

**2<sup>nd</sup> International Conference on Maritime  
Technology and Engineering**

**MARTECH 2014**

**FINAL PROGRAMME**

**15 – 17 October 2014**

**IST Congress Centre  
LISBON, PORTUGAL**

## ORGANISATION

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## SCHEDULE AT A GLANCE

<b>Wednesday, 15 October 2014</b>			
<b>Registration</b> (Hall 01 – from 08h00 onwards)			
<b>Instituto Superior Técnico – Congress Centre</b>			
<b>Opening Session</b> ( 09h30-10h30) - Auditorium Keynote lectures			
<i>Coffee-break</i> (10h30-11h00)			
<i>Auditorium</i> (11h00-12h30) <b>Ports</b>	<i>Room 02.1</i> (11h00-12h30) <b>Longitudinal Strength</b>	<i>Room 02.2</i> (11h00-12h30) <b>Ship Seakeeping</b>	<i>Room 02.3</i> (11h00-12h30) <b>Wave Statistics</b>
<i>Lunch</i> (12h30-14h00)			
<i>Room 01.1</i> (14h00-15h30) <b>Maritime Transportation</b>	<i>Room 02.1</i> (14h00-15h30) <b>Structural Energy Absorption</b>	<i>Room 02.2</i> (14h00-15h30) <b>Seakeeping and Slamming</b>	<i>Room 02.3</i> (14h00-15h30) <b>Wind and Wave Modelling</b>
<i>Coffee-break</i> (15h30-16h00)			
<i>Room 01.1</i> (16h00-17h30) <b>Inland Navigation</b>	<i>Room 02.1</i> (16h00-17h30) <b>Ship Structural Components</b>	<i>Room 02.2</i> 16h00-17h30) <b>Ship Dynamics and Hydrodynamics</b>	<i>Room 02.3</i> (16h00-17h30) <b>Wave Modelling</b>
<b>Thursday, 16 October 2014</b>			
<b>Registration</b> (Hall 01 – from 08h00 onwards)			
<i>Room 01.1</i> (09h00 – 10h30) <b>Offshore Platform Dynamics</b>	<i>Room 02.1</i> (9h00 – 10h30) <b>Strength Welded Plates</b>	<i>Room 02.2</i> (09h00 – 10h30) <b>Ship Resistance</b>	<i>Room 02.3</i> (9h00 – 10h30) <b>Fisheries &amp; Aquaculture I</b>
<i>Coffee-break</i> (10h30-11h00)			
<i>Room 01.1</i> (11h00-12h30) <b>Offshore Platform Design</b>	<i>Room 02.1</i> (11h00-12h30) <b>Stiffened Panels</b>	<i>Room 02.2</i> (11h00-12h30) <b>Energy Efficiency</b>	<i>Room 02.3</i> (11h00-12h30) <b>Fisheries &amp; Aquaculture II</b>
<i>Lunch</i> (12h30-14h00)			
<i>Room 01.1</i> (14h00-15h30) <b>Computational Fluid Dynamics</b>	<i>Room 02.1</i> (14h00-15h30) <b>Composite Structures</b>	<i>Room 02.2</i> (14h00-15h30) <b>Ship Manoeuvring</b>	<i>Auditorium</i> (14h00-15h30) <b>Oil and Gas II</b>
<i>Coffee-break</i> (15h30-16h00)			
<i>Room 01.1</i> (16h00-17h30) <b>Computer Aided Ship Design</b>	<i>Room 02.1</i> 16h00-17h30) <b>Maritime Economy</b>	<i>Room 02.2</i> 16h00-17h30) <b>Shallow water Hydrodynamics</b>	<i>Auditorium</i> (16h00-17h30) <b>Oil and Gas II</b>
<b>20:00 h - Conference Dinner</b>			
<b>Friday, 17 October 2014</b>			
<b>Registration</b> (Hall 01 – from 08h00 onwards)			
<i>Room 01.1</i> (09h00 – 10h30) <b>Design Optimization</b>	<i>Room 02.1</i> (9h00–10h30) <b>Ship Traffic</b>	<i>Room 02.2</i> (09h00 – 10h30) <b>Ship Propulsion</b>	<i>Room 02.3</i> (9h00 – 10h30) <b>Renewable energy I</b>
<i>Coffee-break</i> (10h30-11h00)			
<i>Room 01.1</i> (11h00-12h30) <b>Ship Design</b>	<i>Room 02.1</i> (11h00-12h30) <b>Maritime Accidents</b>	<i>Room 02.2</i> (11h00-12h30) <b>Efficient Propulsion and Control</b>	<i>Room 02.3</i> (11h00-12h30) <b>Renewable energy II</b>
<i>Lunch</i> (12h30-14h00)			
	<i>Room 02.1</i> (14h00-15h30) <b>Structural Reliability &amp; Risk</b>	<i>Room 02.2</i> (14h00-15h30) <b>Ship Propulsion and Environment</b>	<i>Room 02.3</i> (14h00-15h30) <b>Oscillating Water Column Converters</b>
<i>Coffee-break</i> (15h30-16h00)			
	<i>Room 02.1</i> (16h00-17h30) <b>Shipyard Technology</b>	<i>Room 02.2</i> (16h00-17h30) <b>Environmental Impact</b>	

