Faculty of Navigation
Gdynia Maritime University

and

have the honour to invite
to

9th INTERNATIONAL SYMPOSIUM ON MARINE NAVIGATION AND SAFETY OF SEA TRANSPORTATION

TransNav 2011

Gdynia, 15-17 June 2011

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Prof. Adam **Weintrit** – Dean of the Faculty of Navigation, Gdynia Maritime University
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Media Partners:

Seaways - The International Journal of The Nautical Institute
Coordinates - A monthly magazine on positioning, navigation and beyond (not confirmed)
Hydro International (not confirmed)
InsideGNSS (not confirmed)
European Journal of Navigation (not confirmed)
Archives of Transport
Archives of Transport System Telematics
The International Hydrographic Review
Drogi Ladowe, Powietrzne, Wodne

Symposium important dates and deadlines:

1 April 2011

3rd Announcement

Information on the preliminary Symposium's Programme

1 June 2011

4th Announcement - final version of **Symposium Programme,** chairmen list confirmation

15 June 2011

The First Day of Symposium (Wednesday)

Opening ceremony, plenary session, round table panel discussion and parallel provided specialist sessions

16 June 2011

The Second Day of Symposium (Thursday)

Parallel provided specialist sessions and poster sessions

17 June 2011

The Third Day of Symposium (Friday)

Technical tour to Malbork Castle and Ship Handling Research and Training Centre in Ilawa

Symposium main topics:

- Marine navigation
- Safety and security of maritime shipping
- Sea transport and transportation technology
- Technology development in maritime and ocean engineering
- Safety and environment protection at sea
- Recent trends and future perspectives for shipping
- Hydrography, geodesy and marine cartography
- Geodetic and hydrographical support of human activity at sea
- Geomatics and GIS in maritime applications
- Spatial data analysis
- Electronic chart systems ECS and ECDIS
- Inland, sea-river, river and pilot navigation systems
- Presentation of navigation-related information
- Route planning and monitoring; passage plan
- Integration of navigational systems INS / Integrated bridge systems IBS
- e-Navigation concept
- Satellite navigation (e.g., GNSS, GPS, GLONASS and Galileo)
- Celestial navigation
- Determining the position of a vessel

- Radio based navigational systems
- Telematics in maritime transportation
- Automation aspects in navigation
- Techniques, algorithms and methods
- Ships routeing and associated protected measures
- Hydro-technical structures
- Ocean engineering and ship technology
- Ships and port operations, facilities and cargo handling
- Port engineering
- Safety of port operations
- Maritime traffic engineering
- Organization and management of vessel traffic
- Systems of control, guidance and monitoring of traffic, VTS
- Virtual aids to navigation
- Manoeuvrability and hydrodynamics of ships
- Ship dynamics and stability
- Radar equipment, ARPA, AIS, VDR
- Colregs, ship handling and anti-collision
- Intelligence, surveillance and reconnaissance
- Radio frequency technology
- Maritime search and rescue issues
- Life-saving service
- Sea pollution and environmental protection*
- Human factors, marine accidents, human errors
- Crew resource management, safe manning, stress and fatigue
- Navigational systems - the end user experience
- Systems modelling and simulation
- Marine simulation; full mission bridge, navigational simulator
- Computer-based assessments in seafaring training
- Standardization of navigational terminology
- Maritime education and training; model courses validation
- Frontiers in educational methods
- New researches in the history of navigation
- Meteorology and nautical oceanography
- Climate change
- Tropical cyclones and impact of extreme storms
- Polar research, safe and sustainable traffic in ice/winter conditions
- Acoustic remote sensing
- Coastal zone management
- Marine & coastal protected areas
- Advanced maritime policy and governance
- Maritime law, insurance and arbitration
- International standards and regulation
- Information and communications

- Computer applications in maritime engineering
- Information processing and engineering
- Network & communication technologies
- Signal & image processing
- Decision support systems and artificial intelligence methods in maritime transport
- Intelligent control system of ships dynamic positioning
- Underwater acoustic measurments: technologies, methods and systems
- Maritime sensors, technology and infrastructure in waterside security
- Maritime intelligent transportation systems
- Data transmission and processing
- Modelling and numeric methods in maritime industry
- Application and evaluation studies
- Mathematical model applications in the operation of vessel and port machinery
- Mathematical fundamentals of safety and dependability, maintainability of maritime objects
- System availability, software and structural reliability
- Safety, security and risk management
- Risk and safety analysis, assessment and prediction
- Transportation planning and management
- Impact of economic recession on maritime transport
- Maritime transport and logistics systems
- New maritime technologies

INVITATION

We kindly inform that the 9th Navigational Symposium will be held in Gdynia, Poland from 15 to 17 June 2011 (Wednesday to Friday).
The Symposium is organized by the Faculty of Navigation of the Gdynia Maritime University and The Nautical Institute.

