2nd 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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Marcelo Ramos Martins, Brazil
Matthew Collette, USA
Mirek Kaminski, The Netherlands
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Nianzhong Chen, USA
Nicholas Tsouvalis, Greece
Nikolaos P. Ventikos, Greece
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Maria de Fátima Pina, IST, Universidade de Lisboa, Portugal
Sandra Ponce, IST, Universidade de Lisboa, Portugal
### SCHEDULE AT A GLANCE

**Wednesday, 15 October 2014**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location and Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Registration</strong> (Hall 01 – from 08h00 onwards)</td>
<td></td>
</tr>
<tr>
<td>08h00 - 12h30</td>
<td>Instituto Superior Técnico – Congress Centre</td>
</tr>
<tr>
<td><strong>Opening Session (09h30-10h30) - Auditorium</strong></td>
<td></td>
</tr>
<tr>
<td>09h30 - 10h30</td>
<td>Keynote lectures</td>
</tr>
<tr>
<td>10h30 - 11h00</td>
<td>Coffee-break</td>
</tr>
<tr>
<td>11h00 - 12h30</td>
<td>Lunch (12h30-14h00)</td>
</tr>
</tbody>
</table>

**Auditorium (11h00-12h30)**
- Ports
- Longitudinal Strength
- Ship Seakeeping
- Wave Statistics

**Room 02.1 (11h00-12h30)**
- Structural Energy Absorption
- Seakeeping and Slamming
- Wind and Wave Modelling

**Room 01.1 (14h00-15h30)**
- Maritime Transportation
- Ship Structural Components
- Ship Dynamics and Hydrodynamics
- Wave Modelling

**Room 02.1 (14h00-15h30)**
- Offshore Platform Dynamics
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 01.1 (16h00-17h30)**
- Inland Navigation
- Ship Structural Components
- Ship Dynamics and Hydrodynamics
- Wave Modelling

**Room 02.1 (16h00-17h30)**
- Maritime Transportation
- Maritime Economy
- Shallow water Hydrodynamics
- Oil and Gas II

**Room 02.2 (16h00-17h30)**
- Structural Energy Absorption
- Seakeeping and Slamming
- Wind and Wave Modelling

**Room 02.3 (16h00-17h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 02.2 (16h00-17h30)**
- Maritime Transportation
- Maritime Economy
- Shallow water Hydrodynamics
- Oil and Gas II

**Room 02.3 (16h00-17h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 01.1 (17h30-18h30)**
- Design Optimization
- Ship Design
- Maritime Accidents
- Structural Reliability & Risk

**Room 02.1 (17h30-18h30)**
- Ship Traffic
- Maritime Accidents
- Efficient Propulsion and Control
- Oscillating Water Column Converters

**Room 02.2 (17h30-18h30)**
- Ship Propulsion
- Ship Propulsion and Environment
- Renewable energy II

**Room 02.3 (17h30-18h30)**
- Renewable energy I
- Oscillating Water Column Converters

**20:00 h - Conference Dinner**

**Thursday, 16 October 2014**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td><strong>Registration</strong> (Hall 01 – from 08h00 onwards)</td>
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</tr>
<tr>
<td>09h00 - 10h30</td>
<td>Fisheries &amp; Aquaculture I</td>
</tr>
<tr>
<td>10h30 - 11h00</td>
<td>Fisheries &amp; Aquaculture II</td>
</tr>
<tr>
<td>11h00 - 12h30</td>
<td>Energy Efficiency</td>
</tr>
<tr>
<td>12h30 - 14h00</td>
<td>Oil and Gas II</td>
</tr>
<tr>
<td>14h00 - 15h30</td>
<td>Auditorium (14h00-15h30)</td>
</tr>
<tr>
<td>15h30 - 16h00</td>
<td>Oil and Gas II</td>
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</tbody>
</table>

**Room 01.1 (09h00 – 10h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 01.1 (11h00-12h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 02.1 (16h00-17h30)**
- Maritime Transportation
- Maritime Economy
- Shallow water Hydrodynamics
- Oil and Gas II

