

TransNav'2007 – The 7th International Navigational Symposium on Marine Navigation and Safety of Sea Transportation

Foreword to the Proceedings

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ABSTRACT: The paper presents background and preparations for the 7th International Navigational Symposium on Marine Navigation and Safety of Sea Transportation **Trans-Nav'2007**, organized jointly by the Faculty of Navigation, Gdynia Maritime University and the Nautical Institute, to be held from 20 to 22 June, 2007 in Gdynia, Poland. The Symposium is addressed to scientists and professionals in order to share their expert knowledge, experience and research results concerning all aspects of navigation, safety at sea and marine transportation.

1 INTRODUCTION

In today's world, in addition to meeting high standards of safety, environmental protection and efficiency, the international maritime industry has to meet the demands of enhanced security. The theme of this year Navigational Symposium: "Marine Navigation and Safety of Sea Transportation" is, therefore, most timely as it provides participating distinguished delegates who represented Maritime Education and Training (MET) and research institutions, shipping industry, shipowners, classification societies, maritime administrations, ports, services, professional institutes, agencies, societies and navigational instrument manufacturers.

When Symposium on Navigation met for the first time in 1995, one of its highest priorities was "to promote last research in the field of Navigation".

What could be more relevant, therefore, than representatives from 35 countries all over the world coming together to discuss the best possible ways of preparing staff at sea, in shipping companies, ports and maritime administrations to meet these challenges? Hosted by the Gdynia Maritime University there could be no better forum for stimulating interesting and fruitful contributions to discussion of maritime safety issues and for development strategies to address them through maritime education and training.

If we are to uphold and improve standards and ensure continued vigilance, nothing could be of greater importance than the training of the maritime professionals of the future. The papers presented at the **TransNav'2007** cover a full range of topics, from operations, management and organization to engineering and sciences. This Monograph is a set to

become a source of inspiration and reference for maritime institutions worldwide and it is of relevance to all who are involved in the maritime industry, especially in maritime **Transport and Navigation**.

Our imagination on positioning and location is never ending. New techniques and ideas are coming. There are so many radio signals and information infrastructures for positioning around us. Seamless and ubiquitous positioning will point and guide you wherever you are and wherever you go. It all depends on our commitment.

2 MAIN TOPICS

The Symposium main topics are the following:

- Marine navigation,
- Safety and security of maritime shipping,
- Sea transport and transportation technology,
- Hydrography, geodesy and marine cartography,
- Geomatics and GIS in maritime applications,
- Electronic chart systems ECS and ECDIS,
- Inland, river and pilot navigation systems,
- Presentation of navigation-related information,
- Route planning and monitoring; passage plan,
- Integration of navigational systems, INS/IBS,
- E-Navigation,
- GPS, Galileo, GNSS and radio based navigational systems,
- Telematics in marine transportation,
- Automation aspects in navigation; algorithms and methods,
- Ships routing and associated protected measures,
- Maritime traffic engineering,

- Systems of control, guidance and monitoring of traffic, VTS,
- Manoeuvrability and hydrodynamics of ships,
- Colregs, anti-collision, radar equipment, ARPA, AIS, VDR,
- Maritime search and rescue issues,
- Human factors, marine accidents, human errors,
- Crew resource management, safe manning, stress and fatigue,
- Navigational systems - the end user experience,
- Marine simulation; full mission bridge, navigational simulators,
- Meteorology and nautical oceanography,
- Standardization of navigational terminology,
- Maritime education and training; model courses validation,
- Decision support systems and Artificial Intelligence methods in maritime transport,
- Data transmission and processing,
- Modelling and numeric methods in maritime industry.

3 HONORARY COMMITTEE

It is our pleasure to inform that the following very important persons have kindly accepted the honorary patronage of the Symposium: Mr. Rafał Wiechecki - Minister of Maritime Economy Ministry of the Republic of Poland, Capt. Nicholas Cooper – President of the Nautical Institute, VAdm Alexandros Maratos, President of the International Hydrographic Bureau, Dr. Wojciech Szczurek – Mayor of Gdynia and Prof. Józef Lisowski – Rector of Gdynia Maritime University.