Symposium participants
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 of navigation and sea transportation. The goal of the TransNav is to bring together experts from the field of navigation, transport, ocean engineering and maritime technology to discuss on the state-of-the-art and to present new research findings and perspectives of future developments with respect to the conference themes.

On-line registration and abstract submission
The Organizing Committee welcomes the online registration and submission of abstracts and full papers through the Symposium homepage http://transnav.am.gdynia.pl for oral or poster presentations at the Symposium. Authors of papers are invited to submit filled

application forms to the Symposium Office at our web site together with papers' abstracts for consideration by the Scientific Programme Committee.

Paper submission
Only papers not previously published or submitted for presentation at another national or international meeting will be accepted. All papers will be refereed by at least two members of Scientific Programme Committee. The limit for each paper is 8 pages.

Symposium Proceedings
Papers submitted on time will be published in the Transnav Symposium Proceedings - series of a few monographs under the common title: Advances in Marine Navigation and Safety of Sea Transportation. Some best papers will be recommended to be published in the professional journals (see media partners).

Symposium language
The official language of the Symposium is English (no translation is provided).

Symposium Venue
Information about Symposim Venue and hotels accommodation is available at our web site: http://transnav.am.gdynia.pl. Due to summer season it is our suggestion to book the hotels rooms as soon as possible after your paper acceptation.

Round Table Plenary Session
Organizing Committee would like to inform that on 15th of June (Wednesday) - the First Day of Symposium - will be organized the Round Table Panel Discussion under chairmanship of **Prof. Vidal Ashkenazi, UK**. The title of Round Table Plenary Session is **"GNSS Challenges in Maritime Navigation"**.

Distinguished panellists:

Prof. Bernd Eisfeller
Director of the Institute of Geodesy and Navigation, University of FAF, Munich, Germany

Mr Rafael Lucas Rodriguez
Head of Future GNSS Systems and Technology Office, Dept of Galileo Operations & Evolution, ESA/ESTEC

Mr Colin M D Beatty
Managing Director, CBIL, Aylesbury, and President-Elect of the Royal Institute of Navigation, United Kingdom

Dr Captain Refaat Rashad
President of the International Association of Institutes of Navigation (IAIN), Alexandria, Egypt

Prof. Dr Adam Weintrit
Dean, Faculty of Navigation, Gdynia Maritime University, Gdynia, Poland

Symposium Fees

Payment of the conference fee is required for paper publication. To avoid any problem the best idea is to transfer conference fee at the beginning of February, immediately after paper acceptation by Programme Committee. The organizer reserves the right to qualify some papers for the poster session.

Categories (A), (C), (F), (G), (I) and (N) of registration fees include technical programme attendance, one copy of the Symposium proceedings, welcome reception, lunches, coffee-breaks, and conference dinner. Category (S) of registration fee includes technical programme attendance, lunches, and coffee-breaks. Category (W) registration fee includes welcome reception, conference dinner, launches and Lady's program.

1 Euro ≈ 4 PLN

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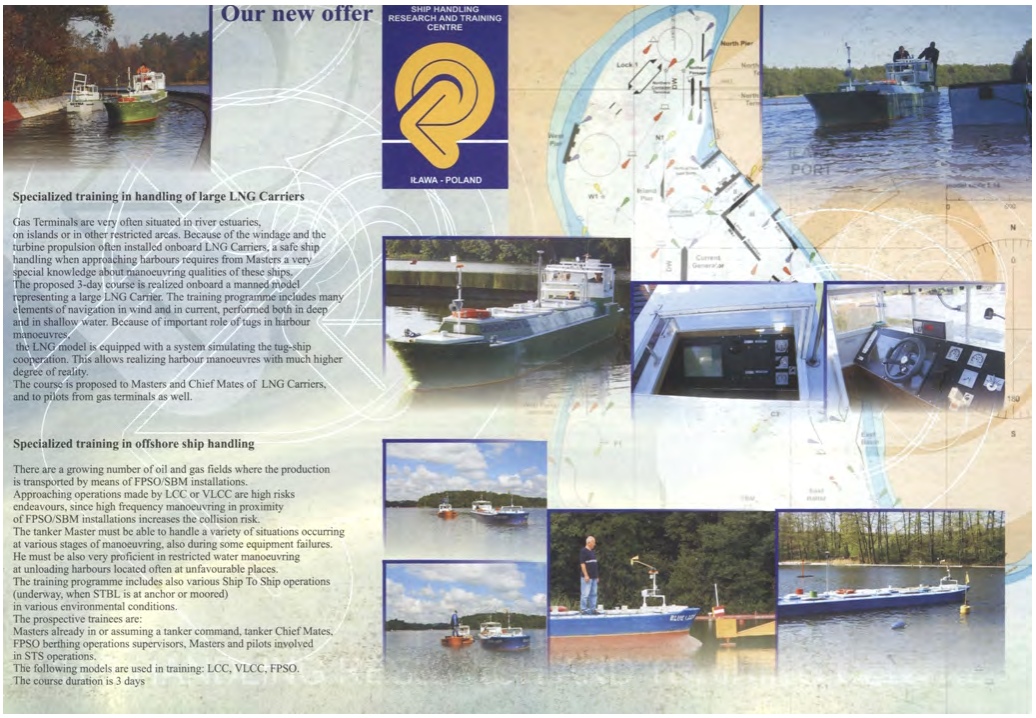
Note: *Please remember that all bank charges should be covered by participants, not by TransNav Office*

