

## Conference Main Topics

### Invitation

We kindly inform that the 12<sup>th</sup> Navigational Conference **TransNav** will be held in Gdynia, Poland from **21 to 23 June 2017** (Wednesday to Friday). The Conference is organized by the Faculty of Navigation of the Gdynia Maritime University and The Nautical Institute.

### Conference Participants

The Conference 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.



More  
Information  
On Website

Nautical Science; Marine Navigation; Current Practical Applications, Developments and Deployments of PNT Systems - Safety and Security of Maritime Shipping; Safety at Sea - Sea Transport and Transportation Technology; Technological Advances in Maritime Transportation - Technology Development in Maritime and Ocean Engineering - Safety and Environment Protection at Sea; Health, Safety and Environment Protection Policy - Recent Trends and Future Perspectives for Shipping - Essential Geodesic based Trajectories in Navigation: Loxodrome (Rhumb Line), Orthodrome (Great Circle) and Geodesic Line - Geometry of Navigation; Computational Geometry in Navigation and Path Planning - Geodesy; Geodetic and Land Surveying; Geodetic Systems; World Geodetic System WGS-84; Geodetic Surveying and the Adjustment of Observations - Hydrography; Sea Surveying; Hydrographic Survey Method and Equipment - Marine Cartography; Chart Projections; Chart Datum; Coastal and Ocean Mapping - Geodetic and Hydrographical Support of Human Activity at Sea - Geospatial Sciences; Geographic Information Systems; GIS Technology; Geoinformatics; Geomatics and GIS in Maritime Applications - Spatial Data Analysis; 3D Mapping; Virtual and Augmented Reality - Geovisualization; Animated and Dynamic Cartography; Generalization and Multi-Scale Representation - Earth Observation; Application of Integrated Interactive Media to Mapping and Visualizing Geographical Information - Spatial Planning of Maritime Areas; Maritime Spatial Planning Directive; Marine Protected Areas - Remote Sensing Applications in Marine Science and Technology - Earth Information Science; Geophysics; Geoscience; Environmental Science and Geography; Virtual Geographic Environments (VGE); - Marine Digital Terrain Model; Marine Digital Elevation Model; Numerical Maps; Marine Geospatial Data; Terrain Models of the Seabed - Electronic Chart Display and Information System (ECDIS); Electronic Chart System (ECS) - Navigational Charts; ENC, RNC, DNC, SNC; Nautical Charts Production - Inland, Sea-River, River and Pilot Navigation Systems; Inland Shipping; Canals and Inland Waterways - Presentation of Navigation-related Information; User Interface; Navigational Systems - the End User Experience - Routeing of Ships and Associated Protected Measures; Ship Reporting; Traffic Separation Schemes (TSS); Waterway Design; - Route Planning and Route Monitoring; Passage Plan; Shipping Lane - Integrated Navigational Systems INS; Integrated Bridge Systems IBS - Multisensor Integration; NMEA; Communication Between Marine Electronics - Alternate Navigation Technologies; Inertial Navigation; Indoor and Multi-Sensor Navigation; Urban Navigation; Personal Navigation - Orienteering; Inertial Systems for Positioning & Orientation; Multisensor PNT: Optical Processing, Sensor Fusion, Multiconstellation GNSS, etc - Remotely Operated Vehicle (ROV); Autonomous Navigation (Car, Boat, UAV, USV, UMV, ASV); Maritime Drones: Flying, Swimming and Diving - e-Navigation Concept; Strategy for the Development and Implementation of e-Navigation - Satellite Navigation Systems (GNSS, GPS, GLONASS, Beidou and Galileo); GNSS Vulnerability - GNSS Ground Based Augmentation Systems (GBAS); Space Based Augmentation Systems (SBAS); Satellite Geodesy - GNSS Interference, Jamming and Spoofing; Next Generation GNSS - GNSS Training, Awareness and Promotion; Multi-GNSS Receivers and Emerging Navigation Satellite Systems - GNSS Meteorology; Space Weather and Atmospheric Effects on GNSS - Integration of Satellite Navigation, Geospatial Information Management and Wireless Communication Systems - Time in Navigation; Atomic Clocks and Timing Applications - Astronomy; Planetary Science; Astro Navigation; Nautical Almanac; Celestial Navigation and Piloting Calculator - Nautical Equipment, Appliances, Tools, Instruments and Accessories; Marine Converters and Calculators - Magnetic Compass; Mechanical, Fiber Optic and Ring Laser Gyro Compasses - Radio Frequency Technology; Radio Based Navigational Systems; Radio