer Lloyd AG
Pauli, Harald	Germanischer Lloyd AG
10:40-11:00	We2.1.2
<i>Underwater Docking Approach of an Under-Actuated AUV in the Presence of Constant Ocean Current</i> , pp. 17-22.	
Park, Jin-Yeong	Korea Ocean Res. Development Inst.
Jun, Bong-Huan	Korea Ocean Res. Development Inst.
Lee, Pan-Mook	Maritime & Ocean Engineering Res. Inst. (MOERI),KORDI
Oh, Jun Ho	KAIST
Lim, Yong-Kon	Korea Ocean Res. Development Inst.
11:00-11:20	We2.1.3
<i>Autonomous Underwater Vehicle Pursuit of Biological Specimens in the Open Ocean</i> , pp 23-27	
Blanco, Max	Univ. of Southampton
Wilson, Philip	Univ. of Southampton
11:20-11:40	We2.1.4
<i>Submapping SLAM Based on Acoustic Data from a 6-DOF AUV</i> , pp. 28-33.	
Aulinas, Josep	Univ. of Girona, Insitute of Informatics and Applications,
Lee, Chee Sing	Univ. de Girona
Salvi, Joaquim	Univ. of Girona
Petillot, Yvan	Heriot-Watt Univ.
11:40-12:00	We2.1.5
<i>Geometric Primitives-Based AUV Path Planning in Cluttered Waterspaces</i> , pp. 34-39.	
Barisic, Matko	Univ. of Zagreb, Faculty of Electrical Engineering and Comp
Vukic, Zoran	Univ. of Zagreb
Miskovic, Nikola	Univ. of Zagreb
Vasiljevic, Antonio	Univ. of Zagreb, Faculty of Electrical Engineering and Comp
<b>We2.2</b>	Sea Terrace
<b>Roll Damping + Propulsion</b> (Regular Session)	
Chair: Fossen, Thor I.	NTNU
Co-Chair: Perez, Tristan	The Univ. of Newcastle
10:20-10:40	We2.2.1
<i>Extremum Seeking Speed and Heading Control Applied to Parametric Roll Resonance</i> , pp. 40-45.	
Breu, Dominik	NTNU
Fossen, Thor I.	NTNU
10:40-11:00	We2.2.2
<i>Roll Damping and Heading Control of a Marine Vessel by Fins-Rudder VSC</i> , pp. 46-51.	
Carletti, Cristina	Univ. Pol. delle Marche
Gasparri, Andrea	Univ. of
Ippoliti, Gianluca	Univ. Pol. delle Marche
Longhi, Sauro	Univ. Pol. delle Marche
Orlando, Giuseppe	Univ. Pol. delle Marche
Raspa, Paolo	Univ. Pol. delle Marche
11:00-11:20	We2.2.3
<i>Simulation and Control Design of Hybrid Propulsions in Boats</i> , pp. 52-57.	
Wilflinger, Johann	Johannes Kepler Univ.
Ortner, Peter	Johannes Kepler Univ.
Del Re, Luigi	Johannes Kepler Univ.
Aschaber, Michael	Steyr Motors
11:20-11:40	We2.2.4
<i>Propulsion and Control System for Shallow Water Ships Based on Surface Cutting Double Propellers</i> , pp. 58-63.	
Markert, Matthias	Hochschule Wismar, Univ. of Applied Sciences, Tech. Bu
Lück, Roland	Marine- und Automatisierungstechnik, Rostock, Germany
Büchler, Dirk	Voith Turbo Advanced Propeller Tech. Rostock, Germany

<b>We3.1</b>		Kurhaus Hall
<b>Navigation + Simulation (Regular Session)</b>		
Chair: Ohtsu, Kohei		Tokyo Univ. of Marine Science and Tech. Japan
Co-Chair: Giron-Sierra, Jose M		Univ. Complutense de Madrid
13:00-13:20		We3.1.1
<i>Statistical Monitoring and Clustering of Ship's Time Series</i> , pp. 64-69.		
Ohtsu, Kohei		Tokyo Univ. of Marine Science and Tech. Japan
Kitagawa, Genshiro		The Inst. of Statistical Mathematics
Peng, Hui		Central South Univ.
13:20-13:40		We3.1.2
<i>Path Planning for Lock Entering Maneuvers Using Nonlinear Programming</i> , pp. 70-73.		
