| | 2nd Conference<br>AUTONOMOUS TRANSPORT<br>Gdynia, 9th of December 2025<br>Faculty of Navigation, Gdynia Maritime University<br>Al. Jana Pawła II 3 |
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| 0800 - 1000 | Conference participant registration:<br>Faculty of Navigation, Gdynia Maritime University<br>Al. Jana Pawła II 3 |
| | Welcome Coffee |
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| 1000 - 1010 | Opening of the conference<br>prof. Adam Weintrit, Master Mariner, Rector of Gdynia Maritime University |
| | Place: Main Lecture Hall (Aula) of the Gdynia Maritime University, Faculty of Navigation |
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| | Introduction to the conference<br>prof. Zbigniew Burciu, prof. Adam Weintrit |
| | Address by the organizers:<br>prof. Marianna Jacyna, Dean, Faculty of Transport, Warsaw University of Technology<br>prof. Marcin Ślęzak, General Director, Motor Transport Institute, Warsaw<br>prof. Tomasz Neumann, Dean, Faculty of Navigation, Gdynia Maritime University |
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| | Guest speaker lecture |
| 1010 - 1030 | Ian Brzezinski<br>A resident senior fellow with the Scowcroft Center for Strategy and Security, a member of the Atlantic Council's Strategic Advisors, an expert of American foreign policy and military affairs, as Deputy Assistant Secretary of Defense for Europe and NATO Policy in 2001–2005.<br>  &minus; *Some perspectives on the evolving dynamics defining the security of the Baltic Sea, wrapping into the important role that autonomous and remotely controlled systems can and should contribute to safeguarding the security of the Baltic* |
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| 1030-1050 | Marek Strosin, Navy Pol-Mil expert, Naval Aviator, Leader, Security Cooperation Professional, USN Captain, Retired. Senior director at AEVEX Aerospace.<br>Tomasz Borowik, CEO SR Robotics<br>  &minus; *Autonomous and remotely controlled unmanned units in the Dual Use system, from critical infrastructure protection to maritime defense operations.* |
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| 1050-1110 | Marianna Jacyna, Emilian Szczepański, Roland Jachimowski, Faculty of Transport, Warsaw University of Technology<br>  &minus; *Automation and Autonomization of Container Terminals: Development Directions, Challenges, and Prospects for Global Logistics* |
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| 1110-1130 | Zbigniew Szozda - Minister's Representative for MASS<br>  &minus; *Maritime Administration Activities in the Field of MASS Shipping* |
| 1130-1200 | Coffee Break |
| 1200-1215 | Marek Narewski, Polish Ship Register of Shipping, R&D Division Director<br>Ewelina Galant, Polish Register of Shipping<br>  &minus; *USV Certification as Seen from PRS and other Class Societies Perspective* |
| 1215- 1230 | Maciej Rek – CEO Enamor<br>  &minus; *Conversion – 1st Step to Mission Autonomy* |
| 1230-1245 | Teresa Abramowicz-Gerigk, Zbigniew Burciu, Adam Weintrit, Gdynia Maritime University<br>  &minus; *Application of the RCM System Based on the Magnus effect to improve the maneuverability of ASV/AUV in Determination of the Theater during Maritime Operations* |
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| 1245- 1330 | Coffee Break, Lunch |