**Room 02.2 (16h00-17h30)**
- Structural Energy Absorption
- Seakeeping and Slamming
- Wind and Wave Modelling

**Room 02.3 (16h00-17h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**20:00 h - Conference Dinner**

**Friday, 17 October 2014**

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<thead>
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<tr>
<td><strong>Registration</strong> (Hall 01 – from 08h00 onwards)</td>
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<tr>
<td>09h00 - 10h30</td>
<td>Renewable energy I</td>
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<tr>
<td>10h30 - 11h00</td>
<td>Renewable energy II</td>
</tr>
<tr>
<td>11h00 - 12h30</td>
<td>Oscillating Water Column Converters</td>
</tr>
<tr>
<td>12h30 - 14h00</td>
<td>Environmental Impact</td>
</tr>
<tr>
<td>14h00 - 15h30</td>
<td>Room 02.1 (14h00-15h30)</td>
</tr>
</tbody>
</table>

**Room 01.1 (09h00 – 10h30)**
- Design Optimization
- Ship Design
- Maritime Accidents
- Structural Reliability & Risk

**Room 01.1 (11h00-12h30)**
- Design Optimization
- Ship Design
- Maritime Accidents
- Structural Reliability & Risk

**Room 02.1 (16h00-17h30)**
- Maritime Transportation
- Maritime Economy
- Shallow water Hydrodynamics
- Oil and Gas II

**Room 02.2 (16h00-17h30)**
- Structural Energy Absorption
- Seakeeping and Slamming
- Wind and Wave Modelling

**Room 02.3 (16h00-17h30)**
- Offshore Platform Design
- Offshore Platform Design
- Computational Fluid Dynamics
- Computer Aided Ship Design

**Room 02.1 (17h30-18h30)**
- Design Optimization
- Ship Design
- Maritime Accidents
- Structural Reliability & Risk

**Room 02.2 (17h30-18h30)**
- Ship Traffic
- Maritime Accidents
- Efficient Propulsion and Control
- Oscillating Water Column Converters

**Room 02.3 (17h30-18h30)**
- Renewable energy II
- Oscillating Water Column Converters

**Room 02.1 (18h30-19h30)**
- Renewable energy I
- Renewable energy II

**Room 02.2 (18h30-19h30)**
- Ship Propulsion
- Ship Propulsion and Environment
- Oscillating Water Column Converters

**Room 02.3 (18h30-19h30)**
- Renewable energy II
- Oscillating Water Column Converters

**20:00 h - Conference Dinner**
• Composite structures – Room 02.1
  Thursday, 16th October 2014 – 14:00 h – 15:30 h

• Computational fluid dynamics – Room 01.1
  Thursday, 16th October 2014 – 14:00 h – 15:30 h

• Computer aided ship design – Room 01.1
  Friday, 16th October 2014 – 16:00 to 17:30 h

• Design optimization – Room 01.1
  Friday, 17th October 2014 – 9:00 to 10:30 h

• Efficient propulsion & control – Room 02.2
  Friday, 17th October 2014 – 11:00 h – 12:30 h

• Energy efficiency – Room 02.2
  Thursday, 16th October 2014 – 11:00 h – 12:30 h

• Environmental impact – Room 02.2
  Friday, 17th October 2014 – 16:00 to 17:30 h

• Fisheries and Aquaculture I – Room 02.3
  Thursday, 16th October 2014 – 9:00 to 10:30 h

• Fisheries and Aquaculture II – Room 02.3
  Thursday, 16th October 2014 – 11:00 h – 12:30 h

• Inland navigation – Room 01.1
  Wednesday, 15th October 2014 – 16:00 h – 17:30h

• Keynote lectures – Auditorium
  Wednesday, 15th October 2014 – 9:00 to 10:30 h

• Longitudinal strength – Room 02.1
  Wednesday, 15th October 2014 – 11:00 h – 12:30h