Lachmeyer, Axel		Univ. Stuttgart
Herzer, Benjamin		Univ. Stuttgart
Gilles, Ernst Dieter	Max Planck Inst.	Max Planck Inst. Dynamics of Complex T
13:40-14:00		We3.1.3
<i>Ship to Ship Operations Monitoring System Using High Accuracy Dgps</i> , pp. 74-78.		
ODA, HIROYUKI		Akishima Lab. (Mitsui Zosen) Inc.
OKUYAMA, ETSURO		Akishima Lab. (Mitsui Zosen) Inc.
SHIMIZU, ETSURO		Tokyo Univ. of Marine Science and Tech.
14:00-14:20		We3.1.4
<i>Modelling and Simulating Ballast Tank Blowing and Venting Operations in Manned Submarines</i> , pp. 79-84.		
Font, Roberto		Univ. Pol. de Cartagena
García Peláez, Javier	Departamento de Ingenieria del Astillero de Cartagena,Navantia S	
OVALLE, DIANA		Univ. Pol. DE CARTAGENA
14:20-14:40		We3.1.5
<i>Damping Structure Selection in Nonlinear Ship Manoeuvring Models</i> , pp. 85-90.		
Perez, Tristan		The Univ. of Newcastle
Revestido Herrero, Elias		Univ. of Cantabria
14:40-15:00		We3.1.6
<i>Application of Fast Time Simulation Technologies for Enhanced Ship Manoeuvring Operation</i> , pp. 91-96.		
Benedict, Knud	Hochschule Wismar, Univ. of Applied Sciences-Tech. Bu	
Gluch, Michael	Hochschule Wismar, Univ. of Applied Sciences - Tech.	
Kirchhoff, Matthias	Hochschule Wismar, Univ. of Applied Sciences - Tech.	
Fischer, Sandro	Hochschule Wismar, Univ. of Applied Sciences - Tech.	
Klaes, Sebastian	Hochschule Wismar, Univ. of Applied Sciences - Tech.	
Baldauf, Michael	World Maritime Univ. WMU, Malmoe / Sweden	
<b>We3.2</b>		Sea Terrace
<b>Autonomous Vehicles II (Regular Session)</b>		
Chair: Donha, Decio Crisol		Univ. de Sao Paulo
Co-Chair: de Barros, Ettore		Univ. of Sao Paulo
13:00-13:20		We3.2.1
<i>Optimal Sensor Placement for Underwater Target Positioning with Noisy Range Measurements</i> , pp. 97-102.		
Moreno Salinas, David		UNED
Pascoal, Antonio M.		ISR-Inst. Superior Tecnico
Alcocer Peñas, Alex	Inst. for Systems and Robotics (ISR), Inst. Tecn	
Aranda, Joaquin	Univ. Nacional de Educación a Distancia	
13:20-13:40		We3.2.2
<i>Developing an Autonomous Surface Ship for Sea Demining: First Steps</i> , pp. 103-108.		
Giron-Sierra, Jose M		Univ. Complutense de Madrid
Pereda, Fernando	Dep. ACYA, Fac. Fisicas, Univ. Complutense de Madrid	
Garcia de Marina, Hector	Dep. ACYA, Fac. Fisicas, Univ. Complutense de Madrid	
Cifuentes, Santiago	Dep. ACYA, Fac. Fisicas, Univ. Complutense de Madrid	
13:40-14:00		We3.2.3
<i>Robust Controllability of Underwater Vehicles and Their Design Optimization</i> , pp. 109-113.		
Kiriazov, Petko		Bulgarian Acad. of Sciences
Kreuzer, Edwin		Hamburg Univ. of Tech.
14:00-14:20		We3.2.4
<i>Development of the Pirajuba AUV</i> , pp. 114-119.		
de Barros, Ettore		Univ. of Sao Paulo
Freire, Luciano Ondir		Pol. School of Univ. of São Paulo
Dantas, João Lucas Dozzi		Pol. School of Univ. of São Paulo
14:20-14:40		We3.2.5
<i>Longitudinal Control of Pirajuba Autonomous Underwater Vehicle, Using Techniques of Robust Control LQG/LTR</i> , pp. 120-125.		