Navigation; e-Loran - Challenges of Space Navigation; Navigating in Deep Space; Spacecraft Traveling - Determining the Position of a Vessel; Position Fixing; Accuracy and Precision; Accuracy Standards for Navigation; Kalman Filtering - Navigational Infrastructure; AtoN; Virtual Aids to Navigation; AIS AtoN (Real, Synthetic and Virtual) - Precise Point Positioning (PPP); Location-Based Services (LBS) - Real-Time Locating System (RTLS); Ranging and Angulating; Multilateration (MLAT) - Dynamic Carrier Allocation Techniques; Localization Techniques - Automation Aspects in Transport and Navigation; Informatics in Control, Automation and Robotics; Optimization Methods - Techniques, Algorithms and Methods in Navigation; Deep Space, Aviation, Marine, Underwater, Land and Inland Water Applications - Maritime Casualties, Ship Safety, Maritime Risk, Safety Culture; Risks Posed by, or to, Tracking or Sensing Systems and Platforms - Ships and Port Operations; Facilities and Cargo Handling; Port Engineering; Safety of Port Operations - Status and Role of Sea Ports in Transport Corridors; Marinas, Ports and Harbours Development; Seafront Wharf Structures - Commodity Science; Dangerous and Hazardous Goods; IMDG Code; Globally Harmonised System of Classification and Labelling of Chemicals (GHS) - Containerization; Container Shipping, Vessels and Terminals; TEU & FEU; Container Tracking; Safe Transport of Containers by Sea - LNG Fuel, Storage, Transport, Vessels, Terminals, Containers, Stations - Hydrotechnics; Hydrotechnical Infrastructure; Hydrotechnical Structures and Constructions; Analysis and Design of Deepwater and Coastal Structures - Ocean, Coast and Offshore Infrastructure and Engineering - Marine Industry; Ocean, Coast, Offshore and Ship Technology; Offshore Surveying - Offshore Energy, Gas and Oil; Renewable Ocean Energy; Green Energy Logistics; Wind Turbines - Automation, Robotics, Underwater Technology and Offshore Constructions - New Marine Vehicles, Constructions, Structures and Equipment - Maritime Traffic Engineering; Traffic Analysis and Control - Organization and Management of Vessel Traffic; Piloting - Systems of Control, Guidance and Monitoring of Traffic; Vessel Traffic Service VTS, VTMS, VTMIS - Ship Manoeuvring in Shallow and Confined Water; Ship to Ship Interaction - Naval Hydrodynamics and Maneuverability of Ships; Ship Behaviour in Shallow and Confined Water - Ship Stability, Dynamics and Safety; Maneuvering and Control of Marine Craft - Modeling of the Ship Dynamics; Numerical Simulation of Ship Motion - Ship Motion; Degrees of Freedom; Numerical Modelling of Propulsion, Control and Ship Motions in 6 Degrees of Freedom - Steering of the Ship Motion; Steering Control Systems; Autopilot Systems - Ship Stability and Seakeeping; Static and Dynamic Stability Criteria - Sea Wave Theory; Ocean Wave Modeling; Computational Fluid Dynamics - Hydraulic Phenomena: Flow in Channels, Maritime Flows, Tides and Waves; Sedimentology in Rivers, Estuaries and Coastal Waters; Water Supply Systems - Global Ocean Ecosystem Dynamics; Coastal Ecosystems; Marine Ecosystem Monitoring; Deep-Sea Exploration - Deploying Positioning, Sensor and Navigation Systems in Sectors such as Autonomy, Smart Infrastructure, Medical Care, Disabilities, Indoor Tracking, Agritech - Water Resources, Hydrology and Hydraulic Engineering; Physical, Chemical, Biological, Geological and Technical Oceanography - Mechanical Engineering; Machinery Construction and Operation; Ship Propulsion; Controllable Pitch Propeller (CPP) and Fixed Pitch Propeller (FPP) - Ship Generator and Power Supply; Applied Mechanics and Mechanical Automation; Machinery & Control; Diagnostics of Marine Engineering - Vessel Efficiency and Fuel Management; Energy Monitoring; Energy Efficiency Measures for International Shipping - Ship Maintenance and Repair; Anti-Corrosion for Maritime Industries; Smart Coatings for Materials Protection; Advance Materials Research and Applications - Structural Health Monitoring; Stress and Fatigue Analysis; Structural Dynamics - Structural Life Extension for Offshore Installations and Marine Vessels Masterclass - Navy and Warship Technology; Defense, Security & Military News - Naval Weapon; Naval Warfare; Naval Technology - Shipbuilding Industry; Shipyards; Ship Repair Yards; Recycling of Ships; Industrial Restructuring - Marine and Offshore System Design - Naval Architecture; Ship Construction and Design - Mathematics and Computers in Naval Engineering - Tactical