



1st International Conference on Maritime Technology and Engineering



MARTECH 2011

PROGRAMME

Tuesday, 10 May 2011

Instituto Superior Técnico – Congress Centre

Registration (Hall 01 – from 08h00 onwards)

Opening Session (Auditorium – 09h30-10h30)

Coffee-break (10h30-11h00)

<i>Auditorium (11h00-12h30)</i> <i>Session: Maritime Industry I</i>	<i>Room 02.1 (11h00-12h30)</i> <i>Session: Ship Design I</i>
MAR - International Shipping Register of Madeira, <i>M. Sequeira, Int. Shipping Register of Madeira</i>	Design Development of an Oil and Garbage Collector and Boom Layer Vessel, <i>J.A. Valente, EUROSHIDE, P. Antunes, L. Batista, VeraNavis-Lisboa & S. Ribeiro e Silva, CENTEC/IST</i>
Promoção da Indústria Naval Portuguesa, <i>O. Mota, J. Ventura de Sousa, AIN & N. Antunes dos Santos, Navalria</i>	Análise das Características de Projecto das Embarcações da Amazônia: uma Contribuição para a Elaboração de Projectos Navais, <i>H. Moraes & R.C. Moraes, Universidade Federal do Pará</i>
Trends in the movement of goods through the Portuguese Ports, <i>J. Quaresma Dias, C. Guedes Soares, CENTEC/IST & R. Salvador, FCSH/UNL</i>	Hull Shape Design of a Compressed Natural Gas Ship, <i>E.B.Malta, M.C.Nogueira, A.A.Ramos & C.M.Sampaio, Univ. São Paulo</i>
HELM - PwC Economy of the Sea Barometer, <i>M. Marques, PriceWaterhouseCoopers</i>	Generation of an Adaptive Triangular Mesh from a Parametric Surface, <i>J. M. Varela & M. Ventura, CENTEC/IST</i>

Lunch (12h30-14h00)

<i>Auditorium (14h00-15h30)</i> <i>Session: Cluster do Mar</i>	<i>Room 02.1 (14h00-15h30)</i> <i>Session: Ship Design II</i>
O Hypercluster da Economia do Mar em Portugal – Um projecto em curso, <i>F.R. Castro, FEEM</i>	Design of a 360 Passenger and 30 Vehicles Ferry, <i>J. Cruz, L. Correia & M. Leal, One Ocean Lda.</i>
Planeamento do Espaço Marítimo e do Cluster do Mar Português, <i>A. Simões R. Salvador, CEGPR-UNL & C. Guedes Soares, CENTEC/IST</i>	Desenvolvimento do Projecto de um Navio Tipo para o Transporte de Contêiner na Região Amazônica, <i>H. Braga de Moraes & Y.V. Remigio Guedes, Universidade Federal do Pará</i>
As relações intersectoriais no Cluster do Mar Português, <i>A. Ferreira, R. Salvador, CEGPR-UNL & C. Guedes Soares, CENTEC/IST</i>	Challenges and Strategy for the Design of Sustainable Marine Vessels, <i>A.F. Mateus & F.C. Salvado, Portuguese Navy & J.A. Witz, HESS</i>
Influencia de Factores de Caracterização dos Portos no Desempenho, <i>V. Caldeirinha & J. Augusto Felício, ISEG/UTL</i>	Ship Preliminary Design, <i>Manuel Barros, ENVC</i>

Coffee-break (15h30-16h00)