Dantas, João Lucas Dozzi		Pol. School of Univ. of São Paulo
de Barros, Ettore		Univ. of Sao Paulo
Da Cruz, Jose Jaime		Univ. of Sao Paulo

<b>We4.1</b>	Simulation Center
<b>Simulation Technologies in Ship Manoeuvring, PT2</b> (Plenary Session)	
Chair: Kurowski, Martin	Univ. of Rostock
16:00-18:00	We4.1.1
<i>Maritime Simulation Technology for Training and Research at the Maritime Simulation Centre Warnemünde MSCW</i> , N/A	
Benedict, Knud	Hochschule Wismar, Univ. of Applied Sciences-Tech. Bu
Bornhorst, Claus	Rheinmetall Defence Electronics GmbH
<b>Th1.1</b>	Kurhaus Hall
<b>Dynamic Positioning, PT3</b> (Plenary Session)	
Chair: Sutton, Robert	The Univ. of Plymouth
08:30-09:30	Th1.1.1
<i>A Survey of Technology Advances and Future Perspectives of Dynamic Positioning Control Systems</i> , N/A	
Soerensen, Asgeir	Norwegian Univ. of Science and Tech.
<b>Th2.1</b>	Kurhaus Hall
<b>Dynamic Positioning I</b> (Regular Session)	
Chair: Soerensen, Asgeir	Norwegian Univ. of Science and Tech.
Co-Chair: Breivik, Morten	Norwegian Univ. of Science and Tech.
10:00-10:20	Th2.1.1
<i>Weather Optimal Positioning Control for Marine Surface Vessels</i> , pp. 149-154.	
Kjerstad, R ivind Klre	Norwegian Univ. of Science and Tech.
Breivik, Morten	Norwegian Univ. of Science and Tech.
10:20-10:40	Th2.1.2
<i>A Multiple Model Adaptive Wave Filter for Dynamic Ship Positioning</i> , pp. 155-160.	
Hassani, Vahid	Inst. Superior Tecnico (IST)
Pascoal, Antonio M.	ISR-Inst. Superior Tecnico
Aguiar, A. Pedro	Inst. Superior Tecnico
Athans, Michael	Inst. Superior Tecnico
10:40-11:00	Th2.1.3
<i>Laboratory Platforms for Dynamic Positioning - Modeling and Identification</i> , pp. 161-166.	
Miskovic, Nikola	Univ. of Zagreb
Nad, Dula	Univ. of Zagreb, Faculty of Electrical Engineering and Com
Vukic, Zoran	Univ. of Zagreb
Marszalek, Berislav	Univ. of Zagreb, Faculty of Electrical Engineering and Com
11:00-11:20	Th2.1.4
<i>Higher Order Sliding Mode Control Applied to Dynamic Positioning Systems</i> , pp. 167-172.	
Tannuri, Eduardo Aoun	Univ. of Sao Paulo USP
Agostinho, Adriana Cavalcante	Univ. of São Paulo
11:20-11:40	Th2.1.5
<i>On the Application of the Empirical Mode Decomposition to Dynamic Positioning Systems</i> , pp. 173-178.	
Kubota, Leonardo	Univ. of São Paulo
Morishita, Helio Mitio	Univ. of São Paulo
Greuell, Solenn	Univ. of São Paulo
Moratelli, Lázaro, Jr.	Univ. of São Paulo
11:40-12:00	Th2.1.6
<i>Thrust Ability Diagrams of DP Vessels: Computational Aspects</i> , pp. 179-183.	
Proskurnikov, Anton	St.-Petersburg State Univ.
Ambrosovskaya, Elena	Navis Engineering
<b>Th2.2</b>	Sea Terrace
<b>Nonlinear Control in Marine Systems I</b> (Regular Session)	
Chair: Aschemann, Harald	Univ. of Rostock
Co-Chair: Drewelow, Wolfgang	Univ. of Rostock
10:00-10:20	Th2.2.1
<i>An Approach towards the Control of Underwater Vehicles</i> , pp. 184-189.	
Casado, Manuel Haro	Univ. of Cadiz
Velasco, Francisco J.	Univ. of Cantabria
Ferreiro Garcia, Ramon	Univ. of A Coruna
10:20-10:40	Th2.2.2
<i>Marine Engine Control with Multivariable Adaptive Extremum Control Scheme</i> , pp. 190-195.	
Mizuno, Naoki	Nagoya Inst. of Tech.