Malbork

The Malbork Castle (from German Marienburg, Mary's Town) – a masterpiece of late-medieval defensive and residential architecture. The biggest Gothic castle complex in the world occupying an area of approx. 21 hectares, with a total capacity of over a quarter million square meters, ranked as the biggest brick structure erected by man.

Iława



Model's type	LCC Tanker	Panamax Bulk Carrier	Ro-ro Vessel	Passenger Car Ferry	VLCC Tanker	Large Container	LNG Carrier
Length L_{BP} [m]	278.00	205.00	182.00	154.20	324.00	304.20	272.00
Breadth B [m]	48.00	30.50	31.00	28.50	57.00	43.00	43.20
Draft T_{MAX} [m]	15.33	12.09	9.50	6.55	20.60	14.50	12.00
Displacement [t]	176 967	62 450	34 830	20 270	323 660	127 980	113 500
Rudder area ratio $A_R/(L \cdot T)$ [%]	1,76	1,39	1,82	2×1,33	1,75	1,85	1,81
Number and type of propellers	1 FP	1 FP	1 FP	2 CP or 2 FP	1 FP	1 FP	1 FP
Engine's type	Diesel / Turbine	Diesel	Diesel	Diesel	Diesel / Turbine	Diesel	Turbine
Other equipment	2 anchors, simulation of tug-ship cooperation, GPS	3 anchors, conventional rudder, Becker or Schilling high lift rudders, bow and stern thrusters	2 anchors, bow and stern thrusters	Rudders, working separately or simultaneously, 2 bow thrusters	Full load or ballast condition, simulation of tug-ship cooperation, GPS	7200 TEU simulation, of tug-ship cooperation, GPS, bow thrusters	140 000m3 simulation, of tug-ship cooperation, GPS, bow thrusters
scale	1:24	1:24	1:24	1:16	1:24	1:24	1:24

Preliminary Symposium's Programme

Volume 1.
International Recent Issues about ECDIS, e-Navigation and Safety at Sea. Advances in Marine Navigation and Safety of Sea Transportation

1. e-Navigation Concept

1. e-Navigation and Future Trend in Navigation
F. AMATO, Michele FIORINI, S. GALLONE, G. GOLINO

2. Development of Requirements for Communication Management on Board in the Framework of the E-navigation Concept
Florian MOTZ, Elena DALINGER, Sabine HOECKEL, Cindy MANN

3. Advanced Maritime Technologies to Support Manoeuvring in Case of Emergencies - a Contribution to E-navigation Development
Michael BALDAUF, Sebastian KLAES, Jens Uwe SCHRÖDER-HINRICHS, Knud BENEDICT, Sandro FISCHER, Erland WILSKE

4. Concept for an Onboard Integrated PNT Unit
Ralf ZIEBOLD, Zhen DAI, Thoralf NOACK, Evelin ENGLER

2. ECDIS

1. Navigation Safety Assessment in the Restricted Area with the Use of ECDIS
Zbigniew PIETRZYKOWSKI, Miroslaw WIELGOSZ

2. Increasing Maritime Safety: Integration of the Digital Selective Calling VHF Marine Radiocommunication System and ECDIS
M.V. MIYUSOV, V.M. KOSHEVOY, A.V. SHISHKIN

3. Enhance Berth to Berth Navigation requires high quality ENC's – The Port ENC – a Proposal for a new Port related ENC Standard
Dieter SEEFELDT

4. The New Electronic Chart Product Specification S-101: an Overview
Julia POWELL

3. Visualization and Presentation of Navigational Information

1. Applications and Benefits of Cartographic 3D Visualisation in Maritime Safety
Rafał GÓRALSKI, Cyril RAY, Chris GOLD

2. Assumptions to the Selective System of Navigational-maneuvering Information Presentation
Rafał GRALAK

3. Security Modeling Technique: Visualizing Information of Security Plans
Daniel LEY, Elena DALINGER

4. Data Transmission and Communication Systems

1. Maritime Communications, Navigation and Surveillance (CNS)
Dimov Stojce ILCEV

2. On a Data Fusion Model of the Navigation and Communication Systems of a Ship
Gyei Kark PARK, Young-Ki KIM

3. Automation of Message Interchange Process in Maritime Transport
Zbigniew PIETRZYKOWSKI, Grzegorz HOŁOWIŃSKI, Janusz MAGAJ, Jarosław CHOMSKI