Navigation for Military Vehicles; Warship ECDIS and Tactical Awareness Solutions - Leadership, Management, Command and Control; The Responsibility of Leadership in Command; Leadership and Teamworking Skills (LTS) - Maritime English, SMCP; Communications in the Multinational Shipping Industry - Radiolocation; Ground-based, Ship-borne and Airborne Radar Systems; Automotive Radar - Marine Radar; Radar Equipment; FMCW, SAR/RAR, ARPA, EPA, ATA; Radar Transponders - Rules of the Road, Colregs and Anti-Collision; Accident Reconstruction - Ship Domain - A Criterion of Navigational Safety Assessment - Ship Handling and Manoeuvring - Automatic Identification System (AIS); Long Range Identification and Tracking (LRIT) - Intelligence, Surveillance and Reconnaissance (ISR); Tracking Systems - Mobile Vehicle Tracking and Monitoring - Electronic Log Book; Voyage Data Recorder VDR, S-VDR; Black Box - Safety, Security and Emergency in Transportation; Cyber Security Vulnerabilities; Risks to Infrastructure and Industries - Marine Salvage; Maritime Search and Rescue (SAR); Search and Rescue Satellite Aided Tracking (SARSAT) System - Maritime Tragedies; Disasters at Sea and Their Impact on Shipping Regulation; Survival in Maritime Disasters; Survival Data Analysis; First Aid to Survivors - Piracy and Armed Robbery; Maritime Terrorism; Refugees and Stowaways; Smuggling - Life-Saving Service; Life-Saving Appliances (LSA) - Bridge Team Management (BTM); Bridge Resource Management (BRM) - Human Factors, Marine Accidents, Human Errors; Ergonomics; Human-Computer Interaction; Human-Machine Interface - Ballast Water Management; Ballast Water Treatment (BWT) Solutions - Sea Pollution and Environmental Protection; Protection of Water Resource; Marine Ecology; Marine conservation - Marine Environmental Science; Chemical Science - Crew Resource Management, Safe Manning, Stress and Fatigue - Maritime Employment and Competitiveness; Seafarers' Work, Family Life; Globalisation, Seafarer Health and Safety - Global Maritime Situational Awareness; Maritime Domain Awareness - Marine Resource Assessment; Natural Resource Management - Duties and Liabilities of the Ship's Captain; Master's Responsibility and Authority; Emergency Procedures - Modelling and Simulation of Marine Systems - Marine Simulation; Full Mission Bridge; Navigational Simulator - Ships Surveys, Audits, Inspections and Certifications; Port State Control (PSC); Flag State Control (FSC) - Standardization of Navigational Terminology - Maritime Education and Training (MET); IMO Model Courses Validation; STCW Implementation - Frontier in Educational Methods; Computer-Based Assessments in Seafaring Training; Computer Based Training (CBT); e-Learning - Web Technologies for Open Access to Maritime Learning and Education; Smart and Virtual Learning Systems - History of Marine Cartography and Historical Cartography; Historical Nautical Charts - New Researches in the History of Navigation; Navigation in Ancient Times - Maritime Civilizations; The History of Maritime Technology; Historic Maritime Vessels; Wrecks - Marine Archaeology; Underwater Research; Underwater Exploration - Marine and Coastal Geography; Marine GIS; Ocean Informatics - Tides and Tidal Currents; Tides and Tide Prediction; Ocean Surface Currents - Meteorology and Nautical Oceanography - Weather Routing, Marine Weather Forecast; Route Optimization - Ocean Disaster Assessment and Prevention; Heavy Weather - Atmospheric and Oceanic Sciences; Climatology; Climate Change; Sea Level Rise - Tropical Cyclones and Impact of Extreme Storms - Geohazards (Volcano Eruptions, Landslides, Floods, Earthquakes, Tsunami Waves); Disaster Prevention and Mitigation - Polar Research, Safe and Sustainable Traffic in Ice/Winter Conditions; Arctic Navigation; Ice Navigation - Integrated Coastal Zone Management (ICZM); - Marine & Coastal Protected Areas; Particularly Sensitive Sea Area (PSSA) - Marine Biology, Ecology, Behaviour of Marine Animals; Biological, Animal, Human, Cognitive Navigation, and Quantum Technologies - Fisheries & Aquaculture; Fish Farming; Fishing Industry - Cruise Shipping - Passenger Ferries - Nautical Tourism and Yachting; Sailing Vessels; Small & Pleasure Crafts; Marine Leisure Industry; Water-Based Tourism, Sport, Leisure and Recreation - UNCLOS, Delimitation of Maritime Boundaries, Exclusive Economic Zone (EEZ) - Advanced Maritime Policy and Governance; Maritime Administration - Maritime Law, Insurance and Arbitration; the Law at