<i>Auditorium (16h00-17h30)</i> <i>Session: Ship Traffic</i>	<i>Room 02.1 (16h00-17h30)</i> <i>Session: Ship Design III</i>	<i>Room 02.2 (16h00-17h30)</i> <i>Session: Maritime Industry II</i>
The Importance of Satellite-based Vessel Monitoring System (VMS) for Fisheries Management – a case study in the Portuguese Trawl Fleet, <i>T.Fonseca, A.Campos, P.Fonseca, B.Mendes, V.Henriques, J.Parente, IPIMAR & M.Afonso-Dias, Univ. do Algarve</i>	Pipe Layout and Cable Routing Optimization, <i>P.T. Martins & V. Lobo, Escola Naval, Alfeite</i>	Comunidade Portuária de Aveiro, <i>R. Paulo, CPA</i>
Maritime Situational Awareness Indicators Based on AIS and MONICAP Information, <i>R. Gonçalves de Deus & R. Alves Francisco, Portuguese Navy</i>	Non-Linear Optimization Applied to Preliminary Ship Design, <i>J. Ruas & M. Ventura, CENTEC/IST</i>	RINA Rules: A General View on Plan Approval Process, <i>J. Ampuero Villagran, RINA Iberia</i>
Analysis of Maritime Traffic off the Coast of Portugal, <i>P. Silveira, A.P. Teixeira & C. Guedes Soares, CENTEC/IST</i>	Short Sea Shipping Route and Stowage Plan Optimization, <i>P.T. Martins & V. Lobo, Escola Naval, Alfeite & A. Moura, Universidade de Aveiro</i>	Electric Cables for Ship and Offshore Applications, <i>R. Lisardo, Prysmian</i>
Intelligent Collision Avoidance Facilities for Maritime Transportation, <i>L.P. Perera, CENTEC/IST, J.P. Carvalho, INESC-ID/IST & C. Guedes Soares, CENTEC/IST</i>	Planning a Fleet of Containerships for a Given Set of Ports, <i>C.M.A. Silva & C. Guedes Soares, IST</i>	Continuous Improvement of Productive Processes, <i>Pajares de Tena, P., Galán Garcia, G., GHENOVA Ingenieria</i>

Wednesday, 11 May 2011

Registration (Hall 01 – from 08h00 onwards)

<i>Auditorium (09h00-10h30)</i> <i>Session: Ship Structures I</i>	<i>Room 02.1 (09h00-10h30)</i> <i>Session: Ship Dynamics and Hydrodynamics I</i>	<i>Room 02.2 (09h00-10h30)</i> <i>Session: Ship Design IV</i>
Numerical Investigations to Study the Effect of Weld Parameters on the Temperature-time History in Steel Plates, <i>B.Q. Chen, M. Adak & C. Guedes Soares, CENTEC/IST</i>	Dynamic analysis of a Purse Seiner and a Trawler fishing vessels in the Portuguese coastal zone, <i>M. Tello Ruiz, S. Ribeiro e Silva & C. Guedes Soares, CENTEC/IST</i>	Experimental Study of the Performance of a Rigid Wing Sail, <i>J.H. Bettencourt, N. Fonseca & C. Guedes Soares, CENTEC/IST</i>
Influences of Boundary Constraints on the Residual Stresses and Deformations in a High Strength Steel Plate after Welding, <i>M. Adak & C. Guedes Soares, CENTEC/IST</i>	Prediction of the Motions of Fishing Vessels using Time Domain 3D Panel Method, <i>R. Datta, J.M. Rodrigues & C. Guedes Soares, CENTEC/IST</i>	Considering Disabled People in Sailing Yacht Design, <i>F. Cerveira, N. Fonseca & L. Sutherland, CENTEC/IST</i>
Tensile Test Simulations for Nonlinear Failure Prediction, <i>R. Villavicencio & C. Guedes Soares, CENTEC/IST</i>	Experiment and Time Domain Method Comparison for Responses on a Container Ship in Extreme Seas and the Effect of Shipping of Green Water, <i>S. Rajendran, N. Fonseca, & C. Guedes Soares, CENTEC/IST</i>	Sail Boat Preliminary Design using a Multidisciplinary Optimization Based on Genetic Algorithms, <i>W. Jose Jr. & M. Vasconcellos, Universidade Federal do Rio de Janeiro</i>
Mechanical Properties Assessment of Specimens Subjected to Random Non-uniform General Corrosion and Tensile Load, <i>B.Q. Chen, Y. Garbatov & C. Guedes Soares, CENTEC/IST</i>	Decision Support System for the Safe Operation of Fishing Vessels in Waves, <i>J.M. Rodrigues, L.P. Perera & C. Guedes Soares, CENTEC/IST</i>	Economic Impact of Sailing Activities, <i>John Duggan, PriceWaterhouseCoopers</i>

Coffee-break (10h30-11h00)