4. An Invariance of the Performance of Noise-Resistance of Spread Spec-trum Signals
Galina CHERNEVA, E. DIMKINA

5. Surface Reflection and Local Environmental Effects in Maritime and other Mobile Satellite Communications
Dimov Stojce ILCEV

6. Shipborne Satellite Antenna Mount and Tracking Systems
Dimov Stojce ILCEV

7. Yesterday, Today and Tomorrow of the GMDSS
Karol KORCZ

5. Safety at Sea

1. Visual Condition at Sea for the Safety Navigation
Masao FURUSHO, K. KAWAMOTO, Y. YANO, K. SAKAMOTO

2. Safety Control of Maritime Traffic Near by Offshore in Time
Daegwun YOON, Yoochaing SUNG, Jung Sik JEONG, Gyei Kark PARK

3. Maritime Safety in the Strait of Gibraltar. Taxonomy and Evolution of Emergencies Rate in 2000-2004 Period
Jorge WALLISER, Francisco PINIELLA, Juan Carlos RASERO BALON, Nieves ENDRINA

4. Safety at Sea – a Review of Norwegian Activities
Tor Einar BERG, B. KVAMSTAD, F. KJERSEM

5. Improving Emergency Supply System to Ensure Port City Safety
Zesheng WANG, Zhonghua ZHU, Wencai CHENG

6. Congested Area Detection and Projection – the User's Requirements
Tadeusz STUPAK, Stanisław ŻURKIEWICZ

7. Studying Probability of Ship Arrival of Yangshan Port with AIS (Automatic Identification System)
HlaingYin NI NI, Qinyou HU, Chaojian SHI

Volume 2.
Navigational Systems and Simulators.
Advances in Marine Navigation and Safety of Sea Transportation

1. Global Navigation Satellite System

1. A Look at the Development of GNSS Capabilities over the Next 10 Years
Jacek JANUSZEWSKI

2. GNSS Meteorology
Jarosław BOSY, W. ROHM, J. SIERNY, J. KAPLON

3. Onboard Wave Sensing with Velocity Information GPS
Yasuo ARAI, Egil PEDERSEN, Nobuyoshi KOUGUCHI, Kouzaburou YAMADA

4. EGNOS Performance Improvement in Southern Latitudes
Liza PANAGIOTOPOULOU, K. FRANGOS

5. An Integrated Vessel Tracking System by Using AIS, Inmarsat and China Beidou Navigation Satellite System
Chun YANG, Qinyou HU, Xinghua TU, Jie GENG

2. Positioning Systems

1. Recent Advances in Wide Area Real-Time Precise Positioning
Dariusz LAPUCHA, K. DE JONG, X. LIU, T. MELGARD, O. OERPEN, E. VIGEN

2. Assessing the Limits of Eloran Positioning Accuracy
Jan ŠAFÁŘ, Frantisek VEJRAŽKA, Paul WILLIAMS

3. Fuzzy Evidence in Terrestrial Navigation
Włodzimierz FILIPOWICZ

4. Ground-based, Hyperbolic Radiolocation System with Spread Spectrum Signal - AEGIR
S.J. AMBROZIAK, R.J. KATULSKI, J. SADOWSKI, Wojciech SIWICKI, J. STEFAŃSKI

5. An Algorithmic Study on Positioning and Directional System by Free Gyros
Tae-Gweon JEONG, Sok-Chu PARK

6. Compensation of Magnetic Compass Deviation at One any Course
Ewgenij ŁUSZNIKOW

3. Navigational Simulators

1. New level of Integrated Simulation Interfacing Ship Handling Simulator with Safety & Security Trainer (SST)
Knud BENEDICT, Christoph FELSENSTEIN, Olaf PULS, Michael BALDAUF

2. Path Following Problem for a DP Ship Simulation Model
Paweł ZALEWSKI

3. Simulating Method of Ship's Turning-basins Designing
Jakub KORNACKI

4. Capabilities of ship handling simulators to simulate shallow water, bank and canal effects
Lech KOBYLIŃSKI

5. Development of a Costs Simulator to Assess New Maritime Trade Routes
Francesc Xavier MARTÍNEZ DE OSÉS, Marcel·la CASTELLS I SANABRA, M. RODRÍGUEZ NUEVO

6. Analogical Manoeuvring Simulator with Remote Pilot Control for Port Design and Operation Improvement
Paolo ALFREDINI, Juliano GERENT, Emilia ARASAKI

7. A Simulation Model for Detecting Vessel Conflicts Within a Seaport
Qing LI, H. S. L. FAN

8. Research on Ship Navigation in Numerical Simulation of Weather and Ocean in a Bay
Taisuke SODA, Shigeaki SHIOTANI, Hidenari MAKINO, Youichi SHIMADA

