



**The AsiaLink-EAMARNET International Conference on Ship Design, Production & Operation**  
 17-18 Jan 2007, Harbin, China

Conference Sponsors:

# Conference Programme



## Day 0, 16 Jan 2007

### Conference Registration & Reception

Venue: Fortune Days Hotel

08:00 – 20:00: Conference Registration at Fortune Days Hotel, Harbin  
 18:00 – 20:00: Conference Reception (with buffet dinner at 19:00 hrs), Fortune Days Hotel

## Day 1, 17 Jan 07

### Conference Open Ceremony and Plenary Session

Venue: Seminar Hall, QI HANG Multi-Function Centre, Harbin Engineering University

07:30 – 08:30: Conference Registration at QI HANG Multi-Function Centre  
 07:45: Bus transfer from Fortune Days Hotel to Conference Venue in Harbin Engineering University  
 08:25: All delegates seated

08:30 – 08:40: Welcome Address, Prof. Zhigang Liu, President of Harbin Engineering University  
 08:40 – 08:50: Opening Remarks, Prof. Peilin Zhou, Asia-Link Project Manager, Universities of Glasgow and Strathclyde  
 08:50 – 09:10: Keynote Speech, Mr. Trevor Blakeley, invited speaker, Chief Executive of the Royal Institution of Naval Architects (RINA)  
 09:10 – 09:50: Special Lecture: *An Integrated Approach to Ship Design for Safety*, Prof. Dracos Vassalos, Universities of Glasgow and Strathclyde

09:50 – 10:20: Tea/Coffee break

<b>Conference Plenary Session</b> <i>Chairman: Prof. P.L. Zhou</i>	
10:20 – 10:40	<b>0106 Fires/Explosions onboard Greek Vessels: The Hazards, the Records &amp; the Statistical Trends</b> Nikolaos P. Ventikos, Koulis Lambrinakis, Spyridon C. Nitsopoulos, Dimitrios V. Lyridis
10:40 – 11:00	<b>0093 A Study of Effects of Gridding and Turbulence Models in CFD on Ship Resistance Calculation</b> Kang Chen, Debo Huang
11:00 – 11:20	<b>0166 Method for Generation of the Primary Response Fields in Bending and Restrained Torsion of Thin-Walled Structures</b> Vedran Zanic, Pero Prebeg, Stanislav Kitarovic
11:20 – 11:40	<b>Benchmark Report of Higher Education Courses in Ship and Marine Technology in China</b> Harbin Engineering University Report
11:40 – 12:00	<b>Benchmark Report of Higher Education and Industry of Ship and Marine Technology in Thailand</b> Kasetsart University Report

12:00 – 14:00: Lunch at Fortune Days Hotel, Bus transfer from HEU to hotel at 12:10.