the Sea; International Maritime Conventions, Protocols and Codes (SOLAS, MARPOL, STCW, etc) - Communication, Electrical, Electronic and Control Engineering; Technology of Antennas - Information and Communication Technology; Computer Science - Computer Engineering; Digital System Design; Computer Applications in Maritime Engineering; Design of Maritime Information Systems - Information Processing and Engineering; Computer Aspects of Technological Change; Computer Graphics; Computer Animation - Information Technology and Applications in Maritime Sector - Maritime Clouds; Digital Data Exchange; Cloud Computing and Big Data - Multimedia, Network & Communication Technology and Application - Satellite & Space Communications; Hybrid System of Satellite Communications Technology - Maritime Telecommunications; Global Maritime Distress and Safety System (GMDSS) - Wireless Maritime Services and Mobile Technology - Signal & Image Processing; Data Transmission, Processing and Analysis - Expert Systems in Marine Navigation and Sea Transportation - Fuzzy Logic; Artificial Intelligence Technologies; Artificial Neural Network; Fuzzy Inference Systems; Evolutionary Computation - Decision Support Systems and Artificial Intelligence Methods in Maritime Transport - Neuroevolution, Artificial Immune Systems, Reinforcement Learning - Telematics in Maritime Transportation; State-of-the-Art Telematics Systems - Autonomy in Transport Systems; Modeling of Autonomous Vehicle Operation in Intelligent Transportation Systems - Maritime Intelligent Transportation Systems; ITS - Smart Vehicles: Connectivity Technologies and ITS Applications - Knowledge-Based Intelligent Information and Engineering Systems - Intelligent Control System of Ships Dynamic Positioning, DP Technology - Autonomous Vehicle Design and Control - Acoustic Remote Sensing; Hydroacoustics - Sonars; Multibeam Echo Sounders (MBES); Sea-Floor Mapping - Underwater Acoustic Measurements: Technologies, Methods and Systems - Maritime Sensors, Technology and Infrastructure in Waterside Security - Modeling and Numeric Methods in Maritime Industry; Applied Mathematics; Operational Research (Management Science, Decision Science) - Cybernetics, Robotics and Automation; Autonomous Marine Operations and Systems - Transport Data and Statistics; Statistical Methods & Applications; Statistical Analysis - Severity, Probability and Risk of Accidents during Maritime Transport; Maritime Accident Statistics - Mathematical Model Applications in the Operation of Vessel and Port Machinery - Mathematical Fundamentals of Safety and Dependability, Maintainability of Maritime Objects - Quality, Reliability, Risk, Maintenance and Safety Engineering - System Availability, Software and Structural Reliability - Maritime Safety, Security and Risk Management; Risk and Safety Analysis, Assessment and Prediction; Quantitative Risk Assessment (QRA) - Crisis, Emergency, Natural Hazard and Disaster Management - International Safety Management Code (ISM Code) - Reliability and Safety Methods; HAZOP, HAZID, HRA, FMEA, FTA, ETA; Formal Safety Assessment (FSA) - Quality Management; Quality Assurance; Quality Control; Quality Maritime Training - Transport Systems: Operation, Management, Control and Maintenance; Shipping Management - Transportation Planning and Management; Economic, Legal and Social Aspects; Transport Policy - Management Information Systems; Maritime Fleet Management Information System - Marine Ship Economy; Finance and Insurance; Management and Business Strategy; Customs Duties, Taxes, Freights, Insurance Rates - Maritime and International Trade; International Commercial Terms (Incoterms); e-Commerce - Impact of Economic Recession on Maritime Transport; Shipping Financial Management; Financial Modeling; e-Business - Sea Freight and Forwarding; Modes of Shipment; Chartering - Intermodal, Multimodal and Combined Transport - Maritime Transport and Logistics Systems; Maritime Economics and Logistics (MEL) - Logistics and Supply Chain Management - Smart City and Port; Technological, Ecological and Social Challenges; Geo-localities and Cultural Effects; Waterfront Infrastructure - Multi-Agent Control for Transport Networks - New Maritime Technologies; Application and Evaluation Studies - Development of Methods and Criteria for International Standards and Specifications; Classification Rules - IMO, IHO, IALA, IEC, ISO, IAIN, IMLA, IMSO, IAME, IAMU, EMSA, ITU, IEEE, RTCM, NMEA, PIANC, EUGIN, PNF, RIN and NI Activities