9. A Methodological Framework for Evaluating Maritime Simulation
Panagiotis VASILAKIS, Nikitas NIKITAKOS

4. Radar and Navigational Equipments

1. Impact of Internal and External Interferences on the Performance of a FMCW Radar
Paweł PAPROCKI

2. Fusion of Data Received from AIS and FMCW and Pulse Radar - Results of Performance Tests Conducted Using Hydrographical Vessels "Tukana" and "Zodiak"
Artur KRÓL, Tadeusz STUPAK, Ryszard WAWRUCH, M. KWIATKOWSKI, Paweł PAPROCKI, Jarosław POPIK

3. Statistical Analysis of Simulated Radar Target's Movement for the Needs of Multiple Model Tracking Filter
Witold KAZIMIERSKI

4. The Modes of Radar Presentation of Situation in Inland Navigation
Wiesław GALOR

5. Ship Handling and Ship Manoeuvering

1. Multirole Population of Automated Helmsmen in Neuroevolutionary Ship Handling
Mirosław ŁĄCKI

2. Ship's Turning in the Navigational Practice
Jakub KORNACKI

6. Search and Rescue

1. Iridium a More Effective Proposal for the Localization, Search and Rescue in the Sea
Isidro PADRÓN , Deivis AVILA PRATS, Enrique MELÓN RODRÍGUEZ, Iballa FRANQUIS VERA, José Ángel RODRÍGUEZ HERNÁNDEZ

2. Research on the Risk Assessment of Man Overboard in the Performance of Flag Vessel Fleet (FVF)
Ting-Rong QIN, Qinyou HU, Jianying MO

Volume 3.
Methods and Algorithms in Navigation. Advances in Marine Navigation and Safety of Sea Transportation

1. Methods and Algorithms

1. Fuzzy–neuron Model of the Ship Propulsion Risk
Alfred BRANDOWSKI, Andrzej MIELEWCZYK, Hoang NGUYEN, Wojciech FRĄCKOWIAK

2. Kalman-Bucy Observer Design for Multivariable Ship Motion Control
Mirosław TOMERA

3. Method of Evaluation of Insurance Expediency of Stevedoring Company's Responsibility for Cargo Safety
Mykhaylo POSTAN, Oleksandr BALOBANOV

4. Experimental and Numerical Methods for Hydrodynamic Profiles Calculation
Andrei Alexandru SCUPI, Dumitru DINU

5. Asymptotic Stability of a Class of Positive Continuous-discrete 2D Linear Systems
Tadeusz KACZOREK

6. Application of CFD Methods for the Assessment of Ship Manoeuvrability in Shallow Water
Tomasz GÓRNICZ, J. KULCZYK

7. Comprehensive Methods of the Minimum Safe Under Keel Claearance Valuation to the Tidal Restricted Waters
Grzegorz SZYCA

2. Collision Avoidance

1. Knowledge Base in the Interpretation Process of the Collision Regulations at Sea
Paweł BANAŚ, Marcin BREITSPRECHER

2. A Method for Assessing a Causation Factor for a Geometrical MDTC Model for Ship-Ship Collision Probability Estimation
Jakub MONTEWKA, Floris GOERLANDT, Heiki LAMMI, Pentti KUJALA

3. The Sensitivity of Safe Ship Control in Restricted Visibility at Sea
Józef LISOWSKI

4. Experimental Research on Evolutionary Path Planning Algorithm with Fitness Function Scaling for Collision Scenarios
P. KOLENDO, R. ŚMIERZCHALSKI, B. JAWORSKI

5. A New Definition of a Collision Zone for a Geometrical Model for Ship-Ship Collision Probability Estimation
Jakub MONTEWKA, Floris GOERLANDT, Pentti KUJALA

6. Uncertainty in Analytical Collision Dynamics Model Due to Assumptions in Dynamic Parameters
Kaarle STÅHLBERG, Floris GOERLANDT, Jakub MONTEWKA, Pentti KUJALA

7. Applied Research of Route Similarity Analysis Based on Association Rules
Zhe XIANG, Ru-ru LIU, Qinyou HU, Chaojian SHI

8. Analysis the Accident Between M/V Ocean Asia and M/V SITC Qingdao in Hanam Canal (Haiphong Port)
Vinh NGUYEN CONG

3. Geodetic Problems in Navigational Applications

1. A Novel Approach to Loxodrome (Rhumb Line), Orthodrome (Great Circle) and Geodesic Line in ECDIS and Navigation in General
Adam WEINTRIT, Piotr KOPACZ

