

İTÜ



FACULTY OF  
MARITIME



BATUMI STATE  
MARITIME ACADEMY



# GLOBAL MARITIME CONGRESS

MAY, 20-21, 2024

İTÜ TUZLA CAMPUS, İSTANBUL - TÜRKİYE



GMC'24  
Global Maritime Congress



Program

[www.globalmaritimecongress.org](http://www.globalmaritimecongress.org)

**20 May 2024, Monday - Salon A (Conference Hall)**

**08:30-All Day REGISTRATION**

**09:00 - 09:30 OPENING SPEECHES**

**Prof. Dr. Mustafa Kumral, ITU Vice Rector**

**Prof. Özcan Arslan, ITU MF Dean**

**A. Yaşar Canca, GEMIMO Chair**

**09:30-10:30 KEYNOTE SPEAKERS**

Towards Green and Intelligent Technology in the Shipping Industry

**Prof. Carlos Guedes Soares | CENTEC, University of Lisbon, Portugal**

Offshore energy infrastructure for fossil and non-fossil fuels

**Prof. Atilla İncecik | University of Strathclyde, Glasgow, Scotland**

**10:30-11:00 COFFEE BREAK**

**11:00-12:00 Session A-1**

**Chair: Prof. Carlos Guedes Soares**

11:00-11:10 Full-Scale Testing of Impact Loads on High-Speed Craft;

**Marko Katalinić, Ana Karaman, Zdeslav Jurić, Joško Parunov**

11:10-11:20 Design of Floating Platform for Ship Recycling Activity (Case Study: Indonesia);

**Mohammad Sholikhhan Arif, Sefer Anil Gunbeyaz, Rafet Emek Kurt**

11:20-11:30 Using Vehicle-In-The-Loop for Free-running Ship Experiments on Ground;

**Afsin Baran Bayezit, Omer Kemal Kinaci**

11:30-11:40 An experimental investigation about Vortex-Induced Vibrations of a single cylinder and two cylinders in tandem arrangement;

**Pouya Tahmasebi, Alkin E. Demirhan, Omer Kemal Kinaci**

11:40-11:50 Model-Based Unmanned Surface Vessel Path Planning in Constrained Maritime Environments with Elephant Herd Optimization;

**Ahmad Irham Jambak, Muhammad Fahmi Mohd.Zukri, Ahmad Zarith**

**Eiman Fadzil Azri, Ismail Bayezit**

11:50-12:00 Questions and Discussions

**12:00-13:00 LUNCH BREAK**

**13:00-13:30 KEYNOTE SPEAKER**

How Collisions Between Ships and Other Objects Help Regulation Making

**Prof. Jin Wang | Liverpool John Moores University**

**20 May 2024, Monday - Salon A (Conference Hall)****13:30-14:30 A-2 Marine Risk Assessment****Chair:** *Prof. Atilla İncecik*13:30-13:40 Navigation Safety and Risk Assessment in the Suez Canal; **Fatih Tonoğlu, İbrahim Burak Başkan, Fırat Sivri, Serdar Yıldız, Özkan Uğurlu, Jin Wang**13:40-13:50 On the Fatigue of Ship-Structures Under Wave Loads; **Pasqualino Corigliano, Federico Frisone**13:50-14:00 Navigating a Greener Marine Future with Vessel Electrification and DC Power Management Systems; **Jaroslav Juriga, Ben Burnett**14:00-14:10 Improving Seakeeping Performance of Fishing Boats by Minimising Radius of Gyration; **Muhammad Iqbal, Momchil Terziev, Tahsin Tezdogan, Atilla İncecik**14:10-14:20 Digital Twin Development for Samsung Autonomous Navigation System for Ships; **Ismail Bayezit, Jaewoo Kim**

14:20-14:30 Questions and Discussions

**14:30-14:45 COFFEE BREAK****14:45-15:45 A-3****Chair:** *Prof. Jin Wang*14:45-14:55 Biofouling Awareness and Antifouling Practices among Fishing Vessels: A Questionnaire Survey Assessment; **Refik Ozyurt, Dogancan Uzun, Mehmet Atlar, Osman Turan**14:55-15:05 Interaction of the Navigation Officer with Artificial Intelligence when Determining the Divergence Maneuver of Vessels; **Sergii Sergii Sagin**15:05-15:15 Determination of Optimal Operating Modes of Marine Diesel Engines Exhaust Gas Bypass Systems; **Sergii Sagin, Oleksiy Kuropyatnyk, Vladyslav Kurkchi**15:15-15:25 The Role of Traditional Wooden Boats (Pelra) in Logistics and Transportation Safety Aspects in Indonesia; **Eka Wahyu Ardhi, Osman Turan, Rafet Kurt**15:25-15:35 A Fuzzy Bayesian Network Approach for Risk Analysis of Cargo Shifting on RORO Ships; **Seher Suendam Arici, Emre Akyuz**

15:35-15:45 Questions and Discussions

**15:45-16:00 COFFEE BREAK****16:00-17:00 A-4****Chair:** *Prof. Osman Turan*16:00-16:10 Productivity, Efficiency and Ergonomics in Shipyards; **Müge Bulu, Ahmet Fahri Özok**16:10-16:20 Automated Classification of Human Factors in Maritime Incident Reports via Natural Language Processing; **Hollie Black, Rafet Kurt**16:20-16:30 Application of Marine Spatial Planning: A Case Study of Croatia; **Astrid Zekić, Ana Gundić, Dino Zupanovic**16:30-16:40 Proposal on Procedural Steps Towards Implementation of Cold Ironing Solutions; **Ana Gundić, Dino Županović, Astrid Zekić, Josip Knez**16:40-16:50 The Issue of Pollution of the Marine Environment from Nautical Tourism Vessels; **Matea Horvat, Mirjana Kovačić**