4 PROGRAMME COMMITTEE

There is a long list of Programme Committee members, almost one hundred names of distinguished persons in the field of Maritime Transport and Navigation from Poland, Europe and the rest of the world (25 different nationalities):

- Prof. Vidal Ashkenazi, FRIN UK
- Capt. Trevor Bailey, Master Mariner, FNI UK
- Prof. Andrzej Banachowicz PL
- Prof. Lubomir Włodzimierz Baran PL
- Prof. Marcin Barlik PL
- Prof. Eugen Barsan, Master Mariner RO
- Dr. Angelica M. Baylon PH
- Prof. Knud Benedict DE
- Prof. Bernard Berking DE
- Prof. Alfred Brandowski, President of PSRA PL
- Prof. Zbigniew Burciu, Master Mariner PL
- Prof. Doina Carp RO
- Prof. Shyy Woei Chang TW
- Prof. Andrzej Chudzikiewicz PL
- Capt. Nicolas Cooper – Nautical Institute President UK
- Prof. Krzysztof Czaplowski PL

- Mr. Eric Dawicki – President of NMI US
- Prof. German de Melo Rodriguez ES
- Prof. Daniel Duda, Master Mariner PL
- Prof. Janusz Dyduch PL
- RAdm. Dr. Czesław Dyrz PL
- Prof. Milan Dzunda SK
- Prof. Ismail Deha Er TR
- Prof. Andrzej Fellner PL
- Prof. Andrzej Felski, President of the PNF PL
- Prof. Włodzimierz Filipowicz, Master Mariner PL
- Prof. Masao Furusho JP
- Prof. Wiesław Galor PL
- Prof. Avtandil Gegenava GE
- Prof. Stanisław Gorski, Master Mariner PL
- Mr. Jerzy Graff, FIMA UK
- Prof. Marek Grzegorzewski PL
- Prof. Andrzej Grzelakowski PL
- Prof. Lucjan Gućma PL
- Prof. Stanisław Gućma, Master Mariner PL
- Prof. Renkuan Guo ZA
- Prof. Hideki Hagiwara, JP
- Prof. Shogo Hayashi, Master Mariner JP
- Prof. Michał Holec – Dean of Nav. Faculty, GMU PL
- Prof. Kinzo Inoue JP
- Prof. Igor Jagniszczak, Master Mariner PL
- Prof. Jacek Januszewski PL
- Prof. Mirosław Jurdziński, Master Mariner, FNI PL
- Prof. Tadeusz Kaczorek PL
- Prof. John Kemp UK
- Prof. Hiroaki Kobayashi, JP
- Prof. Lech Kobylinski PL
- Prof. Krzysztof Kołowrocki, V. President of PSRA PL
- Dr Andrzej Krolikowski, Master Mariner PL
- Prof. Bogumił Łączyński, Master Mariner PL
- Prof. Józef Lisowski – Rector of GMU PL
- Prof. Vladimir Loginovsky RU
- Prof. Mirosław Luft PL
- VAdm. Alexandros Maratos, President of the IHB GR
- Prof. Andrzej A. Marsz PL
- Prof. Bolesław Mazurkiewicz PL
- Prof. Torgeir Moan NO
- Prof. Leszek Morawski PL
- Prof. Waćław Morgas PL
- Prof. Takeshi Nakazawa, WMU JP
- Prof. Nikitas Nikitakos GR
- Prof. Stanisław Oszczak, MRIN PL
- Prof. Gyei-Kark Park KR
- Prof. Jinsoo Park KR
- Mr. David Patraiko, MBA FNI UK
- Prof. Egil Pedersen NO
- Capt. Piotr Pernaczyński, Chief of the HOPN PL
- Prof. Zbigniew Pietrzykowski PL
- Prof. Malek Pourzanjani AU
- Prof. Jerzy B. Rogowski, MRIN PL
- Prof. Władysław Rymarz, Master Mariner PL
- Prof. Chaojian Shi CN
- Prof. Roman Śmierchalski PL
- Capt. Dick Smith, FRIN, President of the IAIN UK
- Prof. Henryk Śniegoćki, Master Mariner, MNI PL
- Prof. Jac Spaans NL
- Prof. Cezary Specht PL