2. Approximation Models of Orthodromic Navigation
Serdjo KOS, David BRČIĆ

3. Solutions of Direct Geodetic Problem in Navigational Applications
Andrzej S. LENART

4. Route Planning in Marine Navigation

1. Advanced Navigation Route Optimization for an Oceangoing Vessel
Eiichi KOBAYASHI, T. ASAJIMA, N. SUEYOSHI

2. On the Method of Ship's Transoceanic Route Planning
Oleksandr PIPCHENKO

3. Weather Hazard Avoidance in Modeling Safety of Motor-driven Ship for Muticriteria Weather Routing
Joanna SZŁAPCZYŃSKA, Przemysław KRATA

4. Evolutionary Sets of Safe Ship Trajectories: Evaluation of Individuals
Rafał SZŁAPCZYŃSKI, Joanna SZŁAPCZYŃSKA

5. Development of a 3D Dynamic Programming Method for Weather Routing
Shao WEI, Peilin Zhou

5. Aviation and Air Navigation

1. Position Reference System for Flight Inspection Aircraft
Michal KUBIS, Andrej NOVAK

2. RNAV GNSS Essential Step for the LUN Implementation and the Chance for the Polish General Aviation
K. BANASZEK, Andrzej FELLNER, P. TRÓMIŃSKI, P. ZADRĄG

3. Aircraft Landing System Utilizing a GPS Receiver with Position Prediction Functionality
Jerzy BIAŁY, Adam CIEĆKO, Janusz ĆWIKLAK, Marek GRZEGORZEWSKI, Piotr KOŚCIELNIAK, Stanisław OSZCZAK

Volume 4.
Human Resources and Crew Resource Management .
Advances in Marine Navigation and Safety of Sea Transportation

1. Crew Resource Management

1. Crew Resource Management: the Role of Human Factors and Bridge Resource Management in Reducing Maritime Casualties
Homayoun YOUSEFI, R. SEYEDJAVADIN

2. Women Seafarers: Solution to Shortage of Competent Officers?
Melchor MAGRAMO, Geneva ELER

3. The Manning Companies in the Philippines Amidst the Global Financial Crisis
Melchor MAGRAMO, Lorna GELLADA, Teresita PARAGON

4. Academe and Industry Collaboration: Key to More Competent Officers?
Melchor MAGRAMO, Geneva ELER, Lorna GELLADA

2. Human Factors

1. Factors of Human Resources Competitiveness in Maritime Transport
E. BARSAN, F. SURUGIU, Cristina DRAGOMIR

2. Human Factors As Causes for Shipboard Oil Pollution Violations
Abdul Hamid SAHARUDDIN, Apandi OSNIN, Rajoo BALAJI

3. STCW Convention

1. Needs and Importance of Master Studies for Navigators in XXI Century and Connectivity to STCW 78/95
Anatoli ALOP

2. Implementation of the 1995 STCW Convention in Constanta Maritime University
Stan LIVIU-CONSTANTIN

3. Implementation of STCW Convention at the Serbian Military Academy
Svetislav ŠOŠKIĆ, Jovica ĆURČIĆ, Slobodan RADOJEVIĆ

4. Electrical, Electronic and Control Engineering – New Mandatory Standards of Competence for Engineer Officers, Regarding Provisions of the Manila Amendments to the STCW Code
Jacek WYSZKOWSKI, Janusz MINDYKOWSKI

5. Assessment Components Influencing Effectiveness of Studies: Marine Engineering Students Opinion
Inga BARTUSEVICIENE, Liudmila RUPSIENE

4. Maritime Education and Training

1. Improving MET Quality: Relationship Between Motives of Choosing Maritime Professions and Students' Approaches to Learning
Genutė KALVAITIENĖ, Inga BARTUSEVICIENE, Viktoras SENČILA

2. Evaluation of Educational Software for Marine Training with the Aid of Neuroscience Methods and Tools
Dimitris PAPACHRISTOS, Nikitas NIKITAKOS

3. Methodological Approaches to the Design of Business Games and Definition of the Marine Specialist Training Content
Sergey MOYSEENKO, Leonid MEYLER

4. Teaching Cross Cultural Competence in Maritime Schools
Carmen CHIREA-UNGUREANU, P.-E. ROSENHAVE

5. Considerations on Maritime Watch Keeping Officers' Vocational Training
Stan LIVIU-CONSTANTIN, Nicolae BUZBUCHI

6. Simulation Training for Replenishment at Sea (RAS) Operations: Addressing the Unique Problems of 'Close-Alongside' and 'In-line' Support for Multi-Streamer Seismic Survey Vessels Underway
Eamonn DOYLE

7. Teaching of ROR or Learning of ROR
Vinode MOHINDRA, I.V. SOLANKI

8. Safety and Security Trainer SST7 – a New Way to Prepare Crews Managing Emergency Situations
Claus BORNHORST

9. The Mareng Plus Project and the New Applications
Barbara KATARZYŃSKA

10. Methods of Maritime-Related Word Stock Research in the Practical Work of a Maritime English Teacher

Nadiya DEMYDENKO

5. Piracy Problem

1. Somali Piracy: Relation Between Crew Nationality and a Vessel's Vulnerability to Seajacking
Alexander COUTROUBIS, George KIOURKTSOGLOU