16:50-17:00 Questions and Discussions

**20 May 2024, Monday - Salon A (Conference Hall)**

**17:00-17:15 COFFEE BREAK**

**17:15-18:15 Sector Session A-5**

**Chair: Prof. Dr. Oral Erdoğan**

17:15-17:25 The Role and status of Class in Shipping - **Türk Loydu**

17:25-17:35 DELMAR Ship Management

17:35-17:45 GISBIR (Turkish Shipbuilders'Association) : Anchoring Türkiye's Shipbuilding Future Since 1971; **Elif Ceren Gülcek**

17:45-17:55 ORKA-Innovative Training Approach to maritime Education; **Levent Şen**

17:55-18:05 Revolutionizing the Maritime Recruitment: An Industry Perspective - The Crewin Ecosystem; **Süleyman Emre Ayvaci, Onur Kılıç, Erkan Coşkun, Sinan Ayvaci, Oğuzhan Korkmaz, Onur Sabri Durak**

18:05-18:15 Questions and Discussions

19:00 Transfer to the Gala Dinner

19:30 **GALA DINNER**

*Gala Dinner is for those who paid the relevant fee.*

**20 May 2024, Monday - Salon B (Meeting Room)**

**11:00-12:00 B-1 Marine Environment and Technologies**

**Chair:** *Prof. Dr. Emre Akyüz*

11:00-11:10 Air Quality Monitoring in Passenger and Ferry Ports in the City of Zadar;

**Dino Zupanovic, Ana Gundić, Astrid Zekić, Josip Knez**

11:10-11:20 Assessing the Feasibility of Biofuel as an Alternative Fuel Source;

**Arsenii Sagin, Ivan Tkachenko, Oleksandr Yantselevych**

11:20-11:30 Determining Factors Shaping Garbage Generation on Cruise Ships in the Arctic Region in through Advanced Deep Learning Models;

**Arzu Bal, Mengü Demir, Ersan Başar**

11:30-11:40 Inorganic and Hybrid Absorbent Materials Developed to Prevent Marine Pollution Caused by Oil Spills from Ships;

**Hümeyra Ozdemir, Oğuzhan Der**

11:40-11:50 System Design for an Autonomous Marine Environment Observation

Framework; **Taner Cosgun, Nurten Vardar, Bülent Bayram, Tolga Bakirman,**

**Iskender Demir, Sertac Ogdum**

11:50-12:00 Questions and Discussions

**12:00-13:00 LUNCH BREAK**

**13:30-14:30 B-2 Maritime Safety & Security**

**Chair:** *Prof. Dr. Selçuk Nas*

13:30-13:40 Analysis of the Impact of Daylight on Grounding and Collision Accidents;

**Ayyüce Yurt, Selçuk Nas**

13:40-13:50 Analysis of Casualty Investigation Reports in the Mediterranean and Black Sea Region;

**Coşkan Sevgili, Burak Kundakçı, Yusuf Zorba**

13:50-14:00 An Analysis of Yacht-Related Incidents in Mediterranean Region;

**Serim Paker, Yusuf Zorba**

14:00-14:10 The transparency of the oceans: A threat to the future of naval submarines;

**Mohammad Moonesun, Mehdi Adjami**

14:10-14:20 Statistical Research on Crew Members Who Have Disappeared Without a

Trace from Onboard Ships; **Hasan Uğurlu**

14:20-14:30 Questions and Discussions

**14:30-14:45 COFFEE BREAK**

**14:45-15:35 B-3**

**Chair:** *Prof. Dr. Rafet Emek Kurt*

14:45-14:55 Effects of Near-Field Earthquakes on the Marine Structure; Aydin Mert

14:55-15:05 Approach to Earthquake Risk in Container Ports: A Case of Kocaeli Ports Area; **Birsen Koldemir, Engin Kudu, Murat Yapıcı**

15:05-15:15 Beyond Traditional Horizons: Unveiling Anxiety Patterns in HUET with ANFIS; **Cenk Ay, Elif Bal Beşikçi**

15:15-15:25 Harmonizing Navigation Safety: A Metaheuristic Journey in Ship Steering Control Optimization; **Tayfun Uyanık**

15:25-15:35 Questions and Discussions

**20 May 2024, Monday - Salon B (Meeting Room)**

**15:45-16:00 COFFEE BREAK**

**16:00-17:00 B-4 Marine Traffic & Management**

**Chair:** *Prof. Dr. H. Funda Yercan*

16:00-16:10 Analyzing Ship Detentions: A Fault Tree Analysis of Paris MoU Database;  
**Hürol Hocek, Devran Yazır, Yunus Emre Nazlıgöl**

16:10-16:20 PSC Inspection Deficiencies on Turkish Flagged Vessels from the Maritime  
Labor Convention 2006 (MLC 2006) View; **Neruz Kenan Sonmez,**

**Remzi Fiskin, Mehmet Ali Vahdet Yılmaz**

16:20-16:30 Integrating Comprehensive Analysis and Dynamic Adaptability for Safer  
Maritime Autonomy; **Murat Mert Tekeli, Seher Suendam Arici, Muhammed  
Fatih Gulen, Emre Akyuz**

16:30-16:40 Economic Justification for Maritime Security Governance and Administration  
Strategies in Nigeria's Gulf of Guinea Region; **Theophilus Chinonyerem  
Nwokedi**

16:40-16:50 A Blockchain Based Response to Fraudulent Certification in Global Shipping;  
**Cagatay Kandemir**

16:50-17:00 Questions and Discussions

**17:00-17:15 COFFEE BREAK**

**17:15-18:15 B-5**

**Chair:** *Prof. Dr. Ahmet Fahri Özok*

17:15-17:25 From Catastrophe to Clarity: Advancing Environmental Decision Support  
Systems for The M/V Lady Tuna Accident And Beyond; **Muge Buber**

