

# 3<sup>rd</sup> International Conference of Maritime Science & Technology Our Sea 2023 Safety, Innovation, Resilience

Dubrovnik, Croatia,  
14 – 16 September 2023

Organizer: Maritime Department, University of Dubrovnik



SVEUČILIŠTE  
U DUBROVNIKU  
UNIVERSITY  
OF DUBROVNIK

UNIVERSITY  
OF DUBROVNIK  
MARITIME  
DEPARTMENT

Venue: University of Dubrovnik, Branitelja  
Dubrovnik 41, Dubrovnik

e-mail: [www.nasemore.com/conference/](http://www.nasemore.com/conference/)  
[conference@nasemore.com](mailto:conference@nasemore.com)

## PROGRAMME OVERVIEW

### DAY 1 14 September 2023 (Thursday)

- 08:00 – 09:00 Registration
- 09:00 – 09:30 **Welcome note and introductory remarks**
- 09:30 – 10:30 **Keynote speech** (Yusuke Mori, Damir Zec)
- 10:30 – 10:50 Coffee break
- 11:00 – 12:30 **Panel session I** – Education
- 12:30 – 13:30 Lunch break
- 13:30 – 14:30 **Presentations**
- 14:30 – 14:45 Coffee break
- 14:45 – 16:15 **Presentations**
- 17:00 Guided sightseeing tour  
(meeting point – [Pile gate – Tourist board](#))

### DAY 2 15 September 2023 (Friday)

- 09:00 – 09:30 **Keynote speech** (Syed Asif Altaf Chowdhury)
- 09:30 – 11:00 **Panel session II** – Business sector
- 11:00 – 11:20 Coffee break
- 11:30 – 12:45 **Presentations**
- 12:30 – 13:30 Lunch break
- 13:30 – 14:30 **Presentations**
- 18:30 – 20:00 Karaka boat tour\*
- \*Meeting point: 17:30 Student dorm reception ([bus transfer](#))  
18:15 [The old port of Dubrovnik](#)
- 20:30 Gala dinner - [Museum of Modern Art Dubrovnik](#)



## **CONFERENCE PROGRAMME**

### **14 September 2023 (Thursday)**

Registration 08:00 – 09:00

#### **09:00 – 09:30 WELCOME NOTE AND INTRODUCTORY REMARKS**

##### **WELCOMING REMARKS:**

**Nikša Burum**, Rector of the University of Dubrovnik

Students representative

ITF representative

Ministry of the sea, transport and infrastructure

City of Dubrovnik - Representative

Dubrovnik-Neretva County - Representative

##### **INTRODUCTORY REMARK**

**Srđan Vujičić**, Head of the Maritime Department

##### **KEYNOTE**

**09:30 - 10:00 Yusuke Mori**

**10:00 – 10:30 Damir Zec**

**10:30 – 10:50 coffee break**

**11:00 – 12:30 Panel session I – Education**  
**(Panel discussion with Q&A from the audience)**

##### **THE FUTURE OF MET**

Maritime education and training must seek effective training methods to meet the needs of the shipping industry. Future skills and competencies must emerge from the trends that will shape the future. Therefore, cooperation between industry and universities should explore new approaches and new technologies. Most of the skills that will be needed in the future are outside the scope of current educational programmes. Therefore, educators need to establish appropriate programs that develop the competencies and skills of maritime professionals in response to the rapid development of



technologies, especially Artificial Intelligence. In addition, programmes should enhance seafarers' soft skills in leadership and management aimed at their careers both on board and ashore. Study programmes should also create a strong interdisciplinary environment to connect researchers and maritime professionals. In addition, study programmes should develop strategies to improve or promote awareness of mental health issues in maritime organisations for both shipboard and shore-based personnel.