• Maritime accidents – Room 02.1
  Friday, 17th October 2014 – 11:00 to 12:30 h

• Maritime economy – Room 02.1
  Thursday, 16th October 2014 – 16:00 h – 17:30 h

• Maritime transportation – Room 01.1
  Wednesday, 15th October 2014 – 14:00 h – 15:30h

• Offshore platform design – Room 01.1
  Thursday, 16th October 2014 – 11:00 h – 12:30 h

• Offshore platform dynamics – Room 01.1
  Thursday, 16th October 2014 – 9:00 to 10:30 h

• Oil and Gas I – Auditorium
  Thursday, 16th October 2014 – 14:00 h – 15:30 h

• Oil and Gas II – Auditorium
  Thursday, 16th October 2014 – 16:00 h – 17:30 h

• Oscillating water columns converters – Room 02.3
  Friday, 17th October 2014 – 14:00 to 15:30 h

• Ports – Room - Auditorium
  Wednesday, 15th October 2014 – 11:00 h – 12:30h

• Renewable energy 1 – Room 02.3
  Friday, 17th October 2014 – 9:00 to 10:30 h

• Renewable energy 2 – Room 02.3
  Friday, 17th October 2014 – 11:00 to 12:30 h

• Seakeeping & slamming – Room 02.2
  Wednesday, 15th October 2014 – 14:00 h – 15:30h

• Shallow water hydrodynamics – Room 02.2
  Thursday, 16th October 2014 – 16:00 h – 17:30 h

• Ship design – Room 01.1
  Thursday, 16th October 2014 – 11:00 to 12:30 h

• Ship dynamics & hydrodynamics – Room 02.2
  Wednesday, 15th October 2014 – 16:00 h – 17:30h

• Ship manoeuvring – Room 02.2
  Thursday, 16th October 2014 – 14:00 h – 15:30h

• Ship propulsion – Room 02.2
  Friday, 17th October 2014 – 9:00 to 10:30 h

• Ship propulsion & environment – Room 02.2
  Friday, 17th October 2014 – 14:00 to 15:30 h

• Ship resistance – Room 02.2
  Thursday, 16th October 2014 – 9:00 to 10:30 h

• Ship seakeeping – Room 02.2
  Wednesday, 15th October 2014 – 11:00 h – 12:30h

• Ship structural components – Room 02.1
  Wednesday, 15th October 2014 – 16:00 h – 17:30h

• Ship traffic – Room 02.1
  Friday, 17th October 2014 – 9:00 to 10:30 h

• Shipyard technology – Room 02.1
  Friday, 17th October 2014 – 16:00 to 17:30 h

• Stiffened panels – Room 02.1
  Thursday, 16th October 2014 – 11:00 h – 12:30 h

• Strength of welded plates – Room 02.1
  Thursday, 16th October 2014 – 9:00 to 10:30 h

• Structural energy absorption – Room 02.1
  Wednesday, 15th October 2014 – 14:00 h – 15:30h

• Structural reliability & risk – Room 02.1
  Friday, 17th October 2014 – 14:00 to 15:30 h

• Wave modelling – Room 02.3
  Wednesday, 15th October 2014 – 16:00 h – 17:30h

• Wave statistics – Room 02.3
  Wednesday, 15th October 2014 – 11:00 h – 12:30h

• Wind & wave modelling – Room 02.3
  Wednesday, 15th October 2014 – 14:00 h – 15:30h
# DETAILED PROGRAMME