Miyazaki, Yasuko	Nagoya Inst. of Tech.
Kudo, Yasuhiro	Nagoya Inst. of Tech.
10:40-11:00	Th2.2.3
<i>Incremental Gain Scheduling and Sensitivity-Based Control for Underactuated Ships</i> , pp. 196-201.	
Rauh, Andreas	Univ. of Rostock
Grigoryev, Vladislav	Univ. of Rostock, Chair of Ocean Engineering
Aschemann, Harald	Univ. of Rostock
Paschen, Mathias	Univ. of Rostock, Chair of Ocean Engineering
	Th2.2.4

11:00-11:20	<i>Nonlinear Control and Disturbance Compensation for Underactuated Ships Using Extended Linearisation Techniques</i> , pp. 202-207.	
	Aschemann, Harald	Univ. of Rostock
	Rauh, Andreas	Univ. of Rostock
11:20-11:40	<i>Observer-Based Fault Tolerant Sliding Mode Control for Remotely Operated Vehicles</i> , pp. 208-213.	Th2.2.5
	Corradini, Maria Letizia	Univ. di Camerino
	Longhi, Sauro	Univ. Pol. delle Marche
	Monteriù, Andrea	Univ. Pol. delle Marche
	Orlando, Giuseppe	Univ. Pol. delle Marche
11:40-12:00	<i>Underwater Robot Intelligent Control Based on Multilayer Neural Network</i> , pp. 214-218.	Th2.2.6
	Dyda, Alexander	Maritime State Univ.
	Os'kin, Dmitry A.	Maritime State Univ. Vladivostok, Russia
<b>Th3.1</b>		Kurhaus Hall
<b>Rostock Research Port, PT4</b> (Plenary Session)		
	Chair: Bornhorst, Claus	Rheinmetall Defence Electronics GmbH
13:30-14:00	<i>SEA GATE – Galileo Signals Not from the Orbit*</i> .	Th3.1.1
	Dietz, Holm	RST GmbH - Rostock System Tech. - EADS, Rostock, Germany
<b>Th4.1</b>		Kurhaus Hall
<b>Simulation/ Modelling/ Hydrodynamic</b> (Regular Session)		
	Chair: Perez, Tristan	The Univ. of Newcastle
	Co-Chair: Freiherr von Lukas, Uwe	Fraunhofer IGD
14:20-14:40	<i>MARSPEED - Modelling and Real Time Simulating the Motion of a Wing-In-Ground-Effect Vehicle</i> , pp. 219-224.	Th4.1.1
	Kolewe, Björn	Univ. of Rostock
	Drewelow, Wolfgang	Univ. of Rostock
	Lampe, Bernhard P.	Univ. of Rostock
	Dewitz, Detlef	Univ. of Rostock
14:40-15:00	<i>On Applicability of Mathematical Models Based on Fractional Calculus to Ship Dynamics</i> , pp. 225-230.	Th4.1.2
	Sutulo, Serge	Inst. Superior Técnico, Tech. Univ. of Lisbon, Port
	Guedes Soares, Carlos	Centre for Marine Tech. and Engineering, Inst.
15:00-15:20	<i>Virtual and Augmented Reality for the Maritime Sector – Applications and Requirements</i> , pp. 231-235.	Th4.1.3
	Freiherr von Lukas, Uwe	Fraunhofer IGD
15:20-15:40	<i>Port-Hamiltonian Theory of Motion Control for Marine Craft</i> , pp. 236-241.	Th4.1.4
	Donaire, Alejandro	CDSC - Centre for Complex Dynamic Systems and Control, The Univ.
	Perez, Tristan	The Univ. of Newcastle
15:40-16:00	<i>Simulation of the Dynamics of an Autonomously Acting Small Catamaran for Search and Rescue Process</i> , pp. 242-247.	Th4.1.5
	Haase, Max	Univ. of Rostock
<b>Th4.2</b>		Sea Terrace
<b>Nonlinear Control in Marine Systems II</b> (Regular Session)		
	Chair: Blanke, Mogens	Tech. Univ. of Denmark
	Co-Chair: Breivik, Morten	Norwegian Univ. of Science and Tech.