## SESSIONS INDEX – alphabetical order

- **Composite structures** – Room 02.1  
Thursday, 16<sup>th</sup> October 2014 – 14:00 h – 15:30 h
- **Computational fluid dynamics** – Room 01.1  
Thursday, 16<sup>th</sup> October 2014 – 14:00 h – 15:30 h
- **Computer aided ship design** – Room 01.1  
Friday, 16<sup>th</sup> October 2014 – 16:00 to 17:30 h
- **Design optimization** – Room 01.1  
Friday, 17<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Efficient propulsion & control** – Room 02.2  
Friday, 17<sup>th</sup> October 2014 – 11:00 to 12:30 h
- **Energy efficiency** – Room 02.2  
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- **Environmental impact** – Room 02.2  
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- **Fisheries and Aquaculture I** – Room 02.3  
Thursday, 16<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Fisheries and Aquaculture II** – Room 02.3  
Thursday, 16<sup>th</sup> October 2014 – 11:00 h – 12:30 h
- **Inland navigation** – Room 01.1  
Wednesday, 15<sup>th</sup> October 2014 – 16:00 h – 17:30h
- **Keynote lectures** – Auditorium  
Wednesday, 15<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Longitudinal strength** – Room 02.1  
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- **Maritime accidents** – Room 02.1  
Friday, 17<sup>th</sup> October 2014 – 11:00 to 12:30 h
- **Maritime economy** – Room 02.1  
Thursday, 16<sup>th</sup> October 2014 – 16:00 h – 17:30 h
- **Maritime transportation** – Room 01.1  
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- **Offshore platform design** – Room 01.1  
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- **Offshore platform dynamics** – Room 01.1  
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- **Oil and Gas I** – Auditorium  
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- **Oil and Gas II** – Auditorium  
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- **Oscilating water columns converters** – Room 02.3  
Friday, 17<sup>th</sup> October 2014 – 14:00 to 15:30 h
- **Ports** – Room - Auditorium  
Wednesday, 15<sup>th</sup> October 2014 – 11:00 h – 12:30h
- **Renewable energy 1** – Room 02.3  
Friday, 17<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Renewable energy 2** – Room 02.3  
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- **Seakeeping & slamming** – Room 02.2  
Wednesday, 15<sup>th</sup> October 2014 – 14:00 h – 15:30h
- **Shallow water hydrodynamics** – Room 02.2  
Thursday, 16<sup>th</sup> October 2014 – 16:00 h – 17:30 h
- **Ship design** – Room 01.1  
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- **Ship dynamics & hydrodynamics** – Room 02.2  
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- **Ship maneuvering** – Room 02.2  
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- **Ship propulsion** – Room 02.2  
Friday, 17<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Ship propulsion & environment** – Room 02.2  
Friday, 17<sup>th</sup> October 2014 – 14:00 to 15:30 h
- **Ship resistance** – Room 02.2  
Thursday, 16<sup>th</sup> October 2014 – 9:00 to 10:30 h
- **Ship seakeeping** – Room 02.2  
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- **Ship structural components** – Room 02.1  
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- **Ship traffic** – Room 02.1  
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- **Shipyards technology** – Room 02.1  
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- **Stiffened panels** – Room 02.1  
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- **Strength of welded plates** – Room 02.1  
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- **Structural energy absorption** – Room 02.1  
Wednesday, 15<sup>th</sup> October 2014 – 14:00 h – 15:30h
- **Structural reliability & risk** – Room 02.1  
Friday, 17<sup>th</sup> October 2014 – 14:00 to 15:30 h
- **Wave modelling** – Room 02.3  
Wednesday, 15<sup>th</sup> October 2014 – 16:00 h – 17:30h
- **Wave statistics** – Room 02.3  
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- **Wind & wave modelling** – Room 02.3  
Wednesday, 15<sup>th</sup> October 2014 – 14:00 h – 15:30h

# DETAILED PROGRAMME

## Wednesday, 15<sup>th</sup> October 2014

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**Time: 9:00 to 10:30 h**

### Keynote lectures Auditorium

Chair:

The past, present and future of the ocean engineering activities

*H. Maeda*

Risk assessment for ship collision against offshore structures

*P. T. Pedersen*

**Time: 11:00 h – 12:30 h**

### PORTS Auditorium

Chair:

The container terminal characteristics and customer satisfaction

*V. Caldeirinha, J. A. Felicio & A. Dionisio*

Performance evaluation using data envelopment analysis: the case of Portuguese General Cargo Terminals

*J. F. C. Grilo & J. C. Q. Dias*

A System Dynamics model for evaluating container terminal management policies

*A. M. P. Santos, J. P. Mendes & C. Guedes Soares*

Methodology and tools to design container terminals

*T. A. Santos, M. Marques & C. Guedes Soares*

### LONGITUDINAL STRENGTH Room 02.1

Chair:

