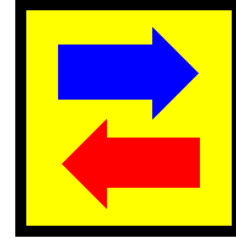




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## FINAL PROGRAMME



INTERNATIONAL  
SYMPOSIUM ON MARITIME  
SAFETY, SECURITY AND  
ENVIRONMENTAL  
PROTECTION  
September 20-21, 2007  
Athens, Greece







Following the successful International Symposia on Maritime Safety organized by the University of Piraeus in 1998 and the University of the Aegean in 2001, the Laboratory for Maritime Transport of the National Technical University of Athens organizes the International Symposium on Maritime Safety, Security and Environmental Protection (SSE07).

The Symposium aims at bringing together ship operators, managers, academics and policy-makers to discuss and debate important issues facing the industry as regards safety, security and environmental protection. The Symposium is being held at the premises of the Eugenides Foundation in Athens ([www.eugenfound.edu.gr](http://www.eugenfound.edu.gr)).

### SYMPOSIUM WEB SITE

[www.martrans.org:8093/symposium/](http://www.martrans.org:8093/symposium/)

THE SYMPOSIUM IS UNDER THE AUSPICES OF

The Hellenic Chamber of Shipping (NEE)	
The Hellenic Marine Environment Protection Association (HELMEPA)	
The International Association of Maritime Economists (IAME)	
The Society of Naval Architects and Marine Engineers (SNAME)	
WISTA Hellas	
The World Maritime University's Journal of Maritime Affairs	

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#### PROCEEDINGS

All presented papers are in the Symposium Proceedings, distributed to the Symposium participants on CD-ROM. Also, the World Maritime University's Journal of Maritime Affairs will invite a subset of the Symposium papers to be published in a special issue of the Journal (April 2008). The decision of which papers will be selected rests with the Journal. All papers of the Symposium will be considered for this selection, unless we are told otherwise by the authors.

## ACKNOWLEDGMENTS

Both abstracts and full papers were refereed by expert reviewers. Sincere thanks are due to the members of International Scientific Committee who actively participated in the review process at both levels, and to external reviewers who were called upon to complement this task by reviewing specific papers. Particular appreciation is due to (alphabetically): Jack Devanney (Center for Tankship Excellence, USA), Dimitris Konovessis (Universities of Glasgow and Strathclyde, UK), Dimitris Lyridis (NTUA), Nikos Mikelis (IMO), Manolis Samuelides (NTUA), Orestis Schinas (Transmart Consulting, Greece), Rolf Skjong (DNV, Norway), Kostas Spyrou (NTUA), Dracos Vassalos (Universities of Glasgow and Strathclyde, UK), Jaime Veiga (European Maritime Safety Agency- EMSA), Nikos Ventikos (NTUA), and Panos Zachariadis (Atlantic Bulk Carrier Management Ltd).

Warmest thanks are also due to the industry associations that have put this Symposium under their auspices (without financial support) and to those sponsoring companies that have provided financial support for the Symposium.

Last but not least, sincere appreciation is due to all authors, session chairs, panelists and other participants who have contributed to making this Symposium a success and to the Secretary General of the IMO Mr. Efthymios Mitropoulos for accepting the invitation to deliver the keynote address.

Harilaos N. Psarftis  
Symposium Chairman

## SESSION TRACKER

There are 50 papers presented at the Symposium. There are two plenary sessions, 16 parallel sessions, and one video screening, arranged in three tracks as per the table below. All session rooms are at Level 1.