14:20-14:40	<i>Disturbance Estimation for Feedforward Control of Inland Vessels</i> , pp. 248-253.	Th4.2.1
	Herzer, Benjamin	Univ. Stuttgart
	Gilles, Ernst Dieter	Max Planck Inst. Max Planck Inst. Dynamics of Complex T
14:40-15:00	<i>A Speed Control Algorithm for Planar Path Maneuvering</i> , pp. 254-259.	Th4.2.2
	Haugen, Joakim	Norwegian Univ. of Science and Tech.
	Breivik, Morten	Norwegian Univ. of Science and Tech.
15:00-15:20	<i>Reflexions on Feedforward Control Strategies for a Class of Sailing Vehicles</i> , pp. 260-265.	Th4.2.3
	Xiao, Lin	Univ. of Southern Denmark
	Jouffroy, Jerome	Univ. of Southern Denmark (SDU)
15:20-15:40	<i>Guaranteed Performance for Sampled-Data Systems with Generalized Higher-Order Hold</i> , pp. 266-271.	Th4.2.4
	Rybinskii, Vladislav	SMTU
	Rosenwasser, Efim N.	Marine Tech. Univ. of Saint Petersburg
	Lampe, Bernhard P.	Univ. of Rostock
15:40-16:00	<i>Gain Scheduling Control of a Combined Diesel or Gas Ship Propulsion System with Parameter-Dependent Delay</i> , pp. 272-277.	Th4.2.5
	Pinto, Fernando Teixeira	Brazilian Navy Res. Inst.
	Pellanda, Paulo C.	IME - Military Inst. of Engineering

<b>Fr1.1</b>	Kurhaus Hall
<b>Manoeuvring in Ports, PT5 (Plenary Session)</b>	
Chair: Vukic, Zoran	Univ. of Zagreb
08:50-09:50	Fr1.1.1
<i>Low Speed Manoeuvring, and New Aspects of Maneuvering in Ports*</i> .	
Hasegawa, Kazuhiko	Osaka Univ.
<b>Fr2.1</b>	Kurhaus Hall
<b>Collision Avoidance (Regular Session)</b>	
Chair: Guedes Soares, Carlos	Inst. Técnico, Tech. Univ. of Lisbon
Co-Chair: Hasegawa, Kazuhiko	Osaka Univ.
10:20-10:40	Fr2.1.1
<i>Path Following for the Dynamic Model of a Marine Surface Vessel without Closed-Loop Control of the Surge Speed</i> , pp. 278-283.	
Pedone, Paola	Univ. del Salento
Zizzari, Alessandro Antonio	Univ. of Salento
Indiveri, Giovanni	Univ. of Salento
10:40-11:00	Fr2.1.2
<i>Agent Controlled Information Exchange for Integrated Ship Bridge Systems</i> , pp. 284-288.	
Mueller-Demuth, Reinhard	Hochschule Wismar, Univ. of Tech. Business and Design
Demuth, Michaela	Schiffahrtsinstitut Warnemuende, at the Hochschule Wismar
11:00-11:20	Fr2.1.3
<i>An Automatic Collision Detection and Avoidance Module for Inland Navigation</i> , pp. 289-294.	
Lutz, Alexander	Univ. Stuttgart
Gilles, Ernst Dieter	Max Planck Inst. Max Planck Inst. Dynamics of Complex T
11:20-11:40	Fr2.1.4
<i>Fuzzy-Logic Based Parallel Collisions Avoidance Decision Formulation for an Ocean Navigational System</i> , pp. 295-300.	
Perera, Lokukaluge Prasad	Tech. Univ. of Lisbon
Carvalho, Joao Paulo	INESC-ID, Inst. Superior Técnico, Tech. Univ. of Li
Guedes Soares, Carlos	Inst. Técnico, Tech. Univ. of Lisbon
11:40-12:00	Fr2.1.5
<i>Bayesian Network Based Sequential Collision Avoidance Action Execution for an Ocean Navigational System</i> , pp. 301-306.	
Perera, Lokukaluge Prasad	Tech. Univ. of Lisbon
Carvalho, Joao Paulo	INESC-ID, Inst. Superior Técnico, Tech. Univ. of Li
Guedes Soares, Carlos	Inst. Técnico, Tech. Univ. of Lisbon
<b>Fr2.2</b>	Sea Terrace
<b>Measurement/ Sensors (Regular Session)</b>	
Chair: Toal, Daniel	Univ. of Limerick
Co-Chair: Ringwood, John	NUI Maynooth
10:20-10:40	Fr2.2.1
<i>A Numerical Comparison between Feature Correlation and Phase Correlation for Motion Estimation Relative to Sea Bottom</i> , pp. 307-311.	