Wednesday, 11 May 2011

<i>Auditorium (11h00-12h30)</i> <i>Session: Ship Structures II</i>	<i>Room 02.1 (11h00-12h30)</i> <i>Session: Ship Dynamics and Hydrodynamics II</i>	<i>Room 02.2 (11h00-12h30)</i> <i>Session: Onboard Systems</i>
Fatigue Strength Assessment of Welded Ship Structures based on Experimental and Numerical Analyses, <i>W. Fricke, Hamburg University of Technology</i>	Análise do Efeito de Águas Rasas no Projecto do Canal de Navegação do rio Tocantins, <i>N. Figueiredo & H. Moraes, Universidade Federal do Pará</i>	The Future of Platform Integration Systems on Ships. <i>V. Alankaya & F. Alarçin, Yildiz Technical University</i>
Fatigue Damage Assessment of Stiffener-frame Structure, <i>W. Huang, Y. Garbatov & C. Guedes Soares, CENTEC/IST</i>	Interação da Agitação Marítima com Navios durante a Entrada no Porto, <i>S. Rodrigues, LNEC & J. Alfredo Santos, ISEL</i>	Bridge Officer Decision Support Tool, <i>P.T. Martins & V. Lobo, Escola Naval, Alfeite</i>
Fatigue Damage Assessment of a Tanker Structural Detail Based on the Effective Notch Stress Approach, <i>K.T. Nguyen, Y. Garbatov & C. Guedes Soares, CENTEC/IST</i>	Ship Hydrodynamic Interaction Forces in Restricted Waters, <i>XQ. Zhou, S. Sutulo & C. Guedes Soares, CENTEC/IST</i>	Automation, Electronic Onboard, New Tendencies, Load Calculator, <i>G. Martinez Perez, S.A. SEDNI</i>
Resistance of a Tanker Double Bottom during Various Grounding Scenarios, <i>R. Villavicencio & C. Guedes Soares, CENTEC/IST & J. Amdahl, Norwegian Univ. of Science & Technology</i>	Estimation of Hull Bending Moment and Shear Force from Ship Motions using Neural Networks, <i>L. Moreira & C. Guedes Soares, CENTEC/IST</i>	Broadband Communications with Ad hoc Networks - Case study with simulated scenarios, <i>F. Correia, Inesc-ID, Alfeite & J. Santos & P. Mesquita, Escola Naval</i>

Lunch (12h30-14h00)

<i>Auditorium (14h00-15h30)</i> <i>Session: Ship Structures III</i>	<i>Room 02.1 (14h00-15h30)</i> <i>Session: Sea Waves I</i>	<i>Room 02.2 (14h00-15h30)</i> <i>Session: Ship Propulsion & Control</i>
Structural Reinforcement Study of a Floating Dock Mooring Structure using FEM Software, <i>T. Carvalho, E. Mota & A. Correia Rodrigues, LISNAVE</i>	Nonlinear Ocean Wave Groups with High Waves. <i>F. Arena, Mediterranea University, Reggio Calabria</i>	Conditioned Maintenance - Predictive Analysis in Maritime Propulsion Engines, <i>S. Lampreia, Escola Naval, V. Vairinhos, CINAV & CENTEC/IST, A.S. Matos, J. Gomes Requeijo & J. Mendonça Dias, FCT/UNL</i>
Analysis of the Fluid-Structure Interaction of a Composite Motor Yacht, <i>H. Bagbanci, N. Baykut, A. S. Oktem, C. Guedes Soares, CENTEC/IST</i>	Joint Long Term Models of Met-Ocean Parameters, <i>E. Bitner-Gregersen, Det Norske Veritas</i>	Controllable Pitch Propeller Control With Neural Network Algorithm, <i>F. Alarçin & S. Ekinici, Yildiz Technical University</i>
Structural Behaviour of a Lightweight Craft, <i>M.S. Santos, R.F. Martins, UNIDEMI/UNL, P. Pires da Silva & A. Mateus, Portuguese Navy</i>	Modelling of Deep-water Rogue Waves: Different Frameworks, <i>A.V. Slunyaev, A.V. Sergeeva & E.N. Pelinovsky, IAP, Dept of Nonlinear Geophysical Processes, Nizhny Novgorod</i>	Non-linear Control Approach for a Vessel Steering System, <i>L.P. Perera & C. Guedes Soares, CENTEC/IST</i>
Explicit FE Simulation of Slamming Load on Rigid Wedge with Various Deadrise Angles during Water Entry, <i>S. Wang, HB. Luo & C. Guedes Soares, CENTEC/IST</i>		Conversion of large-bore diesel engines for heavy fuel oil and natural gas dual fuel operation, <i>Jorge Antunes, TecnoVeritas</i>