| | Plenary Session A1 | Plenary Session A2 | Plenary Session A3 |
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| 1330-1600 | Main Lecture Hall (Aula) Chairmen: prof. Teresa Abramowicz-Gerigk prof. Mariusz Izdebski | Lecture Aud. Max. Chairmen: prof. Andrzej Czerepicki prof. Ireneusz Czarnowski | Lecture N-110 Chairmen: prof. Zbigniew Pietrzykowski SSO dr Dominika Wetoszka |
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| 1330-1345 | Mariusz Kostrzewski<br>The use of Bézier Curves as Trajectories for Autonomous Internal Means of Transport | Andrzej Chudzikiewicz, Anna Stelmach<br>Autonomy in Railway Conditions vs. Autonomy in the Metro | Mirosław Wielgosz, Oskar Desecki, Zbigniew Pietrzykowski, Janusz Uriasz<br>Hybrid Approach for Ship Movement Anomaly Detection: DBSCAN Clustering and Neural Network Prediction" |
| 1345-1400 | Konrad Lewczuk<br>Assessing Internal Transport Systems for Autonomous Deployment: toward a Classification Framework | Michał Lasota, Marianna Jacyna, Mariusz Wasiak<br>Autonomous Road Transport of Oversized Loads: Analysis of Challenges and Potential. | Barbara Stępień<br>The Duty to Render Assistance at Sea in the Age of Autonomy: A Comparative Analysis of MASS and Military Sea Drones |
| 1400-1415 | Mariusz Izdebski, Paweł Gołda Ilona Jacyna-Gołda<br>Environmental Hazard Management System for Railway | Michał Kozłowski, Maciej Kozłowski Andrzej Czerepicki<br>Application of LLMs on Edge Devices to Steer the Transport Process | Dominika Wetoszka<br>Nautical Fault Exception vs. Maritime Autonomus Transport |
| 1415-1430 | Michał Kłodawski<br>The use of UAVs in Last-Mile Logistics: Opportunities, Constraints and Potential Benefits of Autonomous Drone Delivery Systems | Ireneusz Czarnowski Marta Szarmach<br>Detecting AIS Spoofing Using Machine Learning Techniques | Zuzanna Pepłowska-Dąbrowska<br>Liability Issues and Accidents Involving MASS: Who Should Pay the Bill? |
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| 1430-1500 | Coffee break | | |
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| 1500-1515 | Muktar Bedaso Kuyu, Rafal Szlapczynski<br>Towards Deep Learning-Based Prediction and Classification of Vessel Encounters for Enhanced Autonomous Ship Navigation | Norbert Tuśnio<br>Monitoring the Work Environment Using Sensors Worn by Rescuers And Autonomous Robots To Penetrate Endangered Buildings | Alicja Mrozowska, Piotr Mrozowski<br>The Legal and Regulatory Challenges Associated with the Development of Maritime Autonomous Surface Ships (in the context of the owner) |
| 1515-1530 | Monika Rybczak<br>The Effect of the HS-PSO Method on the Performance of the LMI Controller on Ship | Agnieszka Lazarowska<br>Machine Learning-Based Collision Avoidance and Path Planning for Autonomous Ships | Małgorzata Daniszewska<br>Analysis of the selected legal issues related to the introduction of the autonomous ships into maritime transport |
| 1530-1545 | Łukasz Trzciński<br>Advancing Maritime Autonomy: Dual-Use Solutions for Modern Surface Operation | Andrzej Smacki<br>Autonomous Vehicle Mission Planning in Offshore Operations | Eric Kulbiej, Zbigniew Pietrzykowski<br>Determining the Last Effective Anti-Collision Maneuver for Maritime Autonomous Surface Ships Using Control Space Mapping |
| 1545-1600 | Piotr Gołębiowski, Jacek Kukulski, Ignacy Góra, Yaroslav Bolzhelarskyi<br>A Monte Carlo–based Method for Assessing Energy-Related Operational Risks in Railway Undertakings | | |
| 1600 - | Coffee, Lunch | | |

POSTER SESSION

A. Integration of Fuzzy Logic with Guidance Vector Fields for Improved Vessel Path-Tracking Performance.
WnorowskI Jakub, Łebkowski Andrzej
Gdynia Maritime University

B. Optical–AI Maritime Perception System for Autonomous Surface Vessels
K. Kwella, A. Łebkowski
Gdynia Maritime University

C. Humanoid Navigators: The Missing Link Between Human Seamanship and Autonomous Ships
Andrzej Łebkowski
Gdynia Maritime University

D. Application of Machine Vision and AprilTags in Autonomous Tugboat Navigation
W. Koznowski, A. Łebkowski
Gdynia Maritime University

Chair of the scientific committee
Prof. Dr. Adam Weintrit, Master Mariner
Chair of the organizing committee
Prof. Dr. Zbigniew Burciu, Master Mariner