2. Influence of Pirates' Activities on Maritime Transport in the Gulf of Aden Region
Daniel DUDA, Katarzyna WARDIN

3. Preventive Actions and Safety Measures Directed Against Pirates in the Gulf of Aden Region
Daniel DUDA, Katarzyna WARDIN

4. Technological Advances and Efforts to Reduce Piracy
Marko PERKOVIC, Elen TWRDY, Rick HARSCH, Maciej GUCMA, Peter VIDMAR

6. Health Problems

1. Systems for Prevention and Control of Communicable Diseases on Ship
Carlos JEROME

7. Maritime Ecology

1. Study of EEOI Baseline on China International Shipping
Wu WANQING, Zheng QINGGONG, Wu WENFENG, Yang JIANLI

2. Coastal Area Prone to Extreme Flood and Erosion Events Induced by Climate Changes: Study Case of Juqueriquere River Bar Navigation, Caraguatatuba (Sao Paulo State), Brazil
Emilia ARASAKI, Paolo ALFREDINI, Alessandro PEZZOLI, Maurizio ROSSO

3. Ecological Risk from Ballast Waters for the Harbour in Świnoujście
Zofia JÓŹWIAK

Volume 5.
Miscellaneous Problems in Maritime Navigation, Transport and Shipping. Advances in Marine Navigation and Safety of Sea Transportation

1. Weather Routing and Meteorological Aspects

1. Elements of Tropical Cyclones Avoidance Procedure
Bernard WIŚNIEWSKI, Paweł KACZMAREK

2. Baltic Navigation in Ice in Twenty First Century
Marzenna SZTOBRYN

3. Storm-Surges Indicator for the Polish Baltic Coast
Ida STANISŁAWCZYK

4. Polish Seaports – Unfavorable Weather Conditions for Port Operation (Applying Methods of Complex Climatology for Data Formation to be Used by Seafaring)
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5. Analysis of Hydrometeorological Characteristics in Port of Kulevi Zone
Avtandil GEGENAVA, G. KHAIDAROV

6. Hydro-Meteorological Characteristics of the Montenegrin Coast
Jovica ĆURČIĆ, Svetislav ŠOŠKIĆ

2. Ice Navigation

1. Ship's Navigational Safety in the Arctic Unsurveyed Regions
Tadeusz Pastusiak

2. Methods of Iceberg Towing
Aleksey MARCHENKO, Kenneth EIK

3. Ice Management – from Conception to Realization
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3. Ship Construction

1. Investigations of Marine Safety Improvements by Structural Health Monitoring Systems
Lech MURAWSKI, Szymon OPOKA, Katarzyna MAJEWSKA, Magdalena MIELOSZYK, Wiesław OSTACHOWICZ, Adam WEINTRIT

2. Ultrasonic Sampling Phased Array Testing as a Replacement for X-ray Testing of Weld Joints in Ship Construction
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3. Conditions of Carrying Out and Verification of Diagnostic Evaluation in a Vessel
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4. Determination of Ship's Angle of Dynamic Heel Based on Model Tests
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5. Propulsive and Stopping Performance Analysis of Cellular Container Carriers
Jarosław ARTYSZUK

6. Coalescence Filtration with an Unwoven Fabric Barrier in Oil Bilge Water Separation on Board Ships
Jerzy GUTTETER-GRUDZIŃSKI

4. Ship Propulsion and Fuel Efficiency

1. Optimization of Hybrid Propulsion Systems
Edward SCIBERRAS, A. GRECH

2. Integrating Modular Hydrogen Fuel Cell Drives for Ship Propulsion: Prospectus and Challenges
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3. Modeling of Power Management System on Ship By Using Petri Nets
Maja KRCUM, Anita GUDELJ, Leo ŽIŽIĆ

4. Logical Network of Data Transmission Impulses in Journal-Bearing Design
Krzysztof WIERZCHOLSKI

5. Optimum Operation of Coastal Merchant Ships with Consideration of Arrival Delay Risk and Fuel Efficiency
Kyoko TAKASHIMA, Brahim MEZAOUI, R. SHOJI

6. Digital Multichannel Electro-Hydraulic Execution Improves the Ship's Steering Operation and the Safety at Sea (Security of the Navigation Act)
Stefan DORDEA

5. Safe Shipping and Environment in the Baltic Sea Region

1. Towards the Model of Traffic Flow on the Southern Baltic Based on Statistical Data
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2. Incidents Analysis on the Basis of Traffic Monitoring Data in Pomeranian Bay
Lucjan GUCMA, Krzysztof MARCJAN