**FACULTY OF NAVIGATION**  
**GYDYNIA MARITIME UNIVERSITY**

and



HAVE THE HONOUR TO INVITE TO

**12<sup>th</sup> INTERNATIONAL CONFERENCE  
ON MARINE NAVIGATION  
AND SAFETY OF  
SEA TRANSPORTATION**

**TransNav 2017**

21 - 23 June 2017  
Gdynia, POLAND

Address:  
Department of Navigation,  
Faculty of Navigation, Gdynia Maritime University  
Al. Jana Pawła II 3  
81-345 Gdynia, Poland  
phone: + 48 58 5586136, +48 58 6616955  
fax: + 48 58 6616955  
e-mail: transnav@am.gdynia.pl

<http://transnav2017.am.gdynia.pl>



## Scientific Programme Committee:

Prof. A. **Aamodt**, Norway; Prof. A. **Abraham**, United States; Prof. T. **Abramowicz-Gerigk**, Poland; Prof. M. **Acciaro**, Germany; Prof. P. **Alfredini**, Brazil; Prof. D.N. **Aloi**, United States; Prof. A. **Alop**, Estonia; Prof. K. **Andersson**, Sweden; Prof. Y. **Arai**, Japan; Prof. T. **Aven**, Norway; Prof. M. **Baldauf**, Germany; Prof. A. **Banachowicz**, Poland; Prof. M. **Banaszkiewicz**, Poland; Prof. M. **Barlik**, Poland; Prof. E. **Barsan**, Romania; Prof. M. **Batista**, Slovenia; Prof. G. **Batinca**, Romania; Prof. R. **Baumler**, France; Prof. A. **Baylon**, Philippines; Prof. K. **Benedict**, Germany; Prof. C. **Berenguer**, France; Prof. H. **Berg**, Germany; Prof. T.E. **Berg**, Norway; Prof. C.G. **Biancardi**, Italy; Prof. V. **Bondarev**, Russia; Prof. N. **Bose**, Australia; Prof. J. **Bosy**, Poland; Prof. A. **Boykov**, Russia; Prof. A. **Bujak**, Poland; Prof. Z. **Burciu**, Poland; Sr. J. **Carabajosa Menendez**, Spain; Prof. D. **Carp**, Romania; Prof. A.G. **Cerit**, Turkey; Prof. S.W. **Chang**, Taiwan; Prof. A. **Charchalis**, Poland; Prof. W. **Chen**, Hong Kong; Prof. A. **Chudzikiewicz**, Poland; Prof. F. **Coolen**, United Kingdom; Prof. T. **Cottier**, Switzerland; Prof. K. **Cullinane**, United Kingdom; Prof. J. **Czajkowski**, Poland; Prof. K. **Czaplewski**, Poland; Prof. I. **Czarnowski**, Poland; Prof. M. **Czechowski**, Poland; Prof. G. **de Melo Rodriguez**, Spain; Prof. R. **De Souza**, Singapore; Prof. D.C. **Donha**, Brazil; Prof. P. **Donner**, Finland; Prof. E. **Doyle**, Ireland; Prof. B. **Dragović**, Montenegro; Prof. D. **Duda**, Poland; Prof. M. **Dzida**, Poland; Prof. M. **Džunda**, Slovakia; Prof. B. **Edge**, United States; Prof. B. **Eissfeller**, Germany; Prof. A. **El-Rabbany**, Canada; Prof. N. **El-Sheimy**, Canada; Prof. A. **Elentably**, Saudi Arabia; Prof. T.A. **Elsayed**, Egypt; Prof. S. **Everett**, Australia; Prof. O. **Faltinsen**, Norway; Prof. J. **Falzarano**, United States; Prof. A. **Farina**, Italy; Prof. A. **Fellner**, Poland; Prof. A. **Felski**, Poland; Prof. Y. **Feng**, Australia; Prof. W. **Filipowicz**, Poland; Prof. R. **Filjar**, Croatia; Prof. B. **Forssell**, Norway; Prof. A. **Francescutto**, Italy; Prof. E. **Franckx**, Belgium; Prof. J. **Froese**, Germany; Prof. M. **Furusho**, Japan; Prof. W. **Galor**, Poland; Prof. Y. **Gao**, Canada; Prof. A. **Gasparjans**, Latvia; Prof. J. **Gaździcki**, Poland; Prof. A. **Gegenava**, Georgia; Prof. M. **Gerigk**, Poland; Prof. W. **Gierusz**, Poland; Prof. D. **Gotlib**, Poland; Prof. M.R. **Grabowski**, United States; Prof. D. **Grejner-Brzezinska**, United States; Prof. N. **Gruenwald**, Germany; Prof. M. **Grzegorzewski**, Poland; Prof. A. **Grzelakowski**, Poland; Prof. M. **Grzybowski**, Poland; Prof. L. **Gucma**, Poland; Prof. S. **Gucma**, Poland; Prof. C. **Guedes Soares**, Portugal; Prof. S.G. **Gug**, South Korea; Prof. H.D. **Haasis**, Germany; Prof. J. **Hajduk**, Poland; Prof. E. **Hämäläinen**, Finland; Prof. J.