<b>Technical Sessions</b>			
Venue: Fortune Days Hotel			
	<b>A: Safety and Stability</b> <i>Chairman: Prof. H. Boonstra</i>  Venue: Sun Shining Meeting Room	<b>B: Structure Design and Optimisation</b> <i>Chairman: Prof. V. Zanic</i>  Venue: Hall 1	<b>C: Machinery, Systems and Control</b> <i>Chairman: Prof. A. N. Minaev</i>  Venue: Hall 2
14:00 – 14:20	0114 <b>An Application of Risk-Based Ship Design for Damage Survivability</b> Dimitris Konovessis, Dracos Vassalos	0110 <b>Choice of the Hull at Designing the Vessel with Account of Motion</b> Oleg E. Surov, Peter P. Karpov	0050 <b>Supervisory Neural Controller of the Ship Propulsion Plant</b> Jan Kruszewski
14:20 – 14:40	0021 <b>Formal Safety Assessment for Fishery Vessels</b> Fucai Luo, Yan Lin, Zhuoshang Ji	0087 <b>Analysis of Buckling Strength Based on Common Structural Rules</b> Yuanmei Zhu, Jun Ma	0105 <b>Computer-Aided Maintenance of Ship Machinery System</b> Yihuai Hu, B. Gangadhara Prusty
14:40 – 15:00	0053 <b>A Generic Approach to Breach Size Assessment Following a Ship – Ship Collision Event</b> George Mermiris, Dracos Vassalos	0001 <b>Developable NURBS Surfaces in Ship Hull Design</b> F. Péres, J.A. Suárez	0019 <b>Corrosion and Scale Formation Process in the Marine Power Equipment</b> Alexander N. Minaev, S. V. Gnedenkov, S.V. Sinebrukhov, D.V. Mashtalyar, A.I. Bogaevskiy, A. O. Kudriavtsev
15:00 – 15:20	0045 <b>Study on Counter-Flooding Calculation and Decision Making Model of Ship</b> Tianhua Xie, Wei Chi, Ci Fan, Hongxiu Wang	0046 <b>Development of Technique for Auto Mesh Generation using Artificial Life Algorithm</b> Hag Soo Kim, Dong Myung Bae, Chang Hyuk Shin, Qing Wang	0113 <b>Optimization of the Flow Field in a Diesel Engine Catalytic Converter</b> Youhong Xiao, Peilin Zhou, Wenping Zhang, Zhigang Liu
15:20 – 15:40	0104 <b>Towards a Risk-based Approach of Intact Stability of Ships in a Seaway</b> Hotze Boonstra, Jan Blok, Ed van Daalen	0059 <b>Ship Drag Reduction Technology Principle of Auto-Dissolve Microbubbles</b> Wei Chi, Lixin Mo, Zhansheng Gao, Yuming Xu	0043 <b>A New-Type System of Fire-Controlling in Ships</b> Zhaohong Ding, Yu-ming Xu, Kan Shi, Liangan Jin
<b>15:40 – 16:10 Tea/coffee break, Poster Session</b>			
	<b>D: Ship Design</b> <i>Chairman: Dr. O. Turan</i>  Venue: Sun Shining Meeting Room	<b>E: Hydrodynamics and Motion Control</b> <i>Chairman: Prof. D.B. Huang</i>  Venue: Hall 1	<b>F: Environment Protection</b> <i>Chairman: Prof. Z. L. Ji</i>  Venue: Hall 2
16:10 – 16:30	0165 <b>Case-Based Reasoning Approach to Ship Design</b> Osman Turan, Seref Aksu, Hao Cui	0052 <b>Strength Analysis of the “JINGDUN” Wave Piercing Hydrofoil</b> Zhibin Li, Hengyang Zhang, Xiangliang Hu, Feipeng Zheng	0155 <b>Towards Environmental Sustainable Clean Ship Design</b> Ab Saman Ab. Kadir, Oladokun Sulaiman Olanrewaju
16:30 – 16:50	0157 <b>A Fundamental Theory of Sailing and its Application to the Design and Velocity Prediction of a Rigid Airfoil Sail Craft</b>	0141 <b>Research on the Integrated Stabilization Experimental Equipment of the Fin and Anti-Rolling Tank</b> Lijun Yu, Hongzhang Jin, Hui Wang, Lihua	0153 <b>The Numerical Analysis of Temperature and Velocity Fields in Air-Conditioned Compartment</b> Shifan Zhu, Dongmei Cheng, Qinhui Liu

	Hamid Amini, Manucher Rad	Liang	
16:50 – 17:10	0117 <b>Capsize Probability of Damaged Ro-Ro Passenger Ships</b> Yang Zhang, Dracos Vassalos	0041 <b>A Time Domain Numerical Simulation Method for Nonlinear Ship Motions</b> Shukai Liu, Apostolos Papanikolaou, Wenyang Duan	0020 <b>Liquid Neutralization of Exhausted Gases from Ship Energy Installations</b> Vladimir N. Statsenko, Vjacheslav S. Kuzin, Fyodor M. Ajkashev
17:10 – 17:30	0030 <b>Ship Design Optimization in the Multimodal Logistics Framework</b> E.K. Boulougouris, C. Gohari, A.D. Papanikolaou	0161 <b>Control System Design and Test Research of Ship U-tube Passive Controlled Tank</b> Lihua Liang, Songtao Zhang, Wen Liu	0065 <b>Fitted Kinetic Model of Two Algae in Electrolyzed Ships' Ballast Water</b> Kun Dang, Peiting Sun, Yongxin Song, Jingkun Xiao