17:25-17:35 Private Sector Participation or Privatization? What are the Effects of  
Maritime Industry on the Maritime Education Policies of Türkiye?;  
**Aysel Çamcı, Fırat Bolat, Hasan Bora Usluer**

17:35-17:45 AI-Based Adaptive Learning for Advanced Crew Training to Enhance  
Maritime Safety; **Furkan Tornaci**

17:45-17:55 Greenport Alliances – One Step Further for a Greener Maritime Transport;  
**Mustafa Taner Albayrak, Tutku Eker İşcioglu, Kenan Tata, Hüseyin Gençer**

17:55-18:05 The Potential of the Maritime Industry in Sustainable and Green  
Transformation; **Ural Berk Taşdelen, Zuhul Er**

18:05-18:15 Questions and Discussions

## 20 May 2024, Monday - Salon C (Simulator Building)

- 11:00-12:00 **C-1 Alternative Fuels & Renewable Energy**  
**Chair:** Assoc. Prof. Dr. Burak Zincir
- 11:00-11:10 Life Cycle and Cost Assessment of Different Ammonia Fuels on a Case Ship; **Buğra Arda Zincir, Ozcan Durukan, Yasin Arslanoglu**
- 11:10-11:20 An Implementation of Hardware-in-the-Loop System for Accurate Vessel Heading Control; **Emre Sayin, Ahmad Irham Jambak, Ismail Bayezit**
- 11:20-11:30 Regional and environmental analysis of the LNG-powered marine vessels within the scope of ship types; **Canberk Hazar, Murat BAYRAKTAR, Onur Yüksel**
- 11:30-11:40 Design of Hydrogen Fuel Cell-Powered Yacht; **Sadettin Furkan Kahveci, Ramazan Şener, Utku Cem Karabulut**
- 11:40-11:50 Investigation and optimization of the effect of pentanol diesel blend on engine performance and emissions; **Arif Savaş, Tolga Berkay Sirin, Samet Uslu**
- 11:50-12:00 Questions and Discussions
- 12:00-13:00 **LUNCH BREAK**
- 13:30-14:30 **C-2 Alternative Fuels & Renewable Energy**  
**Chair:** Assoc. Prof. Dr. Burak Zincir
- 13:30-13:40 Analysis of the marine diesel engines exhaust gases scrubber cleaning - as a technology to ensure their environmental friendliness; **Sergii Sagin, Yurii Zablotskiy, Kyrylo Krytskyi**
- 13:40-13:50 Voyage Based The Carbon Intensity Indicator (CII) Assessment of LNG Usage: A Case of Bulk Carrier; **Emir Ejder, Bulut Ozan Ceylan, Yasin Arslanoglu**
- 13:50-14:00 The Use of Lithium-Ion Batteries in Reducing the Carbon Footprint of Navigation; **Seben Yücel, Mehmet Emre Çetintaşoğlu, İrşad Bayırhan**
- 14:00-14:10 Explore the Green Energy Options Available for Tugboats; **Renda Aslantas, Murat Pamik**
- 14:10-14:20 Assessment of Energy Potential from Wave and Wind for Offshore Oil&Gas Platforms; **Çağatayhan Sevim, Recep Satır, Burak Zincir, Yasin Arslanoglu**
- 14:20-14:30 Questions and Discussions
- 14:30-14:45 **COFFEE BREAK**
- 14:45-15:45 **C-3 Alternative Fuels & Renewable Energy**  
**Chair:** Assoc. Prof. Dr. Görkem Gökkülünk
- 14:45-14:55 A Glance on Green Hydrogen as Fuel for Shipping and its Reflection on Emissions; **Ahmet Hancı, Ahmet Dursun Alkan**
- 14:55-15:05 Investigation of Reactivity Controlled Compression Ignition Fuelled with Diesel and Natural Gas in Marine Engine; **Ramazan Şener, Samet Memiş, Alper Kılıç**
- 15:05-15:15 Cost Analysis of Using Ammonia and Biofuels for Decarbonization of Maritime Transport; **Şengül Şanlıer Uçak**
- 15:15-15:25 Best-Worst multi-criteria decision-making method for alternative marine fuels; **Alper Seyhan, Cenk Ay**
- 15:25-15:35 Numerical Investigation of Exhaust Emissions of Ammonia on Medium-Speed Marine Diesel Engine Under Different Ammonia Fuel Injection Timing; **Enes Fatih Pehlivan**
- 15:35-15:45 Questions and Discussions

**20 May 2024, Monday - Salon C (Simulator Building)**

**15:45-16:00 COFFEE BREAK**

**16:00-17:00 C-4 Alternative Fuels & Renewable Energy**

**Chair:** *Assist. Prof. Dr. Çağlar Karatuğ*

16:00-16:10 Assessing the Feasibility of Biofuel as an Alternative Fuel Source;

**Sergey, Sergii Sagin, Arsenii Sagin, Oleksandr Yantselevych**

16:10-16:20 Examination of Time-Dependent Components on Ships Using Alternative Marine Fuels with Chemical Kinetics;

**Kubilay Bayramoğlu, Semih Yılmaz, Kerim Deniz Kaya**

16:20-16:30 Integrating of potential renewable energy resources on offshore oil and gas platforms in the Black Sea: opportunities for carbon emission reduction;

**Recep Satır, Çağatayhan Sevim, Tayfun Uyanık, Yasin Arslanoğlu**

16:30-16:40 Transition Fuels in Sustainable Power Generation: A Natural Gas Power Plant Analysis; **Altuğ Kağan Yalman, Emir Ejder, Bulut Ozan Ceylan, Yasin Arslanoglu**

