



SCHOOL OF NAVAL
ARCHITECTURE &
MARINE ENGINEERING

LABORATORY FOR MARITIME TRANSPORT
NEWSLETTER No 7
October – December 2008



<http://www.martrans.org>



N.T.U.A.
NATIONAL TECHNICAL
UNIVERSITY OF ATHENS

Dear Reader,

The electronic newsletter of the Laboratory for Maritime Transport (LMT) of NTUA is issued regularly to inform you regarding our current and forthcoming activities. You are warmly encouraged to visit our website (www.martrans.org) for further information and to contact us about your enquiries. Your feedback will be highly valued. Kind regards...

The LMT staff

**The Laboratory for Maritime
Transport wishes everybody**

All the best for 2009!



PRE-ANNOUNCEMENT

LMT friends in Greece:

**please stay tuned for an
announcement for
our "pitta-cutting" reunion
in the New Year.**

**LMT wins "Piraeus International
Centre Award" in the Lloyd's List 2008
Greek Shipping
Awards**

We are very happy to report that the Laboratory for Maritime Transport won the "Piraeus International Centre Award" for 2008 at this year's Lloyd's List Greek Shipping Awards.



The fifth anniversary of one of the maritime calendar's most exciting events was celebrated on Friday December 12, 2008 at the Athenaeum Intercontinental Hotel in Athens and was attended by over 1,000 key personalities.



*Prof. Psaraffis addressing the audience at the Lloyd's List
Greek Awards ceremony*

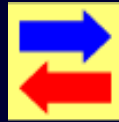
The "Piraeus International Centre Award" is for Greek or non-Greek companies or other entities that have demonstrated outstanding service to Greek shipping clients or members, and/or have made an outstanding contribution to the development of Greece as a shipping business and service center.

Other award categories this year included the Dry Cargo Company of the Year, the Tanker Company of the Year, the



SCHOOL OF NAVAL
ARCHITECTURE &
MARINE ENGINEERING

LABORATORY FOR MARITIME TRANSPORT NEWSLETTER No 7 October – December 2008



<http://www.martrans.org>



N.T.U.A.
NATIONAL TECHNICAL
UNIVERSITY OF ATHENS

Passenger Line of the Year, the Shipbroker of the Year, the Technical Innovation Award, the International Personality of the Year, the Ship of the Year, the Award for Achievement in Education or Training, the Award for Achievement in Safety or Environmental Protection, the Seafarer of the Year, the Greek Shipping Newsmaker of the Year, the Lloyd's List / Propeller Club Lifetime Achievement Award, and the Greek Shipping Personality of the Year.

The Greek Shipping Personality of the Year award was won by IMO Secretary General Efthymios Mitropoulos and the Award for Achievement in Education or Training was won by the Union of Greek Shipowners for their efforts to recruit young people to the maritime profession.

The 10-person adjudication panel this year included Spyros Polemis, President of the International Chamber of Shipping, Nicos Efthymiou, President of the Union of Greek Shipowners, George Gratsos, President of the Hellenic Chamber of Shipping, Captain John Halas, General Secretary of the Panhellenic Seamen's Federation, Nicolas Tsavlis, President of the Propeller Club of the United States – International Port of Piraeus, Dinos Caroussis, Chairman of the UK P&I Club, Anna-Maria Monogioudi, President of WISTA Hellas, Vasso Armogeni, Managing Editor of Efoplistis magazine, Dean Tseretopoulos of the IMO Advisory Group on goal based standards and recent chairman of Intertanko's Safety, Technical and Environment Committee, and Nigel Lowry, Athens correspondent of Lloyd's List.

These awards were endorsed by a number of supporting organizations, including the Union of Greek Shipowners, the Hellenic Chamber of Shipping, the Greek Shipping Co-operation Committee in London, Helmepea and others.

In accepting the award, Harilaos Psarftis thanked the adjudication panel for the honor of choosing LMT for this award, and stated that this only increases LMT's obligation for excellence in the future. He also thanked all of his associates at LMT, without whom this award would not be possible.

LMT signs contract with the Municipal Port Fund of Thira

The Laboratory for Maritime Transport signed in November 2008 a "programmatic contract" with the Municipal Port Fund of Thira (Island of Santorini, Greece). The agreement has two major objectives, namely the management of the shipwreck of

cruise ship **Sea Diamond**, sunk in Santorini in 2007 and the development of the strategic plan of Port of Thira. In particular, as far as the first of the above two objectives is concerned LMT will evaluate proposed plans regarding the removal of polluting substances from the shipwreck and assess potential studies for the removal of the wreck itself. In the context of the second of the objectives, LMT will provide the necessary know-how to the Municipal Port Fund of Thira in order to contribute into the conceptual and subsequently actual development of a viable and functional strategic plan of its services and operations. The overall duration of the contract is two years.