		TRACK A Main Auditorium	TRACK B Conference Room	TRACK C Meeting Room 1
DAY 1: Thursday, Sep. 20	0800-0900	Registration- Coffee		
	0900-1030	Plenary Session A0 Opening Speeches and Keynote Address	-	-
	1030-1100	Coffee Break		
	1100-1230	Parallel Session A1 Safety and Risk I	Parallel Session B1 Ship, Port and Supply Chain Security I	-
	1230-1400	Lunch Break		
	1400-1530	Parallel Session A2 Safety and Risk II	Parallel Session B2 Ship, Port and Supply Chain Security II	Parallel Session C2 Hazardous Cargoes and Arctic Water Protection
	1530-1600	Coffee Break		
	1600-1730	Parallel Session A3 Legal – Regulatory- Policy Issues	Parallel Session B3 Education and Training	Parallel Session C3 Special Safety Topics I
	1800-1900	-	IMO/BBC Video “Invaders from the Sea”	-
	2030-2300	Symposium Dinner		
DAY 2: Friday, Sep. 21	0800-0900	Registration- Coffee		
	0900-1030	Parallel Session A4 Ports of Refuge and Wreck Oil Removal	Parallel Session B4 Ship Recycling and Flag State Performance	Parallel Session C4 Special Safety Topics II
	1030-1100	Coffee Break		
	1100-1230	Parallel Session A5 Oil Spill Control	Parallel Session B5 Inspection and Port State Control	Parallel Session C5 Special Safety Topics III
	1230-1400	Lunch Break		
	1400-1530	Parallel Session A6 Environmental Management, Maintenance, ISM Code	Parallel Session B6 Human Factors	-
	1530-1600	Coffee Break		
	1600-1730	Plenary Session A7 Roundtable Discussion	-	-
	1730	Symposium Closure		

## SYMPOSIUM PROGRAMME

DAY 1- THURSDAY SEPTEMBER 20, 2007

0800-0900 REGISTRATION- COFFEE

0900-1030 PLENARY SESSION A0  
Main Auditorium  
Chair: Harilaos N. Psaraftis, National Technical University of Athens

Opening speeches on behalf of:  
National Technical University of Athens (NTUA)  
Eugenides Foundation (EF)  
Ministry of Mercantile Marine (YEN)  
Hellenic Chamber of Shipping (NEE)  
Hellenic Marine Environment Protection Association (HELMPEPA)  
Society of Naval Architects and Marine Engineers (SNAME)  
International Association of Maritime Economists (IAME)  
WISTA Hellas  
World Maritime University's Journal of Maritime Affairs

Symposium's Keynote Address  
Efthymios Mitropoulos, Secretary General, International Maritime Organization

1000-1030 COFFEE BREAK

1100-1230 PARALLEL SESSION A1: Safety and Risk I  
Main Auditorium  
Chair: Nikos Mikelis, International Maritime Organization

Paper no.	Authors	Paper title
A11	J. W. Devanney Center for Tankship Excellence, USA	The Argument for Twin Screw Tankers
A12	U. Langbecker, B. Forman, J. Ellis, S. Gehl, K. Riedel, and P. C. Sames Germanischer Lloyd, Germany	A Risk Model for the Operation of Container Vessels
A13	C. A. Kontovas and H. N. Psaraftis National Technical University of Athens, Greece and P. Zachariadis Atlantic Bulk Carriers Management, Greece	The Two C's of the Risk-Based Approach to Goal Based Standards: Challenges and Caveats

1100-1230 PARALLEL SESSION B1: Ship, Port and Supply Chain Security I  
Conference Room  
Chair: Nikitas Nikitakos, University of the Aegean, Greece

Paper no.	Authors	Paper title
B11	G. Schilk via Donau – Österreichische Wasserstraßen Gesellschaft mbH, Austria E. Blümel Fraunhofer Institute for Factory Operation and Automation, Germany V. Recagno D'Appolonia S.p.A, Italy and W. Boevé European Intermodal Research Advisory Council, Belgium	Ship, Port and Supply Chain Security Concepts Interlinking Maritime with Hinterland Transport Chains

B12	A. A. Pallis and G. K. Vaggelas University of the Aegean, Greece	Port and Maritime Security: A Critical Analysis of Contemporary EU Policies
B13	M. Engler Institute of Shipping Economics and Logistics, Germany	Major Problems Applying Wireless Security Devices in Supply Chains

1230-1400 LUNCH BREAK

1400-1530 PARALLEL SESSION A2: Safety and Risk II  
Main Auditorium  
Chair: Rolf Skjong, Det Norske Veritas, Norway