19:00: Conference Dinner, Fortune Days Hotel

**Day 2, 18 Jan 2007****Technical Sessions**

Venue: Fortune Days Hotel

	<b>G: Marine Operation, Management and Communication</b> <i>Chairman: Dr. B.S. Lee</i> Venue: Sun Shining meeting room	<b>H: Sea Keeping and Manoeuvrability</b> <i>Chairman: Prof. W.Y. Duan</i> Venue: Hall 1	<b>I: Engines, Vibration and Noise Control</b> <i>Chairman: Dr. Nikolaos P. Ventikos</i> Venue: Hall 2
08:30 – 08:50	0029 <b>Concept Exploration Modeling In Inland Waterway Transport</b> Robert Hekkenberg	0099 <b>Acoustics and Hydrodynamics of Moonpool at Angles to Flow Direction–An Experimental Research</b> Xiongliang Yao, Sadiq Salman, Zhuang Kang	0091 <b>NOx Reduction from a Marine Diesel Engine</b> Song Zhou, Peilin Zhou
08:50 – 09:10	0067 <b>Prediction of Capacity of Bulk Carrier Fleets Using a Single-parameter Lagrangian Support Vector Regression</b> Dongqin Li, Lizheng Wang, Chengfang Wang	0095 <b>A Combined Seakeeping Prediction Method for Displacement Ship from Low to High Speed</b> Wenyang Duan, Shan Ma, Quanming Miao	0026 <b>Recognition on Marine Diesel Engine Working Condition by Using Support Vector Machine and Hilbert Spectrum Entropy</b> Hongkun Li, Peilin Zhou, Xiaojiang Ma
09:10 – 09:30	0143 <b>Automatic Simulation Of Manoeuvring In Harbour</b> Yanzhuo Xue, B.S.Lee	0100 <b>An Investigation on Motion Response Algorithm for Ship Maneuvering Simulator</b> Xing Zheng, Wenyang Duan, Duanfeng Han	0047 <b>Structural Analysis on the Cruiser Class, Sailing Yacht of Korean Style</b> Chang Hyuk Shin, Dong Myung Bae, Hag Soo Kim, Qing Wang, Ju Goon Kim
09:30 – 09:50	0040 <b>An Optimization Model And Its Algorithm For Scheduling Integrating Loading And Unloading Operations At Container Terminals</b> Qingcheng Zeng, Zhongzhen Yang	0092 <b>Maneuverability of Ship Avoiding Collision in Inland Waterway</b> Zuyuan Liu, Xide Cheng	0054 <b>Analysis of Shock Environment of Shipboard Equipments</b> Gongmin Liu, Fei Shi
09:50 – 10:10	0119 <b>Elastic-Plastic Dynamic Buckling of Beam under Slamming Loads</b> Yangshan Dai, Fasuo Yan, Xuekang Gu, Chengyang Peng	0081A <b>Hybrid Algorithm based on Dynamic Programming Method and Discrete Particle Swarm Optimization Algorithm for Fleet Planning</b> Shaojuan Su, Lizheng Wang, Chengfang Wang	0062 <b>Active Vibration Isolation System for Seawater Pumps</b> Tiejun Yang, Guoyong Jin, Jingtao Du, Yipeng Cao, Zhigang Liu
<b>10:10 – 10:40 Tea/coffee break, Poster Session</b>			