**Moderator: Ana Gundić**, Assistant Professor, Maritime Department, University of Zadar

**Panelists:**

**Yusuke Mori**, Deputy Executive Director, International Association of Maritime Universities (IAMU)

**Srđan Vujičić**, Assistant Professor, Head of Maritime Department, University of Dubrovnik

**Ana Perić Hadžić**, Associate Professor, Dean of the Faculty of Maritime studies of the University of Rijeka,

**Pero Vidan**, Dean of the Faculty of Maritime Studies, University of Split

**Špiro Ivošević**, Associate Professor, Faculty of Maritime Studies Kotor, University of Montenegro

**Luka Grbić**, Associate Professor, Head of Maritime Department, University of Zadar

Captain **Heikki Koivisto**, Project Manager, Maritime Logistics Research Center at Satakunta University of Applied Sciences

**Ana-Marija Batinović**, Head of Department for Seafarers and Boatmasters, Ministry of the Sea, Transport and Infrastructure

**12:30 – 13:30 Lunch break**

**13:30 – Presentations**

	<b>Parallel session - ROOM A</b>	<b>Parallel session - ROOM B</b>	<b>Parallel session - ROOM C</b>
	<b>Session Chair: Nermin Hasanspahić, Miho Kristić</b>	<b>Session Chair: Mate Barić, Maro Car</b>	<b>Session Chair: Dinka Lale, Tonći Biočić</b>
<b>1.</b>	<b>13:30 – 13:45</b>	<b>Marino Lupi, Daniele Conte, Alessandro Farina</b> DESIGN AND DEVELOPMENT OF A NEW WEB PLATFORM FOR THE	<b>Heikki Koivisto</b> AUTONOMOUS ASPECTS FROM THE CAPTAIN PERSPECTIVE
			<b>Ljudevit Krpan, Ivan Cvitković, Tanja Poletan Jugović, Ines Kolanović</b> USE OF LOCATION THEORY OF TRANSPORT



		MANAGEMENT OF PHYSICAL FLOWS AND CUSTOMS DOCUMENTS AT PORT TERMINALS		FOR DETERMINATION OF LIQUEFIED NATURAL GAS TERMINAL LOCATION
2.	13:45 – 14:00	<b>Ana Gundić, Marko Valčić, Dino Županović, Astrid Zekić</b> MICRO-CREDENTIALS IN MARITIME EDUCATION	<b>Anjaney Borwankar</b> APPLICATION OF ARTIFICIAL INTELLIGENCE TO FACILITATE DECARBONISATION VIA JUST-IN-TIME BUNKERING	<b>Florin Rusca, Aura Rusca, Eugen Rosca, Catalin Coman, Anamaria Ilie</b> SMART EQUIPMENT FOR THE PRESELECTION OF CARGO VEHICLES IN THE MARITIME PORT AREA
3.	14:00 – 14:15	Dimitar Dimitrakiev, Ognyan Kostadinov, <b>Christiana Atanasova</b> <b>ONLINE</b> INTERACTION BETWEEN MANAGEMENT UNITS OF SHIPPING COMPANIES VIA BLOCKCHAIN TECHNOLOGY	<b>Špiro Ivošević</b> EVALUATION OF THE EFFECTIVENESS OF THE ROBOTS' APPLICATION IN THE INSPECTION AND MEASUREMENT OF BULK CARRIER'S STRUCTURAL AREAS	<b>Dino Županović, Ana Gundić, Astrid Zekić, Đoni Štambuk</b> DEVELOPMENT OF LOCAL IMPORTANCE PORT AREAS IN THE CITY OF ZADAR
4.	14:15 - 14:30	<b>Matthew Rooks</b> <b>ONLINE</b> AN ANALYSIS OF SMCP USAGE IN VHF COMMUNICATIONS BY JAPANESE SEAFARERS	<b>Anjaney Borwankar</b> LEVERAGING BLOCKCHAIN ENABLED E-CERTIFICATES (BEES) FOR MARITIME CERTIFICATIONS: EARLY ADOPTER EXPERIENCES FROM AROUND THE WORLD	<b>Siniša Vilke, Jasmin Ćelić, Borna Debelić, Livia Maglić</b> DECISION-MAKING PROCESS FOR URBAN MOBILITY AND TRAFFIC MANAGEMENT
	<b>COFFEE BREAK</b>	<b>14:30–14:45</b>		
5.	14:45 – 15:00	Svetlana Dimitrakieva, <b>Bogdana Dimitrova</b> <b>ONLINE</b> CHALLENGES TO THE EDUCATION OF MARITIME PROFESSIONALS BASED ON DIGITAL PLATFORMS	<b>Stefano Ricci, Luca Rizzetto</b> ESTIMATION AND FORECAST OF GREENHOUSE GAS EMISSIONS FROM SHIPS AT PORTS	<b>Luka Vukić, Roko Glavinović</b> THE BRIDGE ACROSS KAŠTELA BAY AS A TRAFFIC SOLUTION: PROS AND CONS
6.	15:00 – 15:15	Jakub Montewka, Marcin Życzkowski, <b>Filip Zarzycki*</b> <b>ONLINE</b> DATA-DRIVEN, PROBABILISTIC MODEL FOR ATTAINABLE SPEED FOR SHIPS APPROACHING GDAŃSK HARBOUR	<b>Leopold Mandić, Alen Jugović, Josip Orović, Igor Rudan</b> ANALYSIS OF PORT INFRASTRUCTURE ON THE CROATIAN COAST OF ADRIATIC SEA FOR BERTHING SHIPS	<b>Rosanda Mulić, Pero Vidan, Stipe Pupić-Vurilj</b> RISK OF FOOD POISONING ON SHIP AND PREVENTIVE MEASURES