-K. **Han**, South Korea; Prof. K. **Hasegawa**, Japan; Prof. B. **Hofmann-Wellenhof**, Austria; Prof. M. **Holec**, Poland; Prof. M. **Hossam-E-Haider**, Bangladesh; Prof. Q. **Hu**, China; Prof. C. **Hult**, Sweden; Prof. M. **Idzior**, Poland; Prof. S.D. **Ilcev**, South Africa; Prof. A. **Imai**, Japan; Prof. T. **Iseki**, Japan; Prof. M. **Jacyna**, Poland; Prof. J. **Jania**, Poland; Prof. A. **Janota**, Slovakia; Prof. M. **Jansen**, Netherlands; Prof. J. **Januszewski**, Poland; Prof. J.S. **Jeong**, South Korea; Prof. T.G. **Jeong**, South Korea; Prof. J.P. **Jessel**, France; Prof. P. **Jędrzejowicz**, Poland; Prof. S. **Jin**, China; Prof. Y. **Jin**, China; Prof. Z. **Jozwiak**, Poland; Prof. M. **Jurdziński**, Poland; Prof. P. **Kabacik**, Poland; Prof. **Kaczorek**, Poland; Prof. I. **Kale**, United Kingdom; Prof. K. **Kalinov**, Bulgaria; Prof. J. **Kemp**, United Kingdom; Prof. E. **Kobayashi**, Japan; Prof. H. **Kobayashi**, Japan; Prof. L. **Kobyliński**, Poland; Prof. K. **Kołowrocki**, Poland; Prof. Z. **Kopacz**, Poland; Prof. S. **Kos**, Croatia; Prof. E. **Kozaczka**, Poland; Prof. A. **Królikowski**, Poland; Prof. J. **Kryński**, Poland; Prof. N. **Kubo**, Japan; Prof. P. **Kujala**, Finland; Prof. J. **Kulczyk**, Poland; Prof. K. **Kulpa**, Poland; Prof. S. **Kumar**, United States; Prof. U. **Kumar**, Sweden; Prof. A. **Kuznetsov**, Russia; Prof. D. **Last**, United Kingdom; Prof. J.-W. **Lee**, South Korea; Prof. A. **Lenart**, Poland; Prof. N. **Levanon**, Israel; Prof. B. **Lewarn**, Australia; Prof. A. **Lewiński**, Poland; Prof. J. **Lisowski**, Poland; Prof. Z. **Liu**, China; Prof. Z. **Liu**, Hong Kong; Prof. V. **Loginovsky**, Russia; Prof. P. **Lombardo**, Italy; Prof. D. **Lompe**, Germany; Prof. C.S. **Lu**, Hong Kong; Prof. M. **Luft**, Poland; Prof. T. **Luković**, Croatia; Prof. E. **Lushnikov**, Russia; Prof. M. **Lützhöft**, Sweden; Prof. B. **Łazarz**, Poland; Prof. B. **Łączyński**, Poland; Prof. C. **Łuczywek**, Poland; Prof. Z. **Łukasik**, Poland; Prof. M. **Magramo**, Philippines; Prof. P.K. **Mahanti**, Canada; Prof. A. **Makar**, Poland; Prof. J. **Manerowski**, Poland; Prof. M.E. **Manuel**, Ghana; Prof. A. **Marchenko**, Norway; Prof. E. **Marone**, Brazil; Prof. F.X. **Martinez de Oses**, Spain; Prof. M. **Massad**, Jordan; Prof. J. **Matusiak**, Finland; Prof. B. **Mednikarov**, Bulgaria; Prof. M. **Mejia**, Philippines; Prof. J. **Merkisz**, Poland; Prof. J. **Mikulski**, Poland; Prof. W. **Mironiuk**, Poland; Prof. M.V. **Miyusov**, Ukraine; Prof. J. **Montewka**, Poland; Prof. D.S.H. **Moon**, South Korea; Prof. W. **Morgaś**, Poland; Prof. J. **Mou**, China; Prof. S. **Moyseenko**, Russia; Prof. R. **Mueller-Demuth**, Germany; Prof. T. **Nakazawa**, Japan; Prof. J. **Narkiewicz**, Poland; Prof. R.R. **Negenborn**, Netherlands; Prof. J. **Niedzwiecki**, United States; Prof. N. **Nikitakos**, Greece; Prof. A. **Norris**, United Kingdom; Prof. G. **Nowacki**, Poland; Prof. T. **Nowakowski**, Poland; Prof. O.C. **Ojinnaka**, Nigeria; Prof. A.I. **Ölcer**, Turkey; Prof. S. **Oszczak**, Poland; Prof. Z. **Otremba**, Poland; Prof. K.I. **Øvergård**, Norway; Prof. P. **Panayides**, Cyprus; Prof. D. **Pantazis**, Greece; Prof. G.K. **Park**, South