	<b>J: Marine Renewable Energy, Hydrodynamic Simulation</b> <i>Chairman: Prof. L. Zhang</i> Venue: Sun Shining Meeting Room	<b>K: Propulsion and Resistance</b> <i>Chairman: Prof. Q. Zheng</i> Venue: Hall 1	<b>L: Production and Shafting Systems</b> <i>Chairman: Prof. W. Y. Li</i> Venue: Hall 2
10:40 – 11:00	0010 <b>The Conversion of Electrical Energy and Network-Forming Control System of the Tidal Current Power Station</b> Hongda Liu, Yaohua Luo, Dianpu Li, Jincheng Liang	0074 <b>Research on the New Method of Ship Alternating Current MHD Propulsion</b> Renzhong Zhang, Shuyun Yuan, Hongyao Cui, Yixuan Wang	0032 <b>Minimization of Production Cost By Use of an Automatic Cost Assessment Method and Simulation</b> Jean-David Caprace, Frederic Bair, Nicolas Losseau, Philippe Rigo
11:00 – 11:20	0134 <b>Sliding Meshes Model: Applications to the Vertical-Axis Straight-Blade Hydroturbine</b> Ke Sun, Liang Zhang, Kangping Liao	0102 <b>Prediction of Unsteady Performance of Propeller by using Surface Panel Method</b> Jian Hu, Sheng Huang, Peisheng Wang	0146 <b>Vibration Analyzing Of Ship Steam Turbine Rotating Stalling Based On FFT And Wavelet</b> Lidong Wei, Dongxin Xue, Ping Wang, Xigeng Song
11:20 – 11:40	0124 <b>Hydrodynamic Experimental Study on New Type of Vertical-Axis Variable-Pitch Turbine</b> Liang Zhang, Ke Sun, Fenglai Li, Han Chen	0118 <b>A Study of Sea Tug Propeller Choice</b> S.V. Antonenko, M.V. Kitaev	0111 <b>Prediction of Welding Deformation of Ship Hull Panel Block</b> Hong Li, Shangjun Yang, Huilong Ren
11:40 – 12:00	0131 <b>Numerical Simulation of Three-Dimensional Short Foil with the Model of Tip Vortex Roll Up</b> Chunyu Guo, Sheng Huang, Xin Chang	0123 <b>Hydrodynamic Analysis of Oscillating Flexible Tail-Fin in Viscous Flows</b> Liang Yang, Yumin Su	0070 <b>Numerical Simulation of Ship Aft Stern Tube Bearing Fluid Field</b> Chunliang Zhou, Yong Mu, Mingming Liu, Bin Zhou
12:00 – 12:20	0162 <b>Stochastic Motion Response Capability of Three-Axes Ship Motion Simulation Platform</b> Songtao Zhang, Lihua Liang, Wen Liu, Jiguang Song	0107 <b>The Effect of Lift on the Wave-Making Resistance of Multi-Hull Craft</b> Nan Xie, Dracos Vassalos, Philip Sayer	0085 <b>The Research of Active Fault-Tolerant Control for a Ship Propulsion System</b> Bian Wu, Hongbo Shi

**Poster Sessions: Day 1 – from 15:40 to 16:10 and Day 2 – from 10:10 to 10:40**

Venue: Fortune Days Hotel

0003 <b>Research on Methods of Reducing Underwater Structure Acoustic Radiation caused by Longitudinal Vibration of Shafting</b> Yipeng Cao, Wenping Zhang	0138 <b>Vibro-Acoustic Statistical Energy Analysis of a Classic Submarine Structure</b> Shangmao Ai, Liping Sun, Hailong Chen	0056 <b>The Application of Cone-Shape Orientation Sleeve Atomization Combustion System on Diesel Engine</b> Bao-guo Du, Wu-qiang Long, Quan Dong, Li-yan Feng, Sheng-li Wei, Xian-yin Leng
0127 <b>Lyapunov Characteristic Exponents Used as the Criteria for Chaos of Ship's Nonlinear Rolling Movement</b> Yong Ding, Kaiye Hu	0076 <b>The Synthetical Management and the Supplementary Decision of Submarine in the Network Environment</b> Deyu Chen, Renzhong Zhang, Shuyun Yuan, Zhiquan Ma	0079 <b>The Study on the Influence of Ambient Condition on the Performance of Marine Diesel Engine</b> Bin Li, Yong Zhao, Pei-ting Sun
0057 <b>A Web-Based Collaborative Platform for Ship Design</b> Song Du, Yan Lin, ZhuoShang Ji	0022 <b>Study on Innovative Design of Mechatronic System based on D&amp;R Theory</b> Zhonghua Miao, Chengliang Liu, Kezheng Huang	0055 <b>Power Flow Methods for Network Reconfiguration in Shipboard Power System</b> Wei Lu, Fang Lu, Hong-da Liu, Yu Li, Hai Lan
0014 <b>The Slip Ship's Modeling and Stance-Control on Fuzzy-Neural Networks</b> Shuang Gao, Qi-dan Zhu, Lei Li	0042 <b>A Study on Ship Modular and Open System</b> Yueqin Ren	0112 <b>Dynamic Modeling of PEM Fuel Cell Propulsive System for Ship Application</b> Baogang San, Peilin Zhou
0015 <b>Study on Response of Jacket Platform under Random Wave Load</b> Xiaoshuang Han, Jun Ma, Deyou Zhao, Bo Zhou	0024 <b>Ship Safety Assessment based on FMEA and Fuzzy Comprehensive Evaluation Methods</b> Guitao Wu, Wenbin Cui, Yuqing Zhang, Peiting Sun	0082 <b>Investigation on the Fuzzy Control of STC in a High-Speed Marine Diesel Engine</b> Fan Shi, Yinyan Wang, Pengqi Zhang
0128 <b>Research on the Impulse Characteristic of MR Damper on Warship</b> Zheng-dong Tian, Xiong-liang Yao, Zhong-chao Deng, Zhi-hua Shen	0004 <b>Fault Diagnosis of Nuclear Power Plant based on RBF Artificial Neural Network</b> Chunling Xie, Xiaocheng Shi,	0007 <b>A Research on Shafting Alignment with Finite Element Method for Complex-Long Propulsion Shafting</b> Lei Shi, Dongxin Xue, Xigeng Song
0147 <b>Application of Centro-baric Smoothed Wigner-Ville Distribution into the Analysis and Diagnosis of Axial Vibration on a Ship Steam Turbine Shaft</b> Lidong Wei, Dongxin Xue, Ping Wang, Xigong Song	0144 <b>Research on Effect of Double Cylinder Shell Structure' Impact Response in Different Water Depth</b> Wei-Jun Xu, Xiong-liang Yao, Jun Guo, Hai-Long Chen	0108 <b>Effects of Engine Load, Inlet Air Temperature, Valve Overlap and EGR on Diesel HCCI Engine</b> Lei Shi, Kangyao Deng, Yi Cui, Haiyong Peng
0033 <b>Study on Coupled Motion Response and Relative Motion between Two Side-by-side Ships in Waves</b> Xu Xiang, Quanming Miao, Xiao-bo Chen, Xiaofeng Kuang	0066 <b>A Subjective Evaluation Study on Human-Machine Interface of Marine Meter based on RBF Network</b> Shengyuan Yan, Yu-qing Xu, Ming Yang, Zhi-jian Zhang, Min-jun Peng, Xiao-yang Yu, Hong-guo Zhang	0083 <b>Corrosion Behavior of Ship's Ballast Tank in Sodium Hypochlorite Treated Ballast Water</b> Yongxin Song, Kun Dang, Huafang Chi, Delin Guan