Experimental analysis of a box girder with double span subject to pure bending moment

*J. M. Gordo & C. Guedes Soares*

A study on the progressive collapse behaviour of a damaged hull girder

*S. H. Makouei, A. P. Teixeira & C. Guedes Soares*

Ultimate strength assessment of a container ship accounting for the effect of neutral axis movement

*M. Tekgoz, Y. Garbatov & C. Guedes Soares*

Influence of the shear force and distributed load on the longitudinal ultimate strength

*V. Zanic & S. Kitarovic*

### SHIP SEAKEEPING Room 02.2

Chair:

Fully non-linear time domain simulation of 3D wave-body interaction by numerical wave tank

*A. Abbasnia, M. Ghiasi & C. Guedes Soares*

Influence of mesh refinement on the motions predicted by a panel code.

*H. Jafaryeganeh, J. M. Rodrigues & C. Guedes Soares*  
Importance of non-linear hydrodynamic forces in ship design

*D. Sengupta, A. Dutta & R. Datta*

Numerical and experimental study of parametric rolling of a container ship in regular and irregular head waves

*E. Uzunoglu, S. Ribeiro e Silva & C. Guedes Soares*

### WAVE STATISTICS Room 02.3

Chair:

Wind and wave climate over the Black Sea

*Z. Cherneva, C. Guedes Soares & N. Andreeva*

Outliers identification in a wave hindcast dataset used for Regional Frequency Analysis

*C. Lucas, G. Muraleedharan & C. Guedes Soares*

Weather window analysis of a site off Portugal

*D. Martins, G. Muraleedharan & C. Guedes Soares*

Extreme wave statistics of linear and nonlinear waves in Hurricane Camille

*A. Veltcheva & C. Guedes Soares*

**Time: 14:00 to 15:30 h**

### MARITIME TRANSPORTATION Room 01.1

Chair:

A maritime transportation network model.

*A. M. P. Carreira, J. P. Mendes & C. Guedes Soares*

Assessment of motorways of the sea through a method based on analysis of decision groups.

*A. Martínez-López, A. Munin-Doce & D. Pena-Agras*

Competition dynamics between the Hamburg-Le Havre and the Mediterranean port ranges

*A. M. P. Santos & C. Guedes Soares*

### STRUCTURAL ENERGY ABSORPTION Room 02.1

Chair:

Cryogenic crashworthiness of LNG fuel storage tanks

*B. Atli-Veltin & A. W. Vredeveltdt*

Structural analysis under ice loads for ships operating in arctic waters.

*S. Ehlers, B. Erceg, I. Jordaan & R. Taylor*

Experimental and numerical study on response of rectangular tubes subjected to transverse quasi-static and impact loadings.

*B. Liu & C. Guedes Soares*

Optimization of the ballistic properties of an advanced composite armor system: analysis and validation of numerical models subject to High Velocity Impacts.  
*G. Sabadin, M. Gaiotti, C. M. Rizzo & A. Bassano*

## SEAKEEPING & SLAMMING

Room 02.2

Chair:

Review of seakeeping criteria for container ship sustainable speed calculation in rough weather  
*L. Mudronja, P. Vidan & J. Parunov*  
Experimental and numerical study on bottom slamming probability of a chemical tanker subjected to irregular waves  
*S. Wang & C. Guedes Soares*  
Hydroelastic impact due to longitudinal compression on transient vibration of a horizontal elastic plate  
*S. Wang, D. Karmakar & C. Guedes Soares*  
Responses of LNG carrier in the presence of abnormal waves  
*HD. Zhang & C. Guedes Soares*

## WIND & WAVE MODELLING

Room 02.3

Chair:

A Lagrangean perspective of the 2013/2014 winter wave storms in the North Atlantic  
*M. Bernardino & C. Guedes Soares*  
Analysis of wave heights and wind speeds in the Adriatic Sea  
*M. Katalinic, M. Corak & J. Parunov*  
The performance of the Quasi-Determinism theory in crossing seas conditions.  
*A. Santoro, F. Arena & C. Guedes Soares*  
Comparison of altimeter derived wave periods and significant wave heights with buoy data in the Portuguese coastal environment  
*M. Sohrabi, L. Rusu & C. Guedes Soares*

Time: 16:00 h – 17:30 h

## INLAND NAVIGATION

Room 01.1

Chair:

Feasibility study of iron ore export using Douro River.  
*D. B. V. Lima, T. A. Santos & C. Guedes Soares*  
Analysis of river/sea transportation of ore bulk using simulation process.  
*D. Merino da Silva & M. Ventura*  
Design optimization of a bulk carrier for river/sea ore transport  
*D. Merino da Silva & M. Ventura*  
Forecasting navigability conditions of the Tapajós Waterway -Amazon Brazil.  
*N. M. Figueiredo, C. J. C. Blanco & H. B. Moraes*

## SHIP STRUCTURAL COMPONENTS

Room 02.1

Chair:

Innovative de-coupling materials for the isolation of ship cabins  
*A. Badino & E. Rizzuto*  
Bonded joints in shipbuilding: a technological approach to the characterization of actual performances  
*D. Succio, E. Rizzuto, C. Gambaro & E. Lertora*  
Fatigue crack growth analysis of a plate accounting for retardation effect  
*B. Yeter, Y. Garbatov & C. Guedes Soares*  
Life cycle fatigue management for high speed vessels by integrating structural health monitoring data  
*J. Zhu & M. Collette*

## SHIP DYNAMICS & HYDRODYNAMICS

Room 02.2

Chair:

Approximation of towline influence on towed ship motions  
*I. Catipovic, N. Degiuli, V. Coric, A. Werner & J. Radanovic*  
Preliminary investigation on automatic berthing of waterjet catamaran  
*V. Ferrari, S. Sutulo & C. Guedes Soares*  
Simulation of wave action on a moored container carrier inside Sines harbour  
*L. Pinheiro, C. J. Fortes, B. M. Abecassis Jalles, J. A. Santos & L. Fernandes*  
The probabilistic approach for the damage stability assessment: an application case in the specific field of megayacht units.  
*M. Spigno, P. Gualeni, D. Piva & M. Giannini*

## WIND & WAVE MODELLING

Room 02.3

Chair:

Application of the Ensemble Kalman Filter to a high-resolution wave forecasting model for wave height forecast and hindcast in harbor areas  
*S. Almeida, L. Rusu, & C. Guedes Soares*  
Influence of a new quay on the wave propagation inside the Sines harbor  
*E. Rusu & C. Guedes Soares*  
Numerical modelling of the North Atlantic storms affecting the West Iberian coast  
*L. Rusu, S. Ponce de León & C. Guedes Soares*  
Application of the numerical model SWAN in locations with vegetation in the Tiete-Paranj waterway Lake of Ilha Solteira's Dam Brazil  
*A. S. Vieira, I. C. Gregório, C. J. E. M. Fortes, T. Suzuki & G. Maciel*



Time: 9:00 to 10:30 h

## OFFSHORE PLATFORM DYNAMICS

Room 01.1

Chair:

Effect of wave particle velocity on drag force on semi-submersibles.

*X. Cheng & B. Wu*

Hydrodynamic analysis of Amir-Kabir semi-submersible platform.

*M. Ezoji, A. R. M. Gharabaghi & H. Gol-Zaroudi*

Comparison of floating structures motion prediction between diffraction, diffraction-viscous and diffraction-Morison methods

*K. Jaswar, C. L. Siow, N. M. Khairuddin, H. Abyn & C. Guedes Soares*

Behavior of a riser with BOP suspended by the drilling vessel in movement

*C. K. Morooka, J. R. P. Mendes & K. Miura*

## STRENGTH OF WELDED PLATES

Room 02.1

Chair:

Study on ultimate strength of ship plates considering weld-induced residual stresses.

*B. Q. Chen & C. Guedes Soares*

Analysis of butt-weld induced distortion accounting for the welding sequences and weld toe geometry

*M. Hashemzadeh, Y. Garbatov & C. Guedes Soares*

Numerical investigation of the thermal fields due to the welding sequences of butt-welds

*M. Hashemzadeh, Y. Garbatov & C. Guedes Soares*

Compressive strength assessment of rectangular steel plates accounting for the presence of a local dent or an opening

*S. Saad-Eldeen, Y. Garbatov & C. Guedes Soares*

Strength assessment of wash plates subjected to combined lateral and axial loading.

*S. Saad-Eldeen, Y. Garbatov & C. Guedes Soares*

## SHIP RESISTANCE

Room 02.2

Chair:

Numerical simulation of added resistance in head waves: a RANSE and BEM approach

*E. Ageno, D. Bruzzone & D. Villa*

Experimental investigation of the wake flow of a bulk-carrier model using a five-hole pitot arrangement

*D. E. Liarokapis, A. G. Zarifis, & G. D. Tzabiras*

Methods for estimating the power of typical boats from Amazon

*H. B. Moraes, R. M. Moraes & P. A. Wilson*

The effect of free-surface simulations on the resistance and propulsion characteristics of a ship

*G. D. Tzabiras*

## FISHERIES AND AQUACULTURE I

Room 02.3

Chair: *Aida Campos e Nuno Lourenço*

(ORAL PRESENTATIONS ONLY)

Portuguese Integrated Maritime Surveillance and Monitoring - Towards Blue Growth

*F. Dias Marques*

Combining fisheries-dependent data to produce information relevant for integrated management

*A. Campos, T. Fonseca, P. Fonseca, J. Parente, V. Henriques*

Fishing the most out of vessel monitoring system (VMS): lessons learned analyzing data from the Portuguese trawl fleet

*T. Fonseca, A. Campos, M. Afonso-Dias*

Integrating oceanographic and biological observations to study marine populations and their connectivity

*AMP Santos, C Bartilotti, S Garrido, A Moreno, A Peliz, RFT Pires, P Ré, A. dos Santos*

Time: 11:00 to 12:30 h

## OFFSHORE PLATFORM DESIGN

Room 01.1

Chair:

A design summary of a state of the art drilling semi-submersible.