3. Model of Time Differences Between Schedule and Actual Time of Departure of Sea Ferries in the Świnoujście Harbour
Lucjan GUCMA, Marcin PRZYWARTY

4. Simplified Risk Analysis of Tanker Collisions in the Gulf of Finland
Floris GOERLANDT, Maria HÄNNINEN, Kaarle STÅHLBERG, Jakub MONTEWKA, Pentti KUJALA

5. Estimating the Number of Tanker Collisions in the Gulf of Finland in 2015
Maria HÄNNINEN, Pentti KUJALA, J. YLITALO, J. KURONEN

6. Oil Spill Response

1. The Method of Optimal Allocation of Oil Spill Response in the Region of Baltic Sea
Lucjan GUCMA, W. JUSZKIEWICZ, Kinga ŁAZUGA

2. Modeling of Accidental Bunker Oil Spills as a Result of Ship's Bunker Tanks Rupture – a Case Study
Przemysław KRATA, Jacek JACHOWSKI, Jakub MONTEWKA

3. The Profile of Polish Oil Spill Fighting System
Andrzej BĄK, K. Ludwiczak

7. Large Cetaceans

1. Estimation on Audibility of Large Cetaceans for Improvement of the Under Water Speaker
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2. Feasibility Study on Infrared Detecting of Large Cetaceans to Avoid Sudden Collisions
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3. Towards Safer Navigation of Hydrofoils: Avoiding Sudden Collisions with Cetaceans
Hidehiro KATO, Hiroko YAMADA, K. SHAKATA, A. ODAGAWA, Lisa KAGAMI, Yuta YONEHARA, Minoru TERADA, K. SAKUMA, H. MORI, I. TANAKA, Hiroko SUGIOKA, M. KYO

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2. Modelling of Traffic Incidents in Transport
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3. Maritime Transport Single Windows: Issues and Prospects
Kay FJORTOFT, Maria A. LAMBROU, Marianne HAGASETH, Paal BALTZERSEN

2. Information and Computer Systems in Transport Process

1. Development and Standardization of Intelligent Transport Systems
Gabriel NOWACKI

2. Computer Systems Aided Management in Logistics
Krzysztof CHWESIUK

3. Information in Transport Processes
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4. Application of Fractional Calculus in Identification of the Measuring System
Mirosław LUFT, Elżbieta SZYCHTA, Radosław CIOĆ, Daniel PIETRUSZCZAK

5. Railroad Level Crossing – Technical and Safety Trouble
Jerzy MIKULSKI, Jakub MŁYŃCZAK

6. Application of the Polish Active Geodetic Network fot The Railway Track Determination
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7. The Advantage of Activating the Role of the EDI-Bill of Lading And its Role to Achieve Possible Fullest
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3. Maritime Transport Policy

1. Effectiveness of the European Maritime Policy Instruments
Gunars STEINERTS

2. Sustainable Transport Planning & Development in the EU at the Example of the Polish Coastal Region Pomorskie
Adam PRZYBYŁOWSKI

3. Development of the Latvian Maritime Policy; a Maritime Cluster Approach
Roberts GAILITIS, M. JANSEN

4. Maritime Law

1. European Union's Stance on the Rotterdam Rules
Kirval LEVENT

2. Maritime Law of Salvage and Adequacy of Laws Protecting the Salvors' Interest
Francis LANSAKARA

3. The Hong Kong International Convention for Safe and Environmentally Sound Management of the Recycling of Ships Hong Kong 2009
Jaime RODRIGO DE LARRUCEA, Cristina Steliana MIHAILOVICI

4. Maritime Delimitation in the Baltic Sea: Status Iuris
Erik FRANCKX

5. Ships Monitoring System; A Decision Support Tool

1. Ships Monitoring System
Liliana-Viorica POPA

2. A Decision Support Tool for VTS Centers to Detect Grounding Candidates
Arsham MAZAHERI, Floris GOERLANDT, Jakub MONTEWKA, Pentti KUJALA

3. Integrated Vessel Traffic Management System (VTMS) for Port Security in Malaysia
Apandi OSNIN, Abdul Hamid SAHARUDDIN, Zahuren TEH

4. On the Development of an Anchor Watch Supporting System for Small Merchant Ships
Hideo YABUKI, T. TAKEMOTO, K. YAMASHITA, S. SAITOH

5. The Relation with Width of Fairway and Marine Traffic Flow
Yuchang SEONG, Jung Sik JEONG, Gyei Kark PARK

6. Integrated Vessel Traffic Control System
M. KWIATKOWSKI, Jarosław POPIK, W. BUSZKA, Ryszard WAWRUCH

6. Inland Navigation

1. Navigation Data Transmission in the RIS System
Andrzej LISAJ

2. Sea-River Technology in Transport of Energy Products
Tomas KALINA, P. PIALA

3. Novel Design of Inland Shipping Management Information System Based on WSN and Internet-of-things