Coffee-break (15h30-16h00)

<i>Auditorium (16h00-17h30)</i> <i>Session: Ship Structures IV</i>	<i>Room 02.1 (16h00-17h30)</i> <i>Session: Sea Waves II</i>	<i>Room 02.2 (16h00-17h30)</i> <i>Session: Platforms & Renewable Energies</i>
Resistência a Compressão do Duplo Fundo sob a Acção de Carregamento em Porões Alternados, <i>J.M. Gordo, CENTEC/IST</i>	Maximum Entropy Modelling of Extreme Significant Wave Heights on Portuguese Coast, <i>V. Petrov, C. Guedes Soares, CENTEC/IST & H. Gotovac, University of Split</i>	Projecto CARCACE – Inovações no Design Modular de uma Plataforma de Afundamento para Diversos Tipos de Instrumentação Oceanografia, <i>D.A. Ribeiro & A. Hilário, Universidade de Aveiro</i>
FE Parameters Estimation and Analysis of Ultimate Strength of a Box Girder, <i>S. Saad-Eldeen, Y. Garbatov & C. Guedes Soares, CENTEC/IST</i>	Assessment of Wave Height Extreme Quantiles in North Atlantic using Regional Frequency Analysis, <i>C. Lucas, G. Muraleedharan & C. Guedes Soares, CENTEC/IST</i>	Desenvolvimento de uma Plataforma Autónoma de Recolha de Dados Ambientais Oceanicos, <i>J. Moura Ferreira, alterStrat – Gestão e Inovação, Lda.</i>
Study on Ultimate Torsional Strength of Ship Hull Models, <i>B. Liu & C. Guedes Soares, CENTEC/IST</i>	Influence of Wave Data Bases on the Long Term Prediction of Wave Induced Loads in Ships, <i>J. Queirós, C. Guedes Soares, CENTEC/IST & M. Bernardino, Portuguese Meteorology Institute</i>	Apresentação da Zona Piloto, <i>J. Freire Cardoso, REN</i>
Ultimate strength of narrow dent stiffened panels subjected to compressive loads, <i>MC. Xu & C. Guedes Soares, CENTEC/IST</i>	Modelling the Wave Conditions in the Archipelago of Azores, <i>L. Rusu, P. Pilar & C. Guedes Soares, CENTEC/IST</i>	Uma visão exterior sobre as energias marinhas, <i>J. Freire Cardoso, REN</i>

Thursday, 12 May 2011

Registration (Hall 01 – from 08h00 onwards)

<i>Auditorium (09h00-10h30)</i> <i>Session: Ship Structures V</i>	<i>Room 02.1 (09h00-10h30)</i> <i>Session: Renewable Energy I</i>	<i>Room 02.2 (09h00-10h30)</i> <i>Session: Sustainable Ships</i>
A New Trigonometric Shear Deformation Theory for Sandwich and Composite Laminated Plates, <i>J.L. Mantari, A.S. Oktem & C. Guedes Soares, CENTEC/IST</i>	Review and Modes of Operation of Wave Energy Converters, <i>L. Pietra, M. Tello, J. Bhattacharjee, C. Guedes Soares, CENTEC/IST</i>	Innovation Protecting Ballast Tanks of New Ships Against Corrosion: an IMO PSPC-Compliant Portuguese-born New Coating Concept, <i>J. Azevedo, EuroNavy Engineering SA</i>
Numerical Study of the Effect of Geometry and Boundary Conditions on the Collapse Behaviour of Long Stiffened Panels, <i>MC. Xu & C. Guedes Soares, CENTEC/IST</i>	Computational Simulation of a Buoy Behaviour for Automation and Power Generation of Aquaculture Facilities, <i>S. Ferreiro & A. Munin, Cetnaga – Centro Tecnológico del Naval Gallego & V. Díaz-Casas, P. Fariñas & F. López Peña, University of A Coruña</i>	Green Ship: New Ideas for Environmentally Friendly Ships, <i>A. Safa & U.B. Celebi, Yildiz University of Technology</i>
Layerwise Finite Element Formulation for the Analysis of Laminates and Sandwich Panels, <i>J.L. Mantari, A.S. Oktem & C. Guedes Soares, CENTEC/IST</i>	Conceptual Design of an Ocean Current Turbine for Deep Waters, <i>L.R. Nuñez Rivas, A. López Piñeiro, J.A. Somolinos Sánchez & F. Robledo de Miguel, ETSIN, Techn.Univ. of Madrid</i>	Emissions and Energy and the new IMO regulations, <i>Jorge Antunes, TecnoVeritas</i>
Response of Stiffeners with Attached Plate Subjected to Lateral Impact, <i>R. Villavicencio, B. Liu & C. Guedes Soares, CENTEC/IST</i>	Reflection and Transmission of Gravity Waves by a Large Floating Circular Elastic Plate, <i>J. Bhattacharjee & C. Guedes Soares, CENTEC/IST</i>	Environmental Effects of Ship Breaking and Recycling, <i>U.B. Celebi, A. Safa & M. Kultur, Yildiz University of Technology</i>