Korea; Prof. J.S. **Park**, South Korea; Prof. A. **Pascoal**, Portugal; Mr. D. **Patraiko**, United Kingdom; Prof. V. **Paulauskas**, Lithuania; Prof. J. **Pawelski**, Poland; Prof. T. **Pawlak**, Germany; Prof. E. **Pedersen**, Norway; Prof. M.R. **Phillips**, United Kingdom; Prof. Z. **Pietrzykowski**, Poland; Prof. F. **Piniella**, Spain; Prof. M. **Popek**, Poland; Prof. T. **Poratne**, Norway; Prof. M. **Pourzanjani**, United Kingdom; Prof. T. **Praczek**, Poland; Prof. B. **Pritchard**, Croatia; Prof. D. **Pyć**, Poland; Prof. R. **Rashad**, Egypt; Prof. M. **Renilson**, Australia; Prof. J. **Ringsberg**, Sweden; Prof. J.B. **Rogowski**, Poland; Prof. H. **Rohling**, Germany; Prof. M.C. **Romero Lares**, Venezuela; Prof. P. **Rosa Santos**, Portugal; Prof. H. **Ruther**, South Africa; Prof. A.H. **Saharuddin**, Malaysia; Prof. H. **Sampson**, United Kingdom; Prof. J.U. **Schröder-Hinrichs**, Germany; Prof. V. **Sencila**, Lithuania; Prof. Z.Z. **Sharifov**, Azerbaijan; Prof. C. **Shi**, China; Prof. M. **Siergiejczyk**, Poland; Prof. J. **Skorupski**, Poland; Prof. L. **Smolarek**, Poland; Prof. S. **Soehodho**, Indonesia; Prof. J. **Soszyńska-Budny**, Poland; Prof. J.D. **Sørensen**, Denmark; Prof. J. **Spaans**, Netherlands; Prof. C. **Specht**, Poland; Prof. V. **Squire**, New Zealand; Prof. A. **Stateczny**, Poland; Prof. A. **Stepnowski**, Poland; Prof. M. **Subramaniam**, Malaysia; Prof. J. **Szantyr**, Poland; Prof. J. **Szpytko**, Poland; Prof. T. **Szubrycht**, Poland; Prof. E. **Szychta**, Poland; Prof. M. **Szymoński**, Poland; Prof. W. **Ślącka**, Poland; Prof. R. **Śmierzchalski**, Poland; Prof. H. **Śniegocki**, Poland; Prof. H.T. **Ta**, Viet Nam; Prof. K. **Tanaka**, Japan; Prof. T. **Tapaninen**, Finland; Prof. T. **Tarasiuk**, Poland; Prof. W. **Tarelko**, Poland; Prof. F. **Taveira-Pinto**, Portugal; Prof. P.J.G. **Teunissen**, Netherlands; Prof. E. **Thalassinos**, Greece; Prof. V. **Torskiy**, Ukraine; Prof. G.F. **Trommer**, Germany; Prof. L. **Tsoulos**, Greece; Prof. M. **Tsybala**, Ukraine; Prof. E. **Twrdy**, Slovenia; Prof. J. **Uriasz**, Poland; Prof. E. **Van de Voorde**, Belgium; Prof. N. **Van Thu**, Viet Nam; Prof. D. **Van Uy**, Viet Nam; Prof. D. **van Willigen**, Netherlands; Prof. M. **Vantorre**, Belgium; Prof. D. **Vassalos**, United Kingdom; Prof. F. **Vejražka**, Czech Republic; Prof. T. **Vellinga**, Netherlands; Prof. M. **Vermeer**, Finland; Prof. G.Y.V. **Victor**, India; Prof. I. **Visvikis**, Greece; Prof. V.A. **Volkogon**, Russia; Prof. M. **Vorländer**, Germany; Prof. J.-G. **Wang**, Canada; Prof. J. **Wang**, United Kingdom; Prof. R. **Wawruch**, Poland; Prof. A. **Weinrit**, Poland; Prof. J. **Weng**, China; Prof. I. **Winnicki**, Poland; Prof. Z. **Wisniewski**, Poland; Prof. K. **Witkowski**, Poland; Prof. E. **Wittbrodt**, Poland; Prof. F.C. **Wolff**, France; Prof. A. **Wolski**, Poland; Prof. J.J. **Wu**, Taiwan; Prof. M. **Xie**, Hong Kong; Prof. H. **Yabuki**, Japan; Prof. D. **Yang**, China; Prof. A. **Yasuda**, Japan; Prof. J.-B. **Yim**, South Korea; Prof. T.L. **Yip**, Hong Kong; Prof. H. **Yousefi**, Iran; Prof. N. **Yuwono**, Indonesia; Prof. J. **Zalewski**, United States; Prof. P. **Zalewski**, Poland; Prof. K. **Zhang**, Australia; Prof. Q. **Zhao**, China; Prof. E. **Zio**, Italy; Prof. F. **Zirilli**, Italy; Prof. J. **Zurek**, Poland;