Paper no.	Authors	Paper title
A21	D. Konovessis, D. Vassalos and G. Mermiris Universities of Glasgow and Strathclyde, UK	Risk Analysis for RoPax Vessels
A22	G. N. Dourmas, N. V. Nikitakos, and M.A. Lambrou University of the Aegean, Greece	Hazards Identification and Prioritization in Formal Safety Assessment using Fuzzy Logic Theory
A23	G. Giannakopoulos, D. Bouros, N. P. Ventikos National Technical University of Athens, Greece	Safety@Risk
A24	O. Schinas, Transmart Consulting, Greece	Examining the Use and Application of Multi - Criteria Decision Making Techniques in Safety Assessment

1400-1530 PARALLEL SESSION B2: Ship, Port and Supply Chain Security II  
Conference Room  
Chair: Dimitrios V. Lyridis, National Technical University of Athens

Paper no.	Authors	Paper title
B21	M. P.A. van Oosterhout and A.W. Veenstra Erasmus University Rotterdam, the Netherlands M.A.G. Meijer TNO Built Environment and Geosciences, the Netherlands N. Popal Erasmus University Rotterdam, the Netherlands J. van den Berg Delft University of Technology, the Netherlands	Visibility Platforms for Enhancing Supply Chain Security: a Case Study in the Port of Rotterdam
B22	P. S. Tsilingiris, H. N. Psaraftis, D. V. Lyridis National Technical University of Athens, Greece	RFID-enabled Innovative Solutions Promote Container Security
B23	E. D. Katarelos, A. A. Alexopoulos University of the Aegean, Greece	The Master's Role in Relation to the Safety of the Port, particularly under the Concept of the ISM and the ISPS Codes

1400-1530 PARALLEL SESSION C2: Hazardous Cargoes and Arctic Water Protection  
 Meeting Room 1  
 Chair: Michael Roe, University of Plymouth, UK

C21	M. Suominen, Markku Häikiö, P. Lehtinen, L. Metso, T. Perna, and L. Ojala Turku School of Economics, Finland	Multiple Case Study of Transport Chains of Dangerous Goods in the Baltic Sea Region
C22	A. Mullai and E. Larsson Lund University, Sweden	Hazardous Materials Incidents – Some Key Results of a Risk Analysis
C23	K. Tikka American Bureau of Shipping, USA K. Riska ILS Oy, Finland and S. Liu American Bureau of Shipping, USA	Ship Design Considerations for Safety and Environmental Protection of Arctic Waters Learning from Past Experience

1530-1600 COFFEE BREAK

1600-1730 PARALLEL SESSION A3: Legal – Regulatory- Policy Issues  
 Main Auditorium  
 Chair: Lauri Ojala, Turku School of Economics, Finland

Paper no.	Authors	Paper title
A31	G. Marshall, P.G. Rynn, M.E. Stanton, and G.E. Horn American Bureau of Shipping, USA	Tanker Safety - Regulatory Change_
A32	M. Roe University of Plymouth, UK	Safety, Security, The Environment and Shipping - The Problem of Making Effective Policies
A33	L. Zhu Hong Kong Polytechnic University, Hong Kong	Compensation Issues under the Bunkers Convention

1600-1730 PARALLEL SESSION B3: Education and Training  
 Conference Room  
 Chair: Nikolaos P. Ventikos, National Technical University of Athens

Paper no.	Authors	Paper title
B31	T. E. Berg, Marintek, Norway U. Klevstad, Norwegian Coastal Administration, Norway G. Gudmundseth, Ship Manoeuvring Simulator, Norway	Training of Personnel on Norwegian Emergency Response Vessels
B32	C. Houghton, Videotel Marine International, UK	Executive Coaching for Seafarers
B33	E. Asyali, A. G. Cerit, S. Nas and M. Kalkan D.E.U. School of Maritime Business and Management, Turkey	Curriculum Development for a Graduate Program on Maritime Safety, Security and Environmental Management