*M. Laranjinha & T. Kvillum*

On the influence of damping plates on the vertical oscillations of cylinders

*A. Lavrov & C. Guedes Soares*

Strength and stability considerations of an ageing oil tanker converted to support the mooring of ultra-deep water floating units

*M. Tapia, P. Kaleff, A. Longo, M. Oliveira & I. Masetti*

Parametric modelling of multi-body cylindrical offshore wind turbine platforms

*E. Uzunoglu & C. Guedes Soares*

## STIFFENED PANELS

Room 02.1

Chair:

Influence of geometric parameters on the structural strength of reinforced cylindrical shells under external hydrostatic pressure

*E. V. Grandez & T. A. Netto*

Ultimate strength of stiffened plate with initial imperfections under complex loading

*X. Shi, A. P. Teixeira, J. Zhang & C. Guedes Soares*

Eigenvalue analysis of stiffened plates resting on elastic foundation

*M. Taczala & R. Buczkowski*

Strength assessment of an imperfect stiffened panel with modified stress-strain curve.

*M. Tekgoz, Y. Garbatov & C. Guedes Soares*

## ENERGY EFFICIENCY Room 02.2

Chair:

A method for the analysis and design of flapping-foil thrusters for augmenting ship propulsion in waves

*K. A. Belibassakis & E. S. Filippas*

Energy efficient design of bilge keels

*C. C. Ciortan & J. Sun*

Influence of ship routes on fuel consumption and CO<sub>2</sub> emission

*J. Ppčić-Oršić, R. Vettor, C. Guedes Soares & O. M. Faltinsen*

Multi-objective evolutionary algorithm in ship route optimization

*R. Vettor & C. Guedes Soares*

## FISHERIES AND AQUACULTURE II Room 02.3

Chair: **Victor Henriques e Aida Campos**

(ORAL PRESENTATIONS ONLY)

The M@rBis Project – Know to protect

*F. Carvalho Dias, E. Berecibar, M. Souto, I. Tojeira, M. Albuquerque, N. V. Rodrigues, J. Gomes-Pereira, A. C. Castanheira, A. Santos de Campos*

Mapping marine benthic habitats by combining direct and remote sensing data

*V. Henriques, M. Tuaty Guerra, M. J. Gaudêncio, P.*

*Fonseca, B. Mendes, A. Campos*

Underwater video analysis for species abundance

control: the crustacean Norway lobster – a case study

*P. Lobato Correia, P. Yee Lau, P. Fonseca, A. Campos*

**Time: 14:00 to 15:30 h**

## COMPUTATIONAL FLUID DYNAMICS Room 01.1

Chair:

Free surface flow simulation around a Wigley hull using viscous and potential flow approaches

*Y. M. Ahmed, C. Ciortan, A. Wnek & C. Guedes Soares*

CFD modelling of the waves generated by a wedge-shaped wave-maker

*J. F. Gadelho, A. Lavrov, C. Guedes Soares, R. Urbina, M. P. Cameron & K. P. Thiagarajan*

Determining hydrodynamic coefficients of a 2D body with Navier-Stokes equations.

*J. F. Gadelho, J. M Rodrigues, A. Lavrov & C. Guedes Soares*

Numerical simulation of the free surface turbulent flow of a Wigley hull with trim and drift angle

*S. Tarbiat, A. Lavrov & C. Guedes Soares*

## COMPOSITE STRUCTURES Room 02.1

Chair:

Impact resistance of marine sandwich structures

*T. Castilho, L. S. Sutherland & C. Guedes Soares*

Analysis of the stress distribution in a composite to steel joint

*N. Kharghani, C. Guedes Soares & A. Milat*

Finite element parametric study of a composite-to-steel-joint

*E. A. Kotsidis, I. G. Kouloukouras & N. G. Tsouvalis*  
Flexural testing of sandwich laminates for steel-composite joints

*L. S. Sutherland, F. Alizadeh & C. Guedes Soares*

## SHIP MANEUVRING Room 02.2

Chair:

Initial experimental tests of a research-oriented self-running ship model

*V. Ferrari, L. P. Perera, F. P. Santos, M. A. Hinostraza, S. Sutulo & C. Guedes Soares*

A benchmark program for comparing hydrodynamic coefficients obtained from simulations and captive tests

*V. Ferrari & F. H. H. A. Quadvlieg*

A numerical study on bank-effect related hydrodynamics

*S. J. Ma, Z. J. Zou & L. P. Huang*

Preliminary analysis of ship manoeuvrability criteria in wind

*S. Sutulo & C. Guedes Soares*

## OIL & GAS OFFSHORE –CHALLENGES FROM NEW FRONTIERS I AUDITORIUM

Chair:

(ORAL PRESENTATIONS ONLY)

O&G Offshore: Industry Challenges in the Deepwater Discoveries

*Manuel Ferreira de Oliveira, GALP Energia*

Contributions of Naval Engineering in Offshore Oil Production at Petrobras

*Sylvio Sá Correa da Silva, Petrobrás*

“XXXXXXXXXXXXXXXXXXXX”