IMO Business- MEPC 58

The 58th session of the Marine Environment Protection Committee took place on Oct. 6-10, 2008, in London. It saw continued progress on the topic of Environmental Risk Evaluation Criteria in Formal Safety Assessment. Progress was achieved on a number of issues and MEPC 58 agreed to re-establish a correspondence group under Prof. Psarftis's coordination, with a view to finalizing the discussion by MEPC 59, to be held in London in July of 2009.

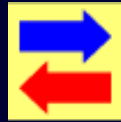
The terms of reference of the correspondence group are as follows:

- recommend an appropriate criterion for assessing environmental consequences in Step 4 of the FSA, including an appropriate threshold value for ascertaining if a specific Risk Control Option (RCO) is cost-effective;
- recommend a way of combining environmental and safety criteria for those RCOs that effect both environmental and fatality risk;
- recommend an appropriate risk matrix or index for environmental criteria;



SCHOOL OF NAVAL
ARCHITECTURE &
MARINE ENGINEERING

LABORATORY FOR MARITIME TRANSPORT NEWSLETTER No 7 October – December 2008



<http://www.martrans.org>



N.T.U.A.
NATIONAL TECHNICAL
UNIVERSITY OF ATHENS

- recommend an appropriate ALARP region and F-N diagram, including an appropriate value for the slope of the F-N curve;
- address the issue of collection and reporting of relevant data;
- recommend any further relevant action; and
- submit a written report to MEPC 59.

IMO Business - MSC 85

The 85th session of the Maritime Safety Committee took place in London on Nov. 26 - Dec. 5, 2008. LMT was involved in the meeting in a quasi-instantaneous way, in the context of an informal presentation by Greece entitled "Formal Safety Assessment Basic Concepts: Purpose, Benefits, Weaknesses, Limitations," held on Dec. 1. The presentation was given by Panos Zachariadis of Atlantic Bulk Carriers Management, Ltd and the meeting was chaired by Prof. Psarftis. The purpose of the presentation was to give an overview of FSA for people who are non-experts in FSA, yet may be called to understand FSA studies and also make important policy decisions based on such studies. The meeting was attended by over 100 people and the presentation was well received. The FSA presentation is available from LMT's web site. FSA will be very important in the months ahead, as an FSA Expert Group will be formed at MSC 86 with the aim to review a number of FSA studies submitted to the IMO.

Workshop on Environmental Risk Evaluation Criteria, Feb. 27, 2009

The first announcement of a workshop on "environmental risk evaluation criteria" that LMT shall host on Friday Feb. 27, 2009 went on the air and is available at <http://www.martrans.org>. It includes the provisional programme of the workshop along with some practical information and registration form.

Although this subject is related in substance to IMO MEPC's work on the same subject, this will be a workshop open to any interested members of the maritime industry or academia. Its attendance is free of charge, but pre-registration is necessary due to limited space. Registrations will be handled on a first-come first-served basis.

The workshop participants will hear from key international experts on the state of the art in this area, along with what the open issues are and how these might be resolved.

Ongoing doctoral research at LMT

An important part of the research undertaken at LMT is reflected in the work of its graduate and undergraduate students. It is a priority for LMT to disseminate its academic research work and link it with the real challenges faced by the industry. In this context, and starting with this newsletter, the ongoing work of LMT's doctoral candidates is briefly presented. For more information, please visit the "People" section at LMT's website (<http://www.martrans.org/people.htm>), while information about completed PhD and undergraduate theses can be found in the "non - funded research" section (<http://www.martrans.org/research.htm>).

Analysis of Competition and Strategic Investments in the LNG market

Konstantinos G. Gkonis began his doctoral studies at LMT in 2005, supervised by Prof. H. Psarftis. In his research work, he uses game theory to analyse (among other) the dynamics of the evolving energy shipping market of Liquefied Natural Gas. Game theory reduces complex strategic decision-making problems into more simple analytical structures and is a modelling tool that helps in understanding the behaviour of players and suggesting optimal moves.

On one level, capacity and price competition among LNG shipping companies, the possibility of non-cooperative collusion in oligopolistic competition in the LNG shipping business, early commitment and entry deterrence in an LNG shipping market are dealt with. On another level, national energy strategy issues are of concern, where the decision makers are governments rather than private investors. By building scenarios, regional future developments and crises with geopolitical dimensions are assessed.

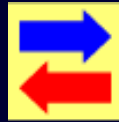
For example, generic scenarios were developed concerning the cut-off of pipeline gas supply to the Greek market (such as the one experienced in January 2009) and the potential role of LNG (such models were developed and proposed to Greek authorities as early as July 2008). Other scenarios concern the Caspian - Black Sea – South East European Gas Corridors and the LNG parameter.