**Wednesday, 15th October 2014**

<table>
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<tr>
<th>Time: 9:00 to 10:30 h</th>
<th>Keynote lectures</th>
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<tbody>
<tr>
<td>Chair:</td>
<td>Auditorium</td>
</tr>
<tr>
<td>The past, present and future of the ocean engineering activities</td>
<td>H. Maeda</td>
</tr>
<tr>
<td>Risk assessment for ship collision against offshore structures</td>
<td>P. T. Pedersen</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time: 11:00 h – 12:30 h</th>
<th>PORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair:</td>
<td>Auditorium</td>
</tr>
<tr>
<td>The container terminal characteristics and customer satisfaction</td>
<td>V. Caldeirinha, J. A. Felicio &amp; A. Dionisio</td>
</tr>
<tr>
<td>Performance evaluation using data envelopment analysis: the case of Portuguese General Cargo Terminals</td>
<td>J. F. C. Grilo &amp; J. C. Q. Dias</td>
</tr>
<tr>
<td>A System Dynamics model for evaluating container terminal management policies</td>
<td>A. M. P. Santos, J. P. Mendes &amp; C. Guedes Soares</td>
</tr>
<tr>
<td>Methodology and tools to design container terminals</td>
<td>T. A. Santos, M. Marques &amp; C. Guedes Soares</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time: 14:00 to 15:30 h</th>
<th>MARITIME TRANSPORTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair:</td>
<td>Room 01.1</td>
</tr>
<tr>
<td>A maritime transportation network model.</td>
<td>A. M. P. Carreira, J. P. Mendes &amp; C. Guedes Soares</td>
</tr>
<tr>
<td>Assessment of motorways of the sea through a method based on analysis of decision groups.</td>
<td>A. Martinez-López, A. Munin-Doce &amp; D. Pena-Agras</td>
</tr>
<tr>
<td>Competition dynamics between the Hamburg-Le Havre and the Mediterranean port ranges</td>
<td>A. M. P. Santos &amp; C. Guedes Soares</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time: 11:00 h – 12:30 h</th>
<th>WAVE STATISTICS</th>
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</thead>
<tbody>
<tr>
<td>Chair:</td>
<td>Room 02.3</td>
</tr>
<tr>
<td>Wind and wave climate over the Black Sea</td>
<td>Z. Cherneva, C. Guedes Soares &amp; N. Andreeva</td>
</tr>
<tr>
<td>Outliers identification in a wave hindcast dataset used for Regional Frequency Analysis</td>
<td>C. Lucas, G. Muraleedharan &amp; C. Guedes Soares</td>
</tr>
<tr>
<td>Weather window analysis of a site off Portugal</td>
<td>D. Martins, G. Muraleedharan &amp; C. Guedes Soares</td>
</tr>
<tr>
<td>Extreme wave statistics of linear and nonlinear waves in Hurricane Camille</td>
<td>A. Veltcheva &amp; C. Guedes Soares</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Time: 14:00 to 15:30 h</th>
<th>STRUCTURAL ENERGY ABSORPTION</th>
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<tbody>
<tr>
<td>Chair:</td>
<td>Room 02.1</td>
</tr>
<tr>
<td>Cryogenic crashworthiness of LNG fuel storage tanks</td>
<td>B. Atli-Veltin &amp; A. W. Vredeveldt</td>
</tr>
<tr>
<td>Structural analysis under ice loads for ships operating in arctic waters.</td>
<td>S. Ehlers, B. Erceg, I. Jordaan &amp; R. Taylor</td>
</tr>
<tr>
<td>Experimental and numerical study on response of rectangular tubes subjected to transverse quasi-static and impact loadings.</td>
<td>B. Liu &amp; C. Guedes Soares</td>
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</table>