Ferreira, Fausto	Consiglio Nazionale delle Ricerche
Orsenigo, Francesco	Hellenic Center for Marine Res.
Veruggio, Gianmarco	Consiglio Nazionale delle Ricerche
Pavlakis, Petros	Hellenic Center for Marine Res.
Caccia, Massimo	CNR-ISSIA
Bruzzzone, Gabriele	CNR-ISSIA
10:40-11:00	Fr2.2.2
<i>Oscillation Reduction Control for Ocean Environment Monitoring Buoys</i> , pp. 312-317.	
Tomizawa, Yuji	Tokyo Univ. of Marine Science and Tech.
Toda, Masayoshi	Tokyo Univ. of Marine Science and Tech.
11:00-11:20	Fr2.2.3
<i>Sensing Technique of Dynamic Marine Mammal's Attitude by Use of Low-Cost Inertial and Magnetic Sensors</i> , pp. 318-323.	
FOURATI, hassen	Univ. de Reims Champagne ardenne (Reims),Univ. pa
Manamanni, Noureddine	Univ. de Reims Champagne Ardenne
HANDRICH, yves	Univ. Louis Pasteur
AFILAL, Lissan	Univ. de reims et champagne ardenne
11:20-11:40	Fr2.2.4
<i>Integration and Testing of Multi-Purpose Platform Technologies System and High Resolution Multi-Beam Sonar on ROV Holland I</i> , pp. 324-329.	
Ahmad, Hammad	Univ. of Limerick Ireland
Omerdic, Edin	Univ. of Limerick
Nolan, Sean	Univ. of Limerick Ireland
Toal, Daniel	Univ. of Limerick
11:40-12:00	Fr2.2.5
<i>State-Of-The-Art of Wave Measurement for Ship Motion Prediction</i> , pp. 330-335.	
Giron-Sierra, Jose M	Univ. Complutense de Madrid
JIMENEZ, JUAN F	Univ. COMPLUTENSE

<b>Fr3.1</b>		Kurhaus Hall
<b>Offshore System Installation, PT6</b> (Plenary Session)		
Chair: Korte, Holger	Univ. of Applied Sciences Wilhelmshaven/Oldenburg/Elsfleth	
13:00-14:00		Fr3.1.1
<i>Effective Installation of Wind Turbines</i> , N/A		
Reales-Bertomeo, Emilio	Beluga Hochtief Offshore GmbH & Co. KG	
Heymann, Carsten	BELUGA HOCHTIEF Offshore GmbH & Co. KG	
<b>Fr4.1</b>		Kurhaus Hall
<b>Offshore Systems/ Dynamic Positioning II</b> (Regular Session)		
Chair: Yamamoto, Ikuo	The Univ. of Kitakyushu	
Co-Chair: Longhi, Sauro	Univ. Pol. delle Marche	
14:20-14:40		Fr4.1.1
<i>Predictor Design for Altitude Control of a Seaweed Harvester</i> , pp. 340-345.		
Gallieri, Marco	IST: Inst. Superior Tecnico	
Giantomassi, Andrea	Univ. Pol. delle Marche	
Ippoliti, Gianluca	Univ. Pol. delle Marche	
Longhi, Sauro	Univ. Pol. delle Marche	
Ringwood, John V.	Dublin City Univ.	
15:00-15:20		Fr4.1.3
<i>Transverse Oscillations of an Underwater Beam-Cable System</i> , pp. 346-350.		
Blanco, Max	Univ. of Southampton	
Wilson, Philip	Univ. of Southampton	
15:20-15:40		Fr4.1.4
<i>Research on the Next Generation Dynamic Positioning System of Offshore Platform in Japan</i> , pp. 351-356.		
Yamamoto, Ikuo	The Univ. of Kitakyushu	
Maeda, Katsuya	Japan Oil, Gas and Metals National Corp.	
Asanuma, Takayuki	Japan Oil, Gas and Metals National Corp.	
15:40-16:00		Fr4.1.5
<i>Numerical and Experimental Analysis of a Typical DP Shuttle Tanker Operating in Brazilian Waters</i> , pp. 357-362.		