Coffee-break (10h30-11h00)

<i>Auditorium (11h00-12h30)</i> <i>Session: Tecnologia de Estaleiros</i>	<i>Room 02.1 (11h00-12h30)</i> <i>Session: Renewable Energy II</i>	<i>Room 02.2 (11h00-12h30)</i> <i>Session: Wave and Wind Modelling</i>
Sustentabilidade dos Processos Anticorrosivos na Construção Naval, <i>M. Paiva & C. Carvalho, EuroNavy Engineering SA</i>	Review of Offshore Floating Wind Turbines Concepts, <i>H. Bagbanci, D. Karmakar, A. Knappmann & C. Guedes Soares, CENTEC/IST</i>	Avaliação da Simulação de Vento e Agitação Marítima num Mar Fechado Utilizando Dados de Satélite, <i>M. Bernardino, N. Salvação, Instituto Meteorológico & L. Rusu, CENTEC/IST</i>
Solda Robotizada, um Estudo de Caso, <i>R.B. Fonseca & N.R. de Albuquerque Bezerra, Estaleiro Atlântico Sul, Brasil</i>	Multi-purpose Offshore Platform (MpOP), <i>N. Santana, Arsenal do Alfeite</i>	Comparisons of Two Wind and Wave Data Sets from the North Atlantic, <i>R.M. Campos & C. Guedes Soares, CENTEC/IST</i>
Método Automático de Planificação de Chapas Adaptado ao Processo de Enformação Térmica, <i>R. Lourenço & J.M. Gordo, CENTEC/IST</i>	Development of an Integrated System for Personnel and Equipment Transfer to Offshore Wind Turbines, <i>T.A. Santos & E. Carichas, RINA, N.Fonseca, & J.Pessoa, CENTEC/IST, F. Duarte, AIN, J. Abreu Valente, Euroshade, L. Baptista, VeraNavis, J. Cruz, M. Leal, Ocean</i>	The Global Wave Age Climate, <i>A. Semedo, Escola Naval & CENTEC/IST, A. Rutgersson, Escola Naval, A. Sterl, Royal Netherlands Meteorological Institute & K. Suseli, California Institute of Technology</i>
Estaleiro Digital. Um Estudo de Caso, <i>I. Maia & N.R. de Albuquerque Bezerra, Estaleiro Atlântico Sul, Brasil</i>	Effect of the Environment on the Design Loads on Monopile Offshore Wind Turbine, <i>H. Bagbanci, D. Karmakar & C. Guedes Soares, CENTEC/IST</i>	MM5 and WRF Comparisons and Validations in the Ligurian Sea, <i>R. Tomé, University of Azores & A. Semedo, Escola Naval & CENTEC/IST</i>

Lunch (12h30-14h00)