16:40-16:50 Evaluating Engine Emission Reduction Methods: A Comparative Analysis of Available Technologies; Gunes Atacan, Emir Ejder, Yasin Arslanoglu

16:50-17:00 Questions and Discussions

**17:00-17:15 COFFEE BREAK**

**17:15-17:55 C-5 Women in Maritime and Session**

**Chair:** *Assoc. Prof. Dr. Elif Bal Beşikçi*

17:15-17:25 Problems Faced by Women in the Maritime Sector: A Research on Customs and Ethical Values; **Merve Alver, Sercan Erol, Ahmet Yaşar Canca**

17:25-17:35 The Role of Women in the Maritime Sector: Challenges for Female Seafarers in Türkiye; **Umut Yildirim, Senem Nart, Sevda Akar, Songül Sarialioğlu, Arda Toygar, Burak Vardar, Sultan Çoşkun Kaya, Mustafa Sari**

17:35-17:45 Women In The Maritime Industry; **Müge Selek, Leyla Tavacioglu, Hakan Cap**

17:45-17:55 Questions and Discussions



**20 May 2024, Monday - Salon D SEM-1**

- 11:00-12:00 **D-1 Cyber Security at Sea**  
**Chair: Assoc. Prof. Dr. Pelin Bolat**
- 11:00-11:10 Adapting the SHIELD Framework for Maritime Cybersecurity: A Human Factors Approach; **Yasin Burak Kurt, Rafet Emek Kurt**
- 11:10-11:20 A Suggested Model to Evaluate Cyber Resilience Level for Vessels;  
**Asuman Aydođdu, Seda Dalgıç, Göksele Uçtu, Serhat Aytugel**
- 11:20-11:30 Cyber Security Hygiene Assessment in Maritime Industry by Applying Multi-Criteria Decision Making Process; **Sedef Isler, Gizem Kayisoglu, Pelin Bolat, Selcuk Cebi**
- 11:30-11:40 Assessing the Significance of IACS UR E26 and E27 Standards with Multi Criteria Decision-Making Model; **Gizem Kayiřođlu, Emre Duzenli, Pelin Bolat, Serhat Aytugel**
- 11:40-11:50 Cybersecurity Incident Analysis in the Maritime Sector; **Gizem Kayiřođlu, Emre Duzenli, Pelin Bolat, Tayfun Acarer**
- 11:50-12:00 Questions and Discussions
- 12:00-13:00 LUNCH BREAK**
- 13:30-14:30 **D-2 Best Practices & New Concepts in MET**  
**Chair: Assist. Prof. Dr. Çađatay Kandemir**
- 13:30-13:40 Modeling Troubleshooting Exercises Using UML Design Diagrams and Fault Trees with Scenarios Demonstrated Using the Ship Engine Room Simulator;  
**Çađrı Berk Güler, İsmail Çiçek**
- 13:40-13:50 Digitalization Process and Applications in Shipyards;  
**Hilal Kılınç, Gökhan Kara**
- 13:50-14:00 Engine Room Resource Management Training Model with Collaborative Teamwork and Using the Engine Room Simulator; **Burak Çavuşođlu, İsmail Çiçek**
- 14:00-14:10 Integration of Ballast Water Treatment System Simulation into Ship Engine Room Simulator and MET Curricula using UML Design Approach and NI LabVIEW; **Burak Kilinc, Burak Çavuşođlu, İsmail Çiçek**
- 14:10-14:20 Determination of Meteorological Conditions Suspending Maritime Traffic in the Istanbul Strait; **Ali Can Sur, Gökhan Kara**
- 14:20-14:30 Questions and Discussions
- 14:30-14:45 COFFEE BREAK**
- 14:45-15:45 **D-3 Marine Environment and Technologies**  
**Chair: Prof. Dr. Ebru Yeřim Özkan**
- 14:45-14:55 Comparing the Ship Recycling Process for Different Countries: A Comparative Study of Türkiye, Bangladesh, and India; **Emine Güneř, Esma Uflaz, Özcan Arslan**
- 14:55-15:05 Operating Ships in the Era of CII and EU ETS: An Analysis of Carbon Abatement Strategies for Ships; **Burak řengün, Umur Bucak**
- 15:05-15:15 Maritime Sustainability Plan in Shipyards; **Hilal Kılınç, Gökhan Kara**
- 15:15-15:25 What are the main drivers of sustainable development goals in the maritime industry? An analysis of liner shipping companies; **Gökçe Tuđdemir Kık, Ilke Sezin Ayaz**
- 15:25-15:35 Investigation of the Impact of the COVID-19 Pandemic on Maritime Transportation and Proposing Strategies for the Future of the Maritime Industry; **Orhan Yiđit Yaman, Eda Turan**
- 15:35-15:45 Questions and Discussions

**20 May 2024, Monday - Salon D SEM-1**

**15:45-16:00 COFFEE BREAK**

**16:00-17:00 D-4 Marine Environment and Technologies**

**Chair:** *Assoc. Prof. Dr. İsmail Çiçek*

16:00-16:10 Technostress Management for Seafarers in the Maritime 4.0 Era;

**Derya Bayrak, Aziz Muslu**

16:10-16:20 Virtual Reality Application on Yacht Design to Enhance Comfort; **Ayşe Didem Onay, Gokdeniz Neser**

16:20-16:30 Development of Maritime Autonomous Surface Ships (MASS) using Model-Based Systems Engineering (MBSE) Processes; **Eyüp Aydın, İsmail Çiçek**

16:30-16:40 An Applied Study on the Design and Control of an Autonomous Surface Vehicle (ASV); **Fuat Peri, Sencer Yazıcı, Duygu Unlu, Selen Cansun Kirgoz, Batuhan Ozer, Betül Sener, Emir Yasin Sağlam, Cihad Delen**