Tannuri, Eduardo Aoun	Univ. of Sao Paulo USP	
Morishita, Helio Mitio	Fundação de Apoio à Univ. de São Paulo CGC: 68.314.830/0	
Vilaça, Rodrigo	Lab. - Oceanic Tech. Lab.	
Saad, Arthur Curtly	Petrobras	
16:00-16:20		Fr4.1.6
<i>Methodology for Evaluating DP Crane-Barge Operation in Close Proximity of a FPSO</i> , pp. 363-368.		
Tannuri, Eduardo Aoun	Univ. of Sao Paulo USP	
Silva, João Luis B.	Petrobras	
Rampazzo, Fabiano	Univ. of São Paulo	
Malta, Edgard B. Malta	Univ. of São Paulo	
Vieira, Daniel Prata	Univ. of São Paulo	
Rossin, Bruno D.	Univ. of São Paulo	
<b>Fr4.2</b>		Sea Terrace
<b>Cooperative Navigation and Control</b> (Regular Session)		
Chair: Caccia, Massimo	CNR-ISSIA	
Co-Chair: Glotzbach, Thomas	Inst. Superior Tecnico (IST)	
14:20-14:40		Fr4.2.1
<i>Virtual Target Based Coordinated Path-Following for Multi-Vehicle Systems</i> , pp. 369-374.		
Bibuli, Marco	CNR-ISSIA	
Caccia, Massimo	CNR-ISSIA	
Lapierre, Lionel	ISR Lisbon	
14:40-15:00		Fr4.2.2
<i>A Sliding Mode Based Guidance System for Vehicle-Following Operations</i> , pp. 375-380.		
Bibuli, Marco	CNR-ISSIA	
Bruzzzone, Gabriele	CNR-ISSIA	
Caccia, Massimo	CNR-ISSIA	
Caiti, Andrea	Univ. of Pisa	
Di Lecce, Nicola	Univ. di Pisa	
15:00-15:20		Fr4.2.3
<i>Fault Tolerant Decentralized Nonlinear MPC for Fleets of Unmanned Marine Vehicles</i> , pp. 381-386.		
FREDDI, ALESSANDRO	Univ. Pol. delle Marche	
Longhi, Sauro	Univ. Pol. delle Marche	
Monteriù, Andrea	Univ. Pol. delle Marche	
Vaccarini, Massimo	Univ. Pol. delle Marche	
15:20-15:40		Fr4.2.4
<i>Advanced Trajectory Planning for Obstacle Avoidance of Multiple Unmanned Marine Vehicles (MUMVs)</i> , pp. 387-392.		
Glotzbach, Thomas	Inst. Superior Tecnico (IST)	
Alrifae, Bassam	TU Ilmenau	
Schneider, Matthias	Tech. Univ. Ilmenau	
Jacobi, Marco	Fraunhofer IOSB-AST	
Zimmermann, Armin	Tech. Univ. Ilmenau	
Ament, Christoph	Tech. Univ. Ilmenau	



Fr5.1		Kurhaus Hall
<b>Wave Energy Converters (Regular Session)</b>		
Chair: Ringwood, John		NUI Maynooth
Co-Chair: Blanke, Mogens		Tech. Univ. of Denmark
16:40-17:00		Fr5.1.1
<i>Optimal Damping Profile for a Heaving Buoy Wave Energy Converter</i> , pp. 393-398.		
Teillant, boris		National Univ. of Ireland Maynooth
gilloteaux, jean-christophe		National Univ. of Ireland Maynooth
Ringwood, John		NUI Maynooth
17:00-17:20		Fr5.1.2
<i>Control-Informed Geometric Optimisation of Wave Energy Converters</i> , pp. 399-404.		
gilloteaux, jean-christophe		National Univ. of Ireland Maynooth
Ringwood, John		NUI Maynooth
17:20-17:40		Fr5.1.3
<i>A Study on Prediction Requirements in Time-Domain Control of Wave Energy Converters</i> , pp. 405-410.		
Fusco, Francesco		National Univ. of Ireland Maynooth
gilloteaux, jean-christophe		National Univ. of Ireland Maynooth
Ringwood, John		NUI Maynooth

**Additional Paper**

**The Problem of Quiescent Period Prediction for Ships: A Review, pp 411-416**

Jose M. Giron-Sierra, Segundo Esteban