0061 <b>Drag Reduction Design for the Underwater High Speed Supercavitating Vehicle</b> YongLiang Xiong, Ye Gao	0129 <b>Numerical Simulation of the Hydrodynamic Performances of a Straight-bladed Turbine</b> Hongyu Zhang, Hongwei Wang, Hailong Chen	0023 <b>Temperature-Control Method for Jacket Cooling Water of Main Marine Diesel Engine</b> Guitao Wu, Peiting Sun
0116 <b>Dynamic Characteristic Experimental Research on Marine Intelligent Structures</b> Zhiguo Yang, Xiongliang Yao,	0077 <b>Research of Architecture based on Submarine Integrated Management System</b> Renzhong Zhang, Jinsong Wang, Jinlong Guo, Xiubin Zhang	0073 <b>Experimental Study on Combustion Noise Control of Diesel Engine with Pilot Injection</b> Haitao Zhou, Dongxin Xue, Ping Wang, Xigeng Song
0098 <b>Ship Hull Fitting and Stability Calculations using NURBs</b> Ahmed Tauseef, Yong Ding	0121 <b>Feasibility Study on Recovery System of Lithium Utilizing Seawater Drainage from Cooling System of Thermal Power Plant</b> Guoqiang Zhou, Fasuo Yan, Liping Sun, Hailong Chen	0150 <b>Game Theory, as a Way for Integrating of Ship Control Systems</b> M. Hossein Ghaemi
0034 <b>Chaotic Dynamics Analysis of Ship Swaying Motion</b> Jianjun Hou, Fang Dong, Feng Cai, Lin Wan	0013 <b>Experimental Study of Reducing Combustion Noise on High Speed DI Diesel Engine in Ship</b> Ping Wang, Xigeng Song, Dongxin Xue, Yulin Ge, Haitao Zhou, Yougen Sun, Xiaowen Ma	

End of Conference

## Social Programme

14:00 – 17:00: HEU campus and laboratory tour (free of charge)

14:00 – 17:00 Tour of Snow Sculptures, entrance ticket: 100 RMB per person. Visit to City Centre and Sophia Church

Dinner and Tour of Ice and Snow World, option 1

18:00 – 20:00 Dinner (Western food) and Russian traditional dancing show, 180 RMB per person

20:00 – 22:00 Tour of Ice and Snow World, entrance ticket: 150 RMB per person

Dinner and Tour of Ice and Snow World, option 2

18:00 – 19:00 Dinner only (Chinese) 20 RMB per person

19:00 – 21:00 Tour of Ice and Snow World, entrance ticket: 150 RMB per person