- Cmdr. Bengt Stahl SE
- Prof. Andrzej Stateczny PL
- Prof. Andrzej Stepnowski PL
- Prof. Stefan Trzeciak, Master Mariner PL
- Prof. Mykola Tsymbal UA
- Prof. Józef Urbański PL
- Capt. Rein van Gooswilligen, Chairman of EUGIN NL
- Prof. František Vejražka, FRIN, President of CZIN CZ
- Mr Philip Wake, FNI, Chief Executive of the NI UK
- Prof. Aleksander Walczak, Master Mariner PL
- Prof. Jin Wang UK
- Prof. Ryszard Wawruch, Master Mariner PL
- Prof. Wojciech Wawrzyński PL
- Prof. Adam Weintrit, Master Mariner, FRIN, MNI PL
- Prof. Bernard Wiśniewski PL
- Prof. Adam Wolski, Master Mariner, MNI PL
- Capt. Ricardas Zazeckis, Master Mariner LT
- Prof. Janusz Zieliński PL

We would like to express our gratitude to the Programme Committee members totally committed to papers review process. Thank you very much for your matter-of-fact critical comments, in general well received by the authors and taken into consideration in the last version of submitted papers.

5 ORGANIZING COMMITTEE

The Chairman of the TransNav'2007 Organizing Committee and the editor of Symposium Proceedings elaborated as Monograph titled "Advances in Navigation and Safety of Sea Transportation" is Prof. Adam Weintrit, Head of Department of Navigation GMU and Chairman of Polish Branch of the Nautical Institute. The Secretary of Symposium is Tomasz Neumann (DN, GMU). The members of the Organizing Committee are the following:

- Andrzej Bomba, Chairman of Technical Committee,
- Piotr Kopacz (Transport),
- Maria Lozinska (Translator/Interpreter),
- Hanna Pleger (Office, Correspondence, Funds),
- Dorota Rajmanska (Office, Registration),
- Krzysztof Stawicki (Accommodation),
- Marek Szczepański,

with permanent co-operation with:

- Tomasz Degórski, GMU Press Spokesman
- Capt. Henryk Nitner, Deputy Chief of Hydrographic Office of Polish Navy.

6 TECHNICAL COMMITTEE

The Chairman of the Technical Committee is Andrzej Bomba, active member of Organizing Committee, responsible for advertisements and contact with the

sponsors. There are the following members of the Technical Committee:

- Piotr Bobkiewicz
- Piotr Kabziński
- Piotr Kopacz
- Dariusz Krucki
- Teresa Majer
- Ryszard Miszke
- Dorota Rajmańska
- Janusz Sawka
- Wojciech Stasiak
- Adam Uljasz.

7 SYMPOSIUM PROCEEDINGS

Symposium Proceedings is organized thematically like a Monograph.

Each paper was reviewed by three members of the Programme Committee. Qualified papers submitted on time are published in the TransNav'2007 Proceedings. Some of them will be presented at plenary sessions, most on parallel thematic sessions and the rest on poster session. The authors were informed that the organizer reserves the right to qualify some papers for the poster session.

After the receipt of information on paper qualification by the Programme Committee an electronic version of the paper in English was submitted at web site <http://transnav.am.gdynia.pl> or as an e-mail attachment. It was informed that the above material shall be with the Symposium Office before the deadline for submission (1st April). Any material received too late (after 1st May) is not published.