*João Ribeiro, DGPM-MAM*

**Time: 16:00 to 17:30 h**

## COMPUTER AIDED SHIP DESIGN Room 01.1

Chair:

Assuring quality ship hull form representation for downstream applications

*D. M. Edessa, L. Kleinsorge & R. Bronsart*

An approach for integrating quality management methods with cad-systems in ship detail design

*K. Hmeshah & R. Bronsart*

Assessment of still water bending moments for damaged hull girders

*J. M. Rodrigues, A. P. Teixeira & C. Guedes Soares*

Geometric modelling of ships for real-time 3D ship simulators

*J. M. Varela & C. Guedes Soares*

## MARITIME ECONOMY Room 02.1

Chair:

Features of the maritime clusters of the Atlantic Arc

*A. Ferreira, R. Salvador & C. Guedes Soares*



Participative approaches in the Portuguese maritime cluster planning  
*R. Salvador, A. Simões & C. Guedes Soares*  
Multipliers, linkages and influence fields among the sectors of the Portuguese maritime cluster  
*A. Simões, R. Salvador & C. Guedes Soares*  
Main challenges facing the aquaculture sector: from a worldwide insight to a regional perspective  
*P. Valadas Monteiro & R. Salvador*

## SHALLOW WATER HYDRODYNAMICS Room 02.2

Chair:

Comparative study on solitary wave solutions of one-dimensional and coupled nonlinear Boussinesq equations in shallow water  
*S. Mohapatra & C. Guedes Soares*  
On pressure disturbance waves in channels: solitons, jets and ripples  
*R. M. Moreira, J. T. A. Chacaltana, J. A. Santos, S. R. A. Rodrigues, C. F. Neves & M. F. Nascimento*  
Propagation of waves generated by a pressure disturbance moving in a channel

*S. Rodrigues, C. Guedes Soares & J. A. Santos*  
Analysis of the numerical errors in the application of the 3D moving patch method to ship-to-ship interaction in shallow water  
*X. Zhou, S. Sutulo & C. Guedes Soares*

## OIL & GAS OFFSHORE –CHALLENGES FROM NEW FRONTIERS II Auditorium

Chair:

(ORAL PRESENTATIONS ONLY)

HiLoad DP, introducing DP capability to Conventional Tankers - Now a reality in operation  
*Geir Ove Saltvedt, Remora/Teekay*  
The advantages and experience with cylindrical hulls, and its application to FPSOs and FLNGs.  
*Lars Ødeskaug, Sevanmarine*  
Guará–Lula Project - Buoy Supported Riser System Installation  
*Jérémy de Barbarin, Subsea 7*

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## Friday, 17<sup>th</sup> October 2014

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### Time: 9:00 to 10:30 h DESIGN OPTIMIZATION Room 01.1

Chair:

Surrogate-assisted Robust Design Optimization considering Interval-type Uncertainty  
*Y. Liu & M. Collette*  
Structural optimisation for ice-strengthened vessels  
*R. A. Pedersen, D. A. Molnes, L. S. Stokkeland & S. Ehlers*  
Scalarising of optimisation criteria proposal for multi-objective optimisation of ship hull structure by evolutionary algorithm  
*Z. Sekulski*  
Multi criteria optimization applied to tankers preliminary design  
*J. M. Vasconcellos, M. Harduim & P. Araujo*

### SHIP TRAFFIC Room 02.1

Chair:

The FCM Classification of the ARPA targets  
*F. Ma, W. Qing & X. Chu*  
Simulation and analysis of maritime traffic in the Tagus River Estuary using AIS data  
*H. Rong, A. P. Teixeira & C. Guedes Soares*  
Assessment of ship collision estimation methods using AIS data  
*P. Silveira, A. P. Teixeira & C. Guedes Soares*

Ship emergency response workflow modeling based on WIFA in uncertain knowledge of situation.  
*B. Wu, X. P. Yan, Y. Wang, Y. & K. Wu*

### SHIP PROPULSION Room 02.2

Chair:

Toward the optimum design propulsion device for a specific trawler  
*S. Coache & J.-M. Laurens*  
Experimental and numerical investigations for modelling propeller cavitation noise  
*S. Gaggero, T. Gaggero, E. Rizzuto, G. Tani, D. Villa, M. Viviani, E. Haimov & J. Hallander*  
Hydro-elastic analysis of flexible marine propellers  
*P. J. Maljaars & J. A. Dekker*  
Practical considerations for marine propeller sizing  
*W. Yehia & M. M. Moustafa*

### RENEWABLE ENERGY I Room 02.3

Chair:

Numerical investigation on the blade geometrical parameters of a vertical axis marine current turbine  
*I. Amin*  
Breaking wave loads on truss support structures for offshore wind turbines  
*W. Cieslikiewicz, O. Podrażka & O. T. Gudmestad*