## Organizing Committee

### Chairman:

Prof. Dr. Adam Weinrit, FRIN, FNI, Master Mariner

### Secretary:

Mr. Tomasz Neumann, PhD

### Members:

Mr. Andrzej **Bomba**, MSc, Head of Technical Committee  
Mr. Piotr **Kopacz**, MSc  
Mr. Dariusz **Krucki**, BSc  
Mrs. Maria **Łozińska**, Msc  
Mrs. Hanna **Niechcial**, BSc  
Mrs. Dorota **Rajmańska**,  
Mrs. Joanna **Rogowska**, Msc

## Conference Proceedings

Papers submitted on time will be published in the Transnav Conference Proceedings - series of a few monographs under the common title: Advances in Marine Navigation and Safety of Sea Transportation or in the *TransNav - International Journal on Marine Navigation and Safety of Sea Transportation* (<http://www.transnav.eu>). During the registration process authors will be able to choose the form of publication of accepted papers. Final decision is in the hands of Chairman of the TransNav Conference.

## Conference Important Dates and Deadlines:

**1<sup>st</sup> of June 2016**

### 1<sup>st</sup> Announcement

Invitation to take part in the Conference

**15<sup>th</sup> of October 2016**

### Deadline for Conference Registration

Deadline for preliminary conference registration and abstract submission

**15<sup>th</sup> of November 2016**

### 2<sup>nd</sup> Announcement

Confirmation of applications and notification of authors

**15<sup>th</sup> of January 2017**

### Submission Papers

Submission of camera-ready papers deadline

**15<sup>th</sup> of February 2017**

### Authors Announcement

Announcement of papers acceptance

**1<sup>st</sup> of May 2017**

### 3<sup>rd</sup> Announcement

Information on the Preliminary Conference Programme

**1<sup>st</sup> of June 2017**

### 4<sup>th</sup> Announcement

Final version of Conference Programme, chairmen list confirmation

**21<sup>st</sup> of June 2017**

### The First Day of Conference