Another area of current game theoretic research is security and counter-terrorism in merchant shipping (for more information visit <http://users.ntua.gr/cgonis>).



SCHOOL OF NAVAL
ARCHITECTURE &
MARINE ENGINEERING

LABORATORY FOR MARITIME TRANSPORT
NEWSLETTER No 7
October – December 2008



<http://www.martrans.org>



N.T.U.A.
NATIONAL TECHNICAL
UNIVERSITY OF ATHENS

Statistical arbitrage strategies for equity portfolios from transportation companies

Stylianos Iordanis began his doctoral studies at LMT in 2006, supervised by Ass. Prof. D. Lyridis. In his research work, he approaches the topic of statistical arbitrage strategies for equity portfolios from the international transportation sector with special focus on the maritime companies. Such quantitative methods of speculation have been quite popular in Wall Street, at hedge funds, in particular. One such very popular is widely known as pair trading, at least 20 years old, but it is nowadays considered rather outdated and relatively primitive strategy.

In the context of this research framework, sophisticated econometric concepts such as cointegration, neural networks, Principal Components analysis, ridge regression, etc. are employed in order to form and optimally trade long/short (market neutral) portfolios of stocks from the sectors mentioned above by exploiting small but consistent regularities in asset price dynamics. Thus, time-series of so-called statistical mispricings are created from the identification of specially modelled combination of assets that show a significant predictable component.

A special feature of the research is the introduction of exogenous economic variables which are not tradable assets. Their contribution for the improvement potential of the returns for the statistical arbitrage strategies is measured. The effectiveness of the various methodologies presented is demonstrated by extensive empirical analysis of real data sets, in particular daily closing prices of numerous stocks from the U.S.A., Germany, U.K., Japan, etc.

**Meetings and Events
attended by LMT staff**

- 1st International Conference on Hazardous Wastes Management, Chania, Greece, Oct. 1-3
- IMO MEPC 58 meeting, London, UK, Oct. 6-10
- Chinos on-site test meeting, Pruszkow, Poland, Oct. 15-16
- General Secretariat Review Meeting of Wind Power Generator, Naxos/Schinousa, Greece, Oct. 17
- Moses Workpackage meeting, Milano, Italy, Oct. 21
- Chinos PMC meeting, Bremerhaven, Germany, Oct. 30
- Chinos on-site test meeting, Thessaloniki, Greece, November 3-5

- 2nd International Maritime Conference, "Human Resources in the Shipping Industry: New Trends and Challenges in the 21st Century," Frederick University, Limassol, Cyprus, Nov. 21-22
- Symposium of the Hellenic Institute of Marine Technology (ELINT), Piraeus, Greece, Nov. 27-28
- IMO MSC 85 meeting, London, UK, Nov. 26 – Dec. 5
- Chinos EC review meeting, Brussels, Belgium, Dec. 11

**Papers, presentations and speeches
published / presented by LMT staff**

- Psaraftis, H.N. (2008), "The Hermaphrodite Physiognomy of Greek Coastal Shipping" (in Greek), *Naftika Chronika*, December 2008.
- Psaraftis, H.N. (2008), "Container Terminal Concession: Economics 101" (in Greek), *Naftika Chronika*, July 2008.
- Psaraftis, H.N. (2008), "Educational Curricula for Naval Architects and Marine Engineers: the Case of Greece", 2nd International Maritime Conference, "Human Resources in the Shipping Industry: New Trends and Challenges in the 21st Century," Frederick University, Limassol, Cyprus, November 2008.
- Psaraftis, H.N. (2008), "Environmental Risk Evaluation Criteria", *WMU Journal of Maritime Affairs*, Vol. 7, No. 2, 411-430, October 2008.
- Psaraftis, H.N. (2008), "OLP-Cosco: Welcome to the Casino" (in Greek) *Naftika Chronika*, November 2008.
- Psaraftis, H.N., C.A. Kontovas (2008), "Carbon Dioxide Emissions from the World Fleet: A Problem Seeking Solutions," (in Greek), *Naftika Chronika*, October 2008.
- Psaraftis, H.N., C.A. Kontovas (2008), "CO2 Emissions Statistics for the World Commercial Fleet," Symposium of the Hellenic Institute of Marine Technology (ELINT), November 2008.
- Rousos E.P.C, Ventikos N.P. (2008), "Maritime Policy Making for Flag States: Forecasting Safety/Detention Performance with the Use of Time Series Analysis", *WMU Journal of Maritime Affairs*, Vol. 7, No. 2, pp. 385-407
- Ventikos N.P., Chatzinikolaou S.D. (2008), "Hazardous Waste Management and Ship Recycling: Friends or FOEs?", *Proceedings of the 1st International Conference on Hazardous Wastes Management, Chania, Greece, 1-3 Oct. 2008*