Methodology and results of the sea trials for a second generation tidal converter  
*A. P. López, L. R. Nunez, S. J. A. Somolinos, R. E. Novoa & A. Carneros Lozano*  
Conceptual definition of one OTEC floating plant  
*L. R. Nuñez Rivas, A. Muñoz Yraola, L. Blay Muñoz & L. Pecharroman de las Heras*

**Time: 11:00 to 12:30 h**

## SHIP DESIGN Room 01.1

Chair:

Approach to quality assurance of repetitive projects in shipbuilding industry  
*T. Buksa, D. Pavletic & M. Forempoher Skuver*  
Classification and analysis of vessels used in International Waterbike Regatta  
*P. Georgiev, S. Genkov, J. Denev & G. Saidov*  
Influence of ship design on ship recycling  
*K. P. Jain, J. F. J. Pruyun & J. J. Hopman*  
System modelling and performance assessment for naval ship design: an application for an Offshore Patrol Vessel (OPV)  
*M. P. Salio, P. Gualeni & F. Perra*

## MARITIME ACCIDENTS Room 02.1

Chair:

Application of TRACEr taxonomy for the codification of grounding and collision accidents  
*A. Graziano, A. P. Teixeira & C. Guedes Soares*  
Statistical analysis of ship accidents occurred in the period 1990-2012 and assessment of safety level of ship types  
*A. Papanikolaou, K. Bitha, E. Eliopoulou & N. P. Ventikos*  
Systems structure and simulation design of emergency response to maritime accidents  
*B. C. Sun, Y. Zhang, W. F. Li, G. L. Jiang & G. Lodewijks*  
Statistics for marine accidents in adverse weather conditions.  
*N. P. Ventikos, A. Koimtzoglou, K. Louzis & E. Eliopoulou*

## EFFICIENT PROPULSION & CONTROL Room 02.2

Chair:

Dynamic positioning system of a vessel with conventional propulsion configuration: modeling and simulation  
*A. Alessandri, S. Donnarumma, G. Luria, M. Martelli, S. Vignolo, R. Chiti & L. Sebastiani*  
Waste heat recovery systems from marine diesel engines: comparison between new design and retrofitting solutions  
*M. Altosole, M. Laviola, A. Trucco & A. Sabattini*  
Assessment of Steam Cycle Layouts for COGAS Ship Propulsion Systems  
*G. Benvenuto, M. Laviola & U. Campora*

Verification of full-scale performance of eco-friendly bulk carriers under actual operating conditions by onboard performance monitoring  
*H. Orihara, H. Yoshida, K. Hirota, K. Yamasaki & Y. Saitoh*

## RENEWABLE ENERGY 2 Room 02.3

Chair:

Modelling pump efficiency in a generic hydraulic power take-off for wave energy point absorbers  
*J. F. Gaspar & C. Guedes Soares*  
Dynamic control of oscillation characteristics of a spar-buoy  
*T. Iseki*  
Hydrodynamic analysis of vertical flapping thin plate in oblique incident waves  
*D. Karmakar & C. Guedes Soares*  
Feasibility study of the CECO wave energy converter  
*J. Marinheiro, P. Rosa-Santos, F. Taveira-Pinto & J. Ribeiro*

**Time: 14:00 to 15:30 h**

## STRUCTURAL RELIABILITY & RISK Room 02.1

Chair:

Short-term probabilistic combination of wave and whipping bending moments  
*M. Corak, J. Parunov & C. Guedes Soares*  
Risk analysis of undesirable events during transport, loading & unloading of Liquefied Natural Gas (LNG) on ships  
*M. R. Martins, M. A. Pestana, R. B. Primon & F. B. Natacci*  
A fundamental study on development of new higher performance anchors for safe maritime transportation  
*A. M. Masuda, I. Otani & K. Minami*  
Fatigue reliability assessment of an offshore supporting structure  
*B. Yeter, Y. Garbatov & C. Guedes Soares*

## SHIP PROPULSION & ENVIRONMENT Room 02.2

Chair:

Challenges and opportunities for LNG as a ship fuel source on the further evolution of sustainable marine container transport system  
*M. Aymelek, E. K. Boulougouris, O. Turan & D. Konovessis*  
Well-to-wheel greenhouse gas savings by using LNG as a marine fuel - Review of recent studies from Europe & U.S.  
*S. Hartman, M. Kofod & T. Mundt*  
Machinery selection to comply with future sulphur emission regulations  
*Ø. Patricksson & O. Balland*  
Future trends of electrical propulsion and implications to ship design  
*H. Pestana*

## OSCILLATING WATER COLUMNS CONVERTERS Room 02.3

### Chair:

Numerical study of an oscillating water column chamber with internal wall

*I. Amin*

Effects of the projecting walls on an OWC type wave energy convertor for improvement of power take-off performance

*T. Ikoma, K. Masuda & H. Maeda*

Hydrodynamic performance assessment of a floating oscillating water column

*K. Rezanejad & C. Guedes Soares*

A fundamental study on the applicability of the MPS method for performance estimation of the OWC type floating wave energy converter

*Y. Sasahara, M. Masuda, K. Minami & K. Masuda*

**Time: 16:00 to 17:30 h**

## SHIPYARD TECHNOLOGY Room 02.1

### Chair:

A continuous simulation technology for ship hull manufacturing processes based on PPRM