16:40-16:50 Effect of Propulsion Model on the Free-Running Simulations of a Self-Propelled Submarine; **Mahmutcan Esenkalan, Taner Cosgun, Omer Kemal Kinaci**

16:50-17:00 Questions and Discussions

**17:00-17:15 COFFEE BREAK**

**17:15-18:15 D-5 Naval Architecture & Offshore Technologies**

**Chair:** *Assist. Prof. Dr. Melek Ertogan*

17:15-17:25 Scale Effects in Oblique Towing Tank Simulations for a Submarine; **Savas Sezen, Emre Kahramanoğlu, Ferdi Çakıcı**

17:25-17:35 A Numerical Investigation of Airfoil Sections for More Efficient Horizontal Axis Hydrokinetic Turbine Design; **Fatih Mehmet Kale, Naz Yılmaz, Kemal Furkan Sökmen**

17:35-17:45 Mechanical Properties and Corrosion Behavior of the Welding Area Joined by Submerged and Gas Metal Arc Welding Methods; **Dursun Murat Sekban, Elif Gündoğdu**

17:45-17:55 Resistance Characteristics of KCS Model Advancing in a Shallow Channel; **Gürkan Fidan, Ali Dogrul, Taner Cosgun**

17:55-18:05 Optimization Model in Ro-Ro Vessel Operations; **Berk Mercan, Dilay Çelebi Gonidis, Barış Bayram Kızılsaç, Leyla Tavacıoğlu**

18:05-18:15 Questions and Discussions

**20 May 2024, Monday - Salon E SEM-3****11:00-12:00 E-1 Energy Efficiency & Energy Management****Chair:** *Assist. Prof. Dr. Tayfun Uyanık*11:00-11:10 Effects of Including Maritime Transport in EU ETS; **Selcuk Alpaslan, Emir Ejder, Yasin Arslanoglu**11:10-11:20 Numerical Study of the Effect of Rudder on Ship Performance; **Benameur Hamoudi, Massinissa Ouahrani, Ayad Ibrahim**11:20-11:30 Combined Evaluation of Thermoelectric Generator and Organic Rankine Cycle in Waste Heat Recovery of Marine Diesel Engines; **Talha Yiğen, Oguzhan Der, Levent Bilgili**11:30-11:40 An Investigation About the EU MRV Data on European Maritime Area; **Toprak Oba, Tayfun Uyanık, Yasin Arslanoglu**11:40-11:50 Policy-Driven Innovations for Enhanced Blue Growth Impact on Energy Efficiency and Carbon Emission Reduction; **Ayşe Gazihan**

11:50-12:00 Questions and Discussions

**12:00-13:00 LUNCH BREAK****13:30-14:30 E-2 Energy Efficiency & Energy Management****Chair:** *Assist. Prof. Dr. Tayfun Uyanık*13:30-13:40 Speed Optimization Strategy for Marine Vessels Based on Artificial Neural Networks; **Çağlar Karatug**13:40-13:50 Thermodynamic Analysis of an Organic Rankine Cycle System Integrated with a Condensation Chamber Working Under Vacuum Conditions; **Olgun Konur, Emir Atakan Taşçıoğlu, Ege Yeleğen, Onur Rifat Aksu, Eralp Çetin, Utku Çelik**13:50-14:00 Floating Solar Powered Systems: Design, Performance and Environmental Impacts; **Zuhal Er**14:00-14:10 Location Optimization in the Maritime Industry: A Bibliometric Review; **Seher Suendam Arici, Murat Mert Tekeli, Emre Akyuz**14:10-14:20 Environmental Assessment of FuelEU Maritime Regulation: Compliance of Marine Fuels; **Ufuk Yakup Çalışkan, Burak Zincir**

14:20-14:30 Questions and Discussions

**14:30-14:45 COFFEE BREAK****14:45-15:35 E-3 Logistics and Maritime Trade****Chair:** *Assist. Prof. Dr. Yunus Emre Şenol*14:45-14:55 Random Shocks and Their Effects on Black Sea Maritime Trade Between 2008 and 2023; **Doğanay Yıldırım, Sercan Erol**14:55-15:05 The impact of EU ETS Application on the Competitiveness of Seaports in Türkiye; **Hüseyin Gençer**15:05-15:15 Evaluation of Turkey's Ship Recycling Industry Policies in Terms of Transition to Circular Economy and International Trade in the Maritime Sector; **Özgül Uyan**15:15-15:25 Could the Escalating Red Sea Crisis Shift Attention to Turkey for Reconfiguring Global Maritime Trade? **Özgül Uyan**

15:25-15:35 Questions and Discussions

20 May 2024, Monday - Salon E SEM-3

15:45-16:00 **COFFEE BREAK**

16:00-17:00 **E-4**

**Chair:** *Assist. Prof. Dr. Umut Taç*

- 16:00-16:10 Evaluation of Vessel Traffic Operators' Selection Criteria by Using Analytic Hierarchy Process Method; **Deniz Tokdemir, Yasin Arslanoğlu**
- 16:10-16:20 Reinforcement Learning-Based Vessel Route Optimization with Continuous Obstacle Avoidance by Using DDPG Algorithms; **Yunus Emre Nazlıgül, Devran Yazır, Hürol Hocek**
- 16:20-16:30 A Comprehensive Analysis of Vessel Traffic Services Researches Using Bibliometric and Scientometric Methods; **Elif Arslan, Serim Paker**
- 16:30-16:40 Analysis of Factors Affecting Safety of Navigation in the Gulf of İzmit by AHP Method; **Berat Dağkiran**
- 16:40-16:50 Assessment of Inspection Processes During Liquid Bulk Cargo Handling Period; **Eren Salihoglu, Bayram Fatih Demir, Ramazan Bayram Göktaş, Elif Bal Beşikçi**
- 16:50-17:00 Questions and Discussions