7.1 Chapters of Monograph

The Monograph is divided into twenty following chapters:

- Introduction
- Chapter 1 Safety of Navigation
- Chapter 2 Navigation, Manoeuvring and Ship-Handling Simulation
- Chapter 3 Global Navigation Satellite System
- Chapter 4 Ships Routeing and Vessel Traffic Services
- Chapter 5 Automatic Identification Systems
- Chapter 6 Anti-Collision
- Chapter 7 Electronic Navigational Charts and ECS/ECDIS Systems
- Chapter 8 Technical Aids to Navigation
- Chapter 9 Integration of Navigation
- Chapter 10 E-Navigation
- Chapter 11 Weather Navigation and Meteorological Aspects
- Chapter 12 Astronavigation
- Chapter 13 History of Navigation

- Chapter 14 Methods and Algorithms
- Chapter 15 Manoeuvring in Port Area and Pilot Navigation
- Chapter 16 Safety and Security In Sea Transportation
- Chapter 17 Pollution and Environment Protection
- Chapter 18 Human Factors and Crew Resource Management
- Chapter 19 Maritime Education and Training
- Chapter 20 STCW Implementation and Maritime Policy

7.2 World Hydrography Day

The United Nations, in its General Assembly Resolution A/60/30 of 29 November 2005, "Welcomes the adoption by the International Hydrographic Organization of the "World Hydrography Day", to be celebrated annually on June 21st, with the aim of giving suitable publicity to its work at all levels and of increasing the coverage of hydrographic information on global basis, and urges all States to work with that organization to promote safe navigation, especially in the areas of international navigation, ports and where there are vulnerable or protected marine areas".

On 21st of June (Thursday) - the Second Day of Symposium – special plenary session will be organized under chairmanship of RAdm. Dr. Czesław Dyrz and Capt. Piotr Pernaczyński, former and present Head of Hydrographic Office of the Polish Navy.

The theme of this year's celebrations is "Electronic Navigational Charts (ENCs); an essential element of safety at sea and efficient maritime operations".

7.3 Round Table Panel

On 21st of June (Thursday) - the Second Day of Symposium - the Round Table Panel Discussion will be organized under chairmanship of Prof. Vidal Ashkenazi, UK. The title of Round Table Plenary Session is "Galileo: A Significant Benefit to Marine Navigation?".

It is our pleasure to present 5 distinguished panelists:

- Jean-Pierre Barboux
Galileo Applications Development Manager, Thales, France
- Carlo des Dorides
Head of the Concession Department European GNSS Supervisory Authority (GSA), Italy
- Rolf Backstrom
Finnish Maritime Administration and IALA, Finland
- Capt R A Smith
President of the International Association of Institutes of Navigation, UK

- Prof Adam Weintrit
Head of Navigational Department, Gdynia Maritime University, Poland

Table 1. Round Table Panel Session

Title:	"Galileo: A Significant Benefit to Marine Navigation?"
Chair:	Prof. Vidal Ashkenazi <i>Chief Executive Nottingham Scientific Ltd., UK</i>
Panellists:	
Mr Jean-Pierre Barboux <i>Galileo Applications Development Manager, Thales, France</i>	
Mr Carlo des Dorides <i>Head of the Concession Department European GNSS Supervisory Authority (GSA), Italy</i>	
Mr Rolf Backstrom <i>Finnish Maritime Administration and IALA, Finland</i>	
Capt Dick Smith <i>President of the International Association of Institutes of Navigation, UK</i>	
Prof. Adam Weintrit <i>Head of Navigational Department, Gdynia Maritime University, Poland</i>	

8 CONCLUSIONS

It is a great pleasure of the Faculty of Navigation, Gdynia Maritime University in association with the Nautical Institute to host this year's Symposium and to invite scientists, theoretical and practical navigators, manufacturers, service providers, design engineers and representatives of national and international organizations, agencies and societies to meet the navigation community in Gdynia, Poland.

The 7th Symposium will be accompanied by a small exhibition, which will display the latest developments in on-board equipment, education and training, safety and navigation infrastructure, and navigation technologies and equipment.

We would like to express our gratitude to distinguished chairmen, speakers, exhibitors, sponsors, participants and all members of Honorary, Programme, Organizing and Technical Committee for their great contribution for expected success of the 7th International Symposium on Navigation **TransNav'2007**. We congratulate the authors for their work.

Six such meetings were already held. This monograph is a collection of 130 various papers of the 7th International Symposium TransNav'2007. We hope that you can find something captivating and inspiring for you.