*H. Guangxu & M. Mei*

Development of a product oriented by work breakdown structure and application of hull block construction method for inland barge

*P. I. D. Lameira, E. Braga & H. M. Braga*

Optimization design of planning and production control in a shipyard - case study: the Amazon region

*P. I. D. Lameira, E. S. P. Loureiro, H. B. Moraes, N. M. Figueiredo & C. M. Benjamin*

Detection and context-driven reaction to production process anomalies in shipyards

*M. Ventura, L. Soares, A. Oliveira & C. Guedes Soares*

## ENVIRONMENTAL IMPACT Room 02.2

### Chair:

Annual emission estimation comparison of two methods for a ship

*L. Bilgili & U. B. Celebi*

Establishment of an emission estimation approach for bulk carriers related to block coefficient (CB)

*L. Bilgili & U. B. Celebi*

Assessing environmental impacts of ships from a life cycle perspective

*S. D. Chatzinikolaou & N. P. Ventikos*

A model for the Life Cycle Analysis of ships: Environmental impact during construction, operation and recycling

*A. Mountaneas, C. Georgopoulou, G. Dimopoulos & N. M. P. Kakalis*

# ADDITIONAL INFORMATION

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## WIFI:

Free WIFI access at IST Campus during MARTECH 2014 will be available to all participants:

- Username: MARTECH
- Password: prEzZ2

## LOCATION OF THE CONFERENCE DINNER:

### ESPAÇO TEJO

CENTRO DE CONGRESSOS DE LISBOA

Praça das Indústrias,

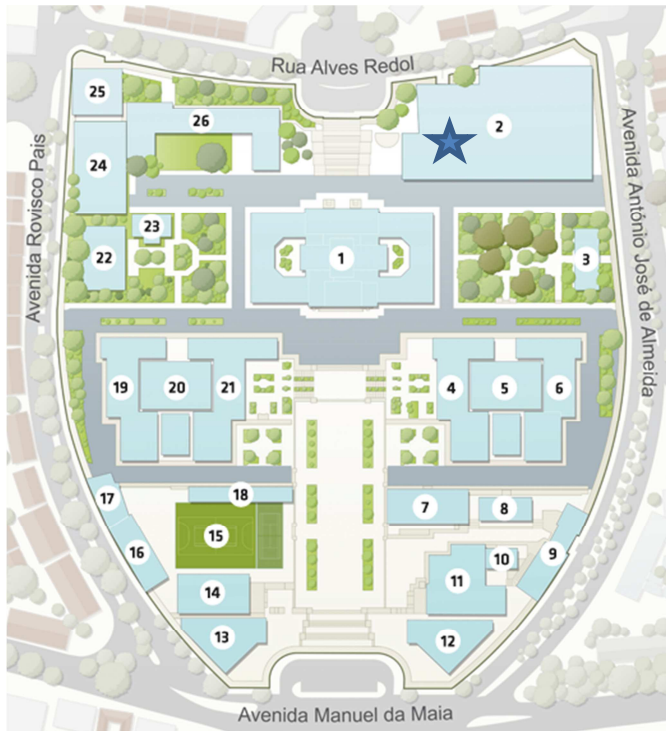
1300-307 LISBOA

T. (+351) 21 3605610

# CONFERENCE VENUE

The 2nd International Conference on Maritime Technology and Engineering will be held at the Congress Centre of Instituto Superior Técnico at the Alameda Campus.

MAP with the location of the Congress Centre of IST:



- 1 Pavilhão Central
- 2 Pavilhão de Civil
- 3 Pavilhão do Jardim Norte
- 4 Pavilhão de Mecânica I
- 5 Torre Norte
- 6 Pavilhão de Electricidade
- 7 Pavilhão de Informática II
- 8 Pavilhão de Mecânica IV
- 9 Pavilhão de Informática I
- 10 Pavilhão de Informática III
- 11 Pavilhão de Mecânica II
- 12 Pavilhão de Mecânica III
- 13 Cantina
- 14 Pavilhão da Ass. Estudantes
- 15 Campo de Jogos
- 16 Piscina
- 17 Pavilhão de Acção Social
- 18 Secção de Folhas
- 19 Pavilhão de Minas
- 20 Torre Sul
- 21 Pavilhão de Química
- 22 Pavilhão do Jardim Sul
- 23 Infantário
- 24 Pavilhão de Matemática
- 25 Pavilhão de Física
- 26 Complexo Interdisciplinar

The **congress centre** ★ has one auditorium and 4 meeting rooms that will be used during MARTECH for the parallel sessions.

## Important Contacts

Congress Centre	CENTEC	Other CONTACTS
Centro de Congressos Instituto Superior Técnico Avenida Rovisco Pais 1049 – 001 Tel: +351 218 418 069	Centre for Marine Technology and Engineering Instituto Superior Técnico Avenida Rovisco Pais 1049 – 001 Tel: +351 218 417 468	EMERGENCY NUMBER – 112

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