17:00-17:15 **COFFEE BREAK**

17:15-17:55 **E-5 Marine Environment and Technologies**

**Chair:** *Assoc. Prof. Dr. Hasan Bora Usluer*

- 17:15-17:25 System Design and Implementation of Modular Offshore Marine Buoy to Collect Environmental Marine Data; **Semih Yılmaz, Kerim Deniz Kaya, Kubilay Bayramoğlu**
- 17:25-17:35 Comparison of Offshore Fish Cage Systems' Floating Collar Designs with Finite Element Method; **Mehmet Emin Özdemir, Merve Terzi, Şevval Öztürk, Murat Yaylacı**
- 17:35-17:45 Analysis of the Inadequacies Encountered by Ships in Port Reception Facilities Between 2019 and 2023; **Ecem Arık, Seda Coşkun Kakşa, Fırat Bolat**
- 17:45-17:55 Questions and Discussions

**20 May 2024, Monday - Salon F SEM-5**

**11:00-11:50 F-1 Maritime Policy, Law & Governance**

**Chair:** *Assoc. Prof. Dr. Tanzer Satır*

11:00-11:10 Cargo Claims in Marine Transportation and Cargo Insurance in Maritime;  
**Tanzer Satır, Doğan Can Akyl**

11:10-11:20 Maritime Supremacy in Foreign Policy of States; **Arda Özkan, Levent Kirval**

11:20-11:30 Assessment of Turkish Commercial Ports in the Context of Sea Power  
Strategy; **Gurkan Bilge, Levent Kirval**

11:30-11:40 The Collection and Processing of Passenger Name Record Data to Fight  
against Terrorism and Serious Crimes in the Maritime Transportation in the  
European Union Law; **Didem Özgür**

11:40-11:50 Questions and Discussions

**12:00-13:00 LUNCH BREAK**

**13:30-14:30 F-2 Maritime Policy, Law & Governance, Maritime Economy**

**Chair:** *Assoc. Prof. Dr. Levent Kirval*

13:30-13:40 An Investigation on Seafarer Selection Criteria and Recruitment Methods of  
Turkish Maritime Companies; **Mehmet Şimşek Buçukoğlu, Olgay Oktaş**

13:40-13:50 Rethinking Filyos Valley Project and Filyos Port: Toward a Strategic Hub for  
Offshore Industry in Türkiye; **Sabri Alkan**

13:50-14:00 Factors affecting the selection of ship recycling country: A binary logistics  
regression approach; **Cemile Solak Fiskin**

14:00-14:10 A Comparison of Fundamental Time Series Models in Freight Rate Index  
Forecasting; **Hüseyin Gençer, Tolga Tuzcuoglu**

14:10-14:20 Company Attractiveness and Ship Type Preferences of Maritime Faculty  
Students; **Özgür Dal**

14:20-14:30 Questions and Discussions

**14:30-14:45 COFFEE BREAK**

**14:45-15:45 F-3 Seafarers' Wellbeing**

**Chair:** *Dr. Zeki Yaşar*

14:45-14:55 Continuous Automated Red Teaming Approach for Maritime Security;  
**Mahmut Erdem Özgen, Regaip Kurt, Göksel Uçtu, Serhat Aytuğel**

14:55-15:05 Improving Maritime Safety: Analyzing PSC Deficiencies with Deep Learning  
Approach to Prevent Ship Detention; **Samet Biçen**

15:05-15:15 Evaluation of the Risks that Cause Fire and Explosion Accidents on Container  
Vessel; **Mehmet Kaptan**

15:15-15:25 A Content Analysis of Blue Crime: Transnational Organized Crime at Sea;  
**Ferhan Oral**

15:25-15:35 Factors that Influence Maritime Piracy: A Systematic Literature Review;  
**Barış Demir, Özge Eski**

15:35-15:45 Questions and Discussions

20 May 2024, Monday - Salon F SEM-5

15:45-16:00 **COFFEE BREAK**

16:00-17:00 **F-4 Seafarers' Wellbeing**

**Chair:** *Prof. Dr. Leyla Tavacıoğlu*

16:00-16:10 The Condition of Seafarers' at Substandard Ships: An Ethnographic Study from A Bulk Carrier; **Çağatay Edgücan Şahin**

16:10-16:20 The Mediating Role of Coping with Stress: The Impact of Psychological Resilience on Rational and Intuitive Decision-Making among Seafarers; **Nihan Senbursa, Emre Dünder**

16:20-16:30 Evaluation of Well-Being of Maritime Students: An Application of Dokuz Eylül University; **Ömer Arslan, Elif Arslan**

16:30-16:40 Comparing The Fatigue Levels Between Maritime Faculty Students and Other Students with Student's t-Hypothesis Test; **Barış Bayram Kızılsaç, Kutluhan Yapar, Hakan Çap, Leyla Tavacıoğlu**

16:40-16:50 Cognitive Assessment of Tugboat Captains During Port Maneuvers: A Neurophysiological Approach; **Serkan Kahraman, Durmus Ali Deveci, İbrahim Oztura, Dilara Mermi Dibek, Ayşe Güldem Cerit**

16:50-17:00 Questions and Discussions

17:00-17:15 **COFFEE BREAK**

17:15-18:15 **F-5 Maritime Transportation & Management**

**Chair:** *Assist. Prof. Dr. Gizem Kayışoğlu*

17:15-17:25 Cargo Liquefaction and Its Effects on Ship Stability; **Muhammet Boran**