**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**
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

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 Tietê-Paraní waterway Lake of Ilha Solteira’s Dam Brazil
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<thead>
<tr>
<th>Time: 9:00 to 10:30 h</th>
<th>FISHERIES AND AQUACULTURE I</th>
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<tbody>
<tr>
<td>OFFSHORE PLATFORM DYNAMICS</td>
<td>Room 02.3</td>
</tr>
<tr>
<td>Chair: X. Cheng &amp; B. Wu</td>
<td>Chair: Aida Campos e Nuno Lourengo</td>
</tr>
<tr>
<td>Effect of wave particle velocity on drag force on semi-submersibles.</td>
<td>(ORAL PRESENTATIONS ONLY)</td>
</tr>
<tr>
<td>X. Cheng &amp; B. Wu</td>
<td>Portuguese Integrated Maritime Surveillance and Monitoring - Towards Blue Growth</td>
</tr>
<tr>
<td>Hydrodynamic analysis of Amir-Kabir semi-submersible platform.</td>
<td>F. Dias Marques</td>
</tr>
<tr>
<td>M. Ezoji, A. R. M. Gharabaghi &amp; H. Gol-Zaroudi</td>
<td>Combining fisheries-dependent data to produce information relevant for integrated management</td>
</tr>
<tr>
<td>Comparison of floating structures motion prediction between diffraction, diffraction-viscous and diffraction-Morison methods</td>
<td>A. Campos, T. Fonseca, P. Fonseca, J. Parente, V. Henriques</td>
</tr>
<tr>
<td>K. Jaswar, C. L. Slow, N. M. Khairuddin, H. Abyn &amp; C. Guedes Soares</td>
<td>Fishing the most out of vessel monitoring system (VMS): lessons learned analyzing data from the Portuguese trawl fleet</td>
</tr>
<tr>
<td>Behavior of a riser with BOP suspended by the drilling vessel in movement</td>
<td>T. Fonseca, A. Campos, M. Afonso-Dias</td>
</tr>
<tr>
<td>C. K. Morooka, J. R. P. Mendes &amp; K. Miura</td>
<td>Integrating oceanographic and biological observations to study marine populations and their connectivity</td>
</tr>
<tr>
<td></td>
<td>AMP Santos, C. Bartilotti, S. Garrido, A. Moreno, A. Peliz, RFT Pires, P. Ré, A. dos Santos</td>
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<table>
<thead>
<tr>
<th>STRENGTH OF WELDED PLATES</th>
<th>Room 02.1</th>
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<tbody>
<tr>
<td>Chair: B. Q. Chen &amp; C. Guedes Soares</td>
<td></td>
</tr>
<tr>
<td>Study on ultimate strength of ship plates considering weld-induced residual stresses.</td>
<td></td>
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<tr>
<td>S. Saad-Eldeen, Y. Garbatov &amp; C. Guedes Soares</td>
<td></td>
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<tr>
<td>Analysis of butt-weld induced distortion accounting for the welding sequences and weld toe geometry</td>
<td></td>
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<tr>
<td>M. Hashemzadeh, Y. Garbatov &amp; C. Guedes Soares</td>
<td></td>
</tr>
<tr>
<td>Numerical investigation of the thermal fields due to the welding sequences of butt-welds</td>
<td></td>
</tr>
<tr>
<td>M. Hashemzadeh, Y. Garbatov &amp; C. Guedes Soares</td>
<td></td>
</tr>
<tr>
<td>Compressive strength assessment of rectangular steel plates accounting for the presence of a local dent or an opening</td>
<td></td>
</tr>
<tr>
<td>S. Saad-Eldeen, Y. Garbatov &amp; C. Guedes Soares</td>
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<td>Strength assessment of wash plates subjected to combined lateral and axial loading.</td>
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<td>Numerical simulation of added resistance in head waves: a RANSE and BEM approach</td>
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<td>Experimental investigation of the wake flow of a bulk-carrier model using a five-hole pitot arrangement</td>
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<td>H. B. Moraes, R. M. Moraes &amp; P. A. Wilson</td>
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<td>The effect of free-surface simulations on the resistance and propulsion characteristics of a ship</td>
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<td>Strength assessment of an imperfect stiffened panel with modified stress-strain curve.</td>
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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. Ciortan & J. Sun
Influence of ship routes on fuel consumption and CO\(_2\) emission
J. Prpić-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. Tauty 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
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. Hinostroza, 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
“XXXXXXXXXXXXXXXXX"
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

Propagation of waves generated by a pressure disturbance moving in a channel

Friday, 17th October 2014

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. Harduin & 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 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

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. Podražka & 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. Cameros Lozano

Conceptual definition of one OTEC floating plant
L. R. Nuñez Rivas, A. Muñoz Yraola, L. Blay Muñoz & L. Pecharroman de las Heras
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

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
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:

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

Important Contacts

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