1600-1730

PARALLEL SESSION C3: Special Safety Topics I  
Meeting Room 1

Chair: Panagiotis Zacharioudakis, National Technical University of Athens

Paper no.	Authors	Paper title
C31	S. Le Floch, J. Dumont CEDRE, France C. Jaffrenou Université de Bretagne Occidentale, France and R. Olier CEDRE, France	Accidental spills: the C.E.C., a new device to test initial dissolution rate of chemicals in seawater column
C32	W. K. Talley Old Dominion University, USA D. Jin and H. Kite Powell, Woods Hole Oceanographic Institution, USA	Determinants of the Damage Cost and Injury Severity of Ferry Vessel Accidents
C33	G. Dikos University of Patras, Greece and S. Sgouridis Massachusetts Institute of Technology, USA	Double Hull Phase In in the Tanker Industry: The Effects of Sunk Cost Uncertainty

1800-1900

SPECIAL SCREENING: Conference Room

The IMO/BBC video "Invaders from the Sea" will be shown. The video gives a unique insight into the problem of transfer of harmful organisms in ships' ballast water and on what can be done to deal with it.

Introduction by Nikos Mikelis, IMO.

2030-2300

SYMPOSIUM DINNER, under the Old Planetarium Dome, Level 2.

DAY 2- FRIDAY SEPTEMBER 21, 2007

0800-0900 REGISTRATION- COFFEE

0900-1030 PARALLEL SESSION A4: Ports of Refuge and Wreck Oil Removal  
Main Auditorium  
Chair: Harilaos N. Psaraftis, National Technical University of Athens

Paper no.	Authors	Paper title
A41	P. Donner World Maritime University, Malmö, Sweden	Offering Refuge is Better than Refusing
A42	A. Constantinou Department of Merchant Shipping, Cyprus	Places of Refuge: A Myth or a Reality?
A43	F. Andritsos European Commission – Joint Research Centre, Italy P. A. Konstantinopoulos and K. J. Charatsis Industrial Systems Institute, Greece	Recuperation of Oil Trapped in Ship-Wrecks: the DIFIS Concept

900-1030 PARALLEL SESSION B4: Ship Recycling and Flag State Performance  
Conference Room  
Chair: Kostas Giziakis, University of Piraeus

Paper no.	Authors	Paper title
B41	F. Bondini and P. L. Gaggero Registro Italiano Navale, Italy	Developments on Ship Recycling
B42	N. Mikelis, International Maritime Organization	A Statistical Overview of Ship Recycling
B43	A. J. Corres and A. A. Pallis, University of the Aegean, Greece	Flag State Performance: An Empirical Analysis

900-1030 PARALLEL SESSION C4: Special Safety Topics II  
Meeting Room 1  
Chair: Petros Lalangas, SNAME

Paper no.	Authors	Paper title
C41	J. Jankowski and M. Bogdaniuk Polish Register of Shipping, Poland	Simulation of Wave Loads and Dynamic Stresses in Ship Hulls in Irregular Waves
C42	J. E. Kokarakis Bureau Veritas, Greece and R. K. Taylor Design Research Engineering, USA	Hydrodynamic Interaction Analysis in Marine Accidents
C43	M. S. Samuelides, N. P. Ventikos National Technical University of Athens, Greece and J.K. Paik Pusan National University, Korea	Study of Grounding Incidents: Description of Contact and Frequency of Occurrence

1030-1100 COFFEE BREAK

1100-1230 PARALLEL SESSION A5: Oil Spill Control  
Main Auditorium  
Chair: John Kokarakis, Bureau Veritas Greece

Paper no.	Authors	Paper title
A51	J. W. Devanney Center for Tankship Excellence, USA	CTX Mate, An Open Source, Combined Loading Instrument and Spill Reduction Program