17:25-17:35 The Role of Computational Fluid Dynamics in Refining Tugboat Operations and Escort Forces; **Hasan Ölmez, Emre Peşman, Mehmet Zeki Şener**

17:35-17:45 Application of the Fuzzy Topsis Method for Recruiting Ship Captains: A Case Study on Chemical Tanker Management and Operations in the Era of Maritime 4.0; **Aziz Muslu, Ercan Yüksekşildiz**

17:45-17:55 Analysis of IMO Autonomy Levels for Ships; **Mehmet Ali Vahdet Yilmaz, Remzi Fiskin**

17:55-18:05 Revolutionizing Maritime Education and Training through Innovative Technology Integration; Introducing Navigational Skills of Behaviour Assessments (NSBA Project); **Esma Uflaz, Levent Sen, Ozcan Arslan**

18:05-18:15 Questions and Discussions

## 21 May 2024, Tuesday - Salon A (Conference Hall)

### 09:15 - 09:45 KEYNOTE SPEAKER

Smarter Maritime: Co-Innovation to Address Emerging Maritime Challenges  
**Prof. Osman Turan | University of Strathclyde, Glasgow, Scotland**

### 09:45-10:00 COFFEE BREAK

### 10:00-11:00 A7-Maritime Safety & Security

**Chair: Prof. Osman Turan**

- 10:00-10:10 Identification of Uncertainties in Accommodation Fires: A Case Study of the Beata Ship Fire; **Serdar Yıldız, Özkan Uğurlu, Fatih Tonoğlu, Firat Sivri, Jin Wang, Mehmet Kaptan**
- 10:10-10:20 Analysis of Human and Organizational Factors (HOFs) in Ship Grounding and Sinking Accidents Occurred in the Black Sea; **Serdar Yıldız, Özkan Uğurlu, Fatih Tonoğlu, Firat Sivri, Jin Wang, Mehmet Kaptan**
- 10:20-10:30 The Latest: Ship's Threat While Transiting Red Sea and Gulf of Aden; **Vedran Nikolić, Zvonimir Lušić**
- 10:30-10:40 Digital Waves in Maritime Safety: A Systematic Analysis of Industry Transformation; **Muhammed Fatih Gülen, Murat Mert Tekeli, Ahmet Lutfi Tunçel, Özcan Arslan**
- 10:40-10:50 CMIP6-derived significant wave height global trends until 2100: implications for the development of offshore wind facilities; **Gabriel Ibarra Berastegui, Alain Ulazia, Jon Saenz, Oihana Aristondo, Hodei Ezpeleta**
- 10:50-11:00 Questions and Discussions

### 11:00-11:15 COFFEE BREAK

### 11:15-12:15 A-8

**Chair: Dr. Özkan Poyraz**

- 11:15-11:25 The Next Revolution in Global Trade? Exploring the Impact of Blockchain in Shipping; **Ourania Sarigiannidou, Peter J. Stavroulakis**
- 11:25-11:35 Examination of Lifeboat Load Tests Employing the AHP Method; **Muhittin Orhan, Furkan Gümüş, Özcan Arslan**
- 11:35-11:45 Cross-European Collaboration in Maritime Education: Enhancing Skills Development; **Mehdi Belabyad, Robyn Pyne, Dimitrios Paraskevadakis**
- 11:45-11:55 Questions and Discussions

### 11:55-12:15 KEYNOTE SPEAKER Online

Research Trends in Maritime Microgrids: Electric Ships, Sea Ports and Offshore Systems  
**Prof. Josep M. Guerrero**

### 12:15-12:30 CLOSING CEREMONY

**21 May 2024, Tuesday - Salon B (Meeting Room)**

**10:00-10:50 B7 - Naval Architecture & Offshore Technologies**

**Chair:** *Assist. Prof. Dr. Melek Ertogan*

- 10:00-10:10 Numerical Investigation of different Length to Beam (L/B) and Height to Breadth (H/B) Ratios on the Static Drift Condition of the Autosub Underwater Vehicle; **Yunus Şahin, Yasemin Arıkan Özden**
- 10:10-10:20 Investigating the Impact of Propeller Pitch, Blade Area Ratio, Skew, and Rake Angle on Cavitation; **Akif Can Turel, Yasemin Arıkan Özden**
- 10:20-10:30 Assessing the Appendage Effects on the Resistance Characteristics of the BB2 Joubert; **Cagin Yilmaz, Erdinç Kara, Cihad Delen**
- 10:30-10:40 Application of Sound Absorbing Panels Made of Jute Fibre Reinforced Composites in the Engine Rooms; **Mehmet Cihan**
- 10:40-10:50 Questions and Discussions

**11:00-11:15 COFFEE BREAK**

**11:15-12:15 B-8**

**Chair:** *Murat Akpınar*

- 11:15-11:25 AUVs housing methods in naval submarines; **Mohammad Moonesun, Tahere Taghizade, Ataollah Ghare Chahi**
- 11:25-11:35 Investigating the Collapse Pressure of Corroded Pipelines of Various API 5L X Grades with Multiple Interacting Defects Using Finite Element Analysis, **Muhammad Hariz Ahmad Rushdi, Mohd Hairil Bin Mohd, Mohd Asamudin A Rahman, Mohd Fakri Muda**
- 11:35-11:45 Numerical Study on Vortex-Induced Vibration (VIV) Energy Harvesting of Multiple Cylinders in Different Arrangements; **Mohd Asamudin A Rahman, Fatin Alias, Muhammad Hariz Ahmad Rushdi, Mohd Hairil Mohd**
- 11:45-11:55 Electronic Design of Free-Running Ship Model for Manual Control; **Deniz İlkme, Ömer Kemal Kınacı**
- 11:55-12:05 Questions and Discussions