Thursday, 12 May 2011

<i>Auditorium (14h00-15h30)</i> <i>Session: Risk and Reliability</i>	<i>Room 02.1 (14h00-15h30)</i> <i>Session: Moorings and Ship Operations</i>	<i>Room 02.2 (14h00-15h30)</i> <i>Session: Wave Modelling</i>
Modelling the Risk of Product Spills in LNG Tankers, <i>F.B. Natacci, P. Antão & C. Guedes Soares, CENTEC/IST & M.R. Martins, Universidade de São Paulo</i>	A Static Analytical Method for the Preliminary Design of Multiple Line Mooring System, <i>A. Monarcha & N. Fonseca, CENTEC/IST</i>	Aplicação do Modelo Numérico SWAN para o Lago de Ilha Solteira, <i>A.S. Vieira, C.J. Fortes, LNEC, G.Freitas Maciel, C.R. Minussi, UNESP</i>
Reliability Assessment of a Plate Subjected to Randomly Non-uniform Corrosion and Compressive Load, <i>J.E. Silva, Y. Garbatov & C. Guedes Soares, CENTEC/IST</i>	Interaction of Gravity Waves with Moored Flexible Floating Membrane, <i>D. Karmakar & C. Guedes Soares, CENTEC/IST</i>	Evaluation of the Wave Models SWAN and STWAVE in Shallow Water using Nested Schemes, <i>M. Gonçalves, E. Rusu & C. Guedes Soares, CENTEC/IST</i>
Vertical Breakwater Reliability Analysis with Direct Integration Method, <i>L. Zhang & S. Dong, Ocean University of China & C. Guedes Soares, CENTEC/IST</i>	Wave Frequency Dynamics of a Tanker Moored Inside the Port, <i>A. Paço, N. Fonseca & C. Guedes Soares, CENTEC/IST</i>	Boussinesq-type Numerical Model for Wave Propagation Near Shore and Wave Penetration in Harbours, <i>L. Pinheiro, C.J. Fortes, J.A. Santos, LNEC, L. Fernandes, IST & M. Walkley, Leeds Univ.</i>
Risk assessment to the approach and berth of LNGC vessels at FLNG systems, <i>P. Antão & C. Guedes Soares, CENTEC/IST</i>	An Interactive 3D Manoeuvring Simulator for Offloading Operations from LNG Platforms, <i>J.M. Varela & C. Guedes Soares, CENTEC/IST</i>	Study of the Wave Transformation in the Central Part of the Portuguese Nearshore with High Resolution Models, <i>E. Rusu, M. Gonçalves & C. Guedes Soares, CENTEC/IST</i>
Production Regularity Assessment using Stochastic Petri Nets with Predicates, <i>F.P. Santos, A.P. Teixeira & C. Guedes Soares, CENTEC/IST</i>		
<i>Coffee-break (15h30-16h00)</i>		
	<i>Room 02.1 (16h00-17h30)</i> <i>Session: Renewable Energy Resources</i>	
	Analysis of Water Depth Effects on the Wave Power Resource and the Energy Captured by a Wave Energy Converter, <i>A. Monarcha & N. Fonseca, CENTEC/IST</i>	
	Modelling the Wave Energy for the Portuguese Coast, <i>D. Silva, P. Martinho & C. Guedes Soares, CENTEC/IST</i>	
	Modelling Wave Energy for the North Coast of Spain, <i>A.R. Bento, P. Martinho & C. Guedes Soares CENTEC/IST</i>	
	Assessment of the Wave Energy in Two Enclosed Seas, <i>E. Rusu & C. Guedes Soares, CENTEC/IST</i>	

Friday, 13 May 2011

<i>Jornadas Luso-Brasileiras de Engenharia Naval</i>	
Programa	
Sala 02.1 – Sessão Pública	
09h00 - 09h15	Sessão de abertura
09h15 - 10h00	Panorama actual da indústria naval portuguesa, <i>José Ventura de Sousa, AIN</i>
10h00 - 10h45	Panorama actual da indústria naval brasileira, <i>Sérgio Leal, SINAVAL</i>
<i>Pausa para Café (10h45-11h15)</i>	
11h15 - 11h30	Fórum Empresarial da Economia do Mar, <i>Fernando Ribeiro e Castro, FEEM</i>
11h30 - 11h45	Rede de Inovação para a Competitividade da Indústria Naval e Offshore, <i>Floriano Pires, UFRJ & SOBENA</i>
11h45 - 12h15	A Engenharia Naval na Universidade Federal do Rio de Janeiro, <i>Cláudio L. Baraúna Vieira, UFRJ</i>
12h15 - 12h45	A Engenharia Naval no Instituto Superior Técnico, <i>Carlos Guedes Soares, IST</i>

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