A52	E.K. Boulougouris and A.D. Papanikolaou National Technical University of Athens, Greece Y. Le Corre Bureau d'Etudes MAURIC, France F. Ghozlan SIREHNA, France O. Turan Universities of Strathclyde & Glasgow, UK N.M.P. Kakalis and Y. Ventikos Oxford University, UK D. Fritsch Fraunhofer Gesellschaft zur Forderung der Angewandten Forschung (IPA), Germany V. Campos Instituto de Soldadura e Qualidade, Portugal and N. P. Ventikos National Technical University of Athens, Greece	Efficient Oil Spill Confrontation by Innovative EU-MOP Units
A53	C. Gkonis, N.P. Ventikos, and H.N. Psaraftis National Technical University of Athens, Greece	A Decision-Making Model for Oil Spill Response at the Tactical Level

1100-1230 PARALLEL SESSION B5: Inspection and Port State Control  
Conference Room  
Chair: Dimitrios V. Lyridis, National Technical University of Athens

Paper no.	Authors	Paper title
B51	C. Serratella, G. Wang, and R. Conachey American Bureau of Shipping, USA	Risk-Based Strategies for the Next Generation of Maintenance and Inspection Programs
B52	P. Cariou, M. Q. Mejia Jr. and F.-C. Wolff World Maritime University, Malmö, Sweden	An Econometric Analysis of Deficiencies Noted in Port State Control Inspections
B53	E.-P. Roussos and N. P. Ventikos National Technical University of Athens, Greece	Port State Control Inspection Procedures: The Selection of Ships Revisited

1100-1230 PARALLEL SESSION C5: Special Safety Topics III  
Meeting Room 1  
Chair: Orestis Schinas, Transmart Consulting, Greece

Paper no.	Authors	Paper title
C51	D. Mitsatsos, C. Prekezes, and S. Volakis Hellenic Marine Environment Protection Association, Greece	Optimization of Shipboard Operations for Environmental Protection and Safety at Sea through Voluntary, Knowledge Transfer
C52	T. Soma, G. Fuglerud and H. Jones Det Norske Veritas, Norway	Safety Excellence – Safety that Lasts
C53	G. Westgaard and S. Bligh Det Norske Veritas, Norway	Energy Management – Savings with a Green Touch
C54	C-U. Böttner Technical University Berlin, Germany	Weather Routing for Ships in Degraded Condition

1230-1400 LUNCH BREAK

1400-1530 PARALLEL SESSION A6: Environmental Management, Maintenance, ISM Code  
Main Auditorium  
Chair: Panos Zachariadis, Atlantic Bulk Carriers Management, Greece

Paper no.	Authors	Paper title
A61	Ioannis Theotokas and V. Kaza University of the Aegean, Greece	Environmental Management in Greek Shipping companies
A62	Ø. J. Rødseth, C. Steinebach, and B. Mo Marintek, Norway	The Use of Technical Condition Indices in Ship Maintenance Planning and the Monitoring of the Ship's Safety Condition
A63	G. D. Provatias and K. Giziakis University of Piraeus, Greece	Financial Profits or Losses from the Correct Implementation of the ISM Code from the Point of View of the Shipping Company

1400-1530 PARALLEL SESSION B6: Human Factors  
Conference Room  
Chair: Nikolaos P. Ventikos, National Technical University of Athens

Paper no.	Authors	Paper title
B61	D. Squire The Nautical Institute, UK and J. Earthy Lloyds Register of Shipping, UK	The Human Element in Shipping
B62	I.C. Gemelos and N. P. Ventikos National Technical University of Athens, Greece	Accidents in Greek Coastal Shipping: Human Factor and Old Ships...or maybe Small Ships?
B63	A. P. Smith, P. H. Allen and E. J. Wadsworth Cardiff University, UK	A Comparative Approach to Seafarer Fatigue

1530-1600 COFFEE BREAK

1600-1730 PLENARY SESSION A7: What Does the Future Hold? Roundtable Discussion  
Main Auditorium

Moderator: Harilaos N. Psarftis, NTUA  
Panelists: Jack Devanney, Center for Tankship Excellence, USA  
Nikos Mikelis, IMO  
Michael Roe, University of Plymouth, UK  
Rolf Skjong, Det Norske Veritas, Norway  
Panos Zachariadis, Atlantic Bulk Carriers Management, Greece

1730 SYMPOSIUM CLOSURE