**21 May 2024, Tuesday - Salon C (Simulator Building)**

**10:00-10:50 C7-Human Factor**

**Chair:** *Assist. Prof. Dr. Esmâ Uflaz*

10:00-10:10 Analysis of Contact Accidents Onboard Ships Assisted by Maritime Pilots; Refik Canimoglu, Umur Yıldırım, Seyid Mahmud Esad Demirci

10:10-10:20 The Relationship between Workload, Work Stress and Burnout in Masters and Deck Officers; **Deniz Alp Dolu, Leyla Tavacioglu, Barış Bayram Kızılsaç**

10:20-10:30 Classification Analysis for Studied Fields in Maritime; **Oguzhan Oztutuncu, Cemal Emir, Leyla Tavacioglu, Deniz Alp Dolu, Barış Bayram Kızılsaç**

10:30-10:40 International Recognition of The Certificate of the Turkish Seafaring Officers for Improving Employment Opportunities on the Board of Developed Countries' Flag; **Ergun Demirel, Recep Odabaş**

10:40-10:50 Questions and Discussions

**11:00-11:15 COFFEE BREAK**

**11:15-12:15 C-8 Human Factor**

**Chair:** *Assist. Prof. Dr. Muhsin Kadioğlu*

11:15-11:25 CUL-MAR-Skills Project: Development of Culinary Skills in Maritime; **Pınar Özdemir, Taner Albayrak, Catalin Popa**

11:25-11:35 Entrepreneurial Tendency of Cadets and the Importance of Entrepreneurial Education in Maritime Universities; **Pınar Özdemir**

11:35-11:45 Reference Systems Used in Maritime Border Delimitation Agreements; **Muhsin Kadioğlu**

11:45-11:55 Maps and Their Features in the Annex to the Maritime Border Delimitation Agreements; **Muhsin Kadioğlu**

11:55-12:05 Questions and Discussions

**21 May 2024, Tuesday - Salon D SEM-1**

10:00-11:00 **D7**

**Chair: Assist. Prof. Dr. Emrah Şık**

- 10:00-10:10 An Application of Fatigue Calculations in Different Standards; **Fatih Özdemir, Serdar Turgut Ince**
- 10:10-10:20 Occupational Health and Safety Risk Assessment of Ship Abandonment Drills Using the TOPSIS Method; **Furkan Gümüş, Muhittin Orhan, Özcan Arslan**
- 10:20-10:30 A proposal on a quantified ship navigational assessment and audit model; **Nasuh RAZI, Kadir CICEK**
- 10:30-10:40 Maritime and Aviation Accidents Between 2013 - 2023: Comparative Analysis; **Ceren Kesmen, Merve Er, İlker Akgun**
- 10:40-10:50 Naval Vessels for Distribution of Disaster Relief Materials by Using the Multi-Criteria Supply Chain Model; **Haydar Mücahit Şişlioğlu**
- 10:50-11:00 Questions and Discussions

**11:00-11:15 COFFEE BREAK**

11:15-12:15 **D-8**

**Chair: Assist. Prof. Dr. Aydın Mert**

- 11:15-11:25 A Fuzzy Logic-Based Approach to Assessing Maritime Education Quality Alignment to ISO 21001; **Alper Kağan Karadeniz, Osman Yaylı, İsmail Kandemir**
- 11:25-11:35 Currents of Innovation: A Bibliometric Perspective of Blockchain Approach in Maritime Studies; **İsmail Kandemir**
- 11:35-11:45 Analysis of Maritime Incidents from A Personal Injury and Contributing Human Factors Perspective; **Duygu Yalcin, Emre Akyuz**
- 11:45-11:55 Historical Development of ITU Maritime Faculty: 140-Year-Old Sycamore's Albatrosses on Seven Seas; **Sinan Cakir**
- 11:55-12:05 Questions and Discussions

**21 May 2024, Tuesday - Salon E SEM-3**

10:00-10:50 **E-7**

**Chair:** *Assist. Prof. Dr. Tayfun Uyanık*

10:00-10:10 Design and Evaluation of Hybrid Power Propulsion System for a Ferry;

**Sait Aktaş, Çağlar Karatuğ, Yasin Arslanoğlu**

10:10-10:20 Hybrid Ferry Propulsion System Design Methods;

**Sait Aktaş, Çağlar Karatuğ, Yasin Arslanoğlu**

10:20-10:30 Seafarers' Well-Being at Sea: Exploring the Interplay Between Sleep Quality, Occupational Stress, and Health-Related Quality of Life;

**Birgül Arslanoğlu, Aysel Camcı, Fırat Bolat**

10:30-10:40 The Impact of Student Club Participation in Maritime Education;

**Turgay Cıncı, Bedir Bıçakçı, Almira Öztop, Birgül Arslanoğlu**

10:40-10:50 Questions and Discussions

**11:00-11:15 COFFEE BREAK**

11:15-12:15 **E-8**

**Chair:** *Assist. Prof. Dr. Çağlar Karatuğ*

11:15-11:25 HAZOP Analysis of Ship Inert Gas System: A Case Study;

**Ozcan Durukan, Buğra Arda Zincir, Yasin Arslanoğlu**

11:25-11:35 Determination of Primary Personality Traits for Seafarers Using the AHP

Method; **Ozcan Durukan, Buğra Arda Zincir, Yasin Arslanoğlu, Hasan Bora Usluer**

11:35-11:45 Risk Assessment of Vessels with Dynamic Positioning Systems Using Fault

Tree Analysis; **Doğanay Alper Elidolu, Yasin Arslanoğlu**

11:45-11:55 Questions and Discussions

## WORLD'S GREENEST TUG FLEET



HiSea Kermode, HiSea Wee'git, HiSea Brave, HiSea Warris, HiSea Warrior  
Halsea Marine