POWERED BY  
ALTERNATIVE FUELS

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| <b>7.</b>  | <b>15:15 –<br/>15:30</b> | <b>Igor Petrović</b> , Jelena Nikčević, Vera Kapetanović, <b>Tatijana Dlabac</b><br>SEAFARERS' EDUCATION AND TRAINING IN PRACTICE: MONTENEGRIN EXPERIENCE   | <b>Langa Dlamini*</b><br>POTENTIAL FOR COASTAL SHIPPING INTEGRATION IN THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY  | Igor Vio, <b>Zuzanna Peptowska-Dąbrowska</b><br>FULLY AUTONOMOUS SHIPS - A FEW REMARKS ON REGULATORY APPROACH |
| <b>8.</b>  | <b>15:30 –<br/>15:45</b> | <b>Lia Dragojević</b><br>INTERNATIONAL OFFICIAL LANGUAGE OF MARINE INDUSTRY AND EDUCATION OF SEAFARERS  | <b>Astrid Zekić, Ana Gundić</b> , Lucija Županović, Martina Antunović<br>SCUTTling – AN OVERVIEW OF THE IMPACT ON THE MARINE ENVIRONMENT                                     | <b>Dinka Lale</b> , Matej Hrtica<br>ENVIRONMENTAL FRIENDLY SHORE POWER CONNECTION                             |
| <b>9.</b>  | <b>15:45 –<br/>16:00</b> | <b>Nikola Mandić, Merica Slišković</b> , Ranka Petrinović, Petra Amižić Jelovčić, Zaloa Sanchez Varela<br>ACADEMIC BACKGROUND AND COMPETENCIES OF TEACHERS WHO TEACH MARITIME LAW ACCORDING TO STCW (MareLaw project) | <b>Ljubica Vidović, Gorana Jelić Mrčelić</b><br>MARINE RENEWABLE ENERGY  |   |
| <b>10.</b> | <b>16:00 –<br/>16:15</b> | <b>Milena Dževerdanović-Pejović</b><br>THE CONCEPT OF MARITIME DISCOURSE COMMUNITY: A SEA OF GENRES   | <b>Ivan Gospić*</b> , Luka Grbić, Frano Paro Vidolin, Nastia Degiuli<br>ENERGETIC AND ECOLOGY EFFECTS OF THE EGR METHOD FOR NOX REDUCTION ON THE DIESEL ENGINE POWERED SHIPS |   |

\* to be confirmed

**17:00 - Guided sightseeing tour**



## 15 September 2023 (Friday)

### KEYNOTE

**09:00 – 09:30 Dr. Syed Asif Altaf Chowdhury**

**09:30 – 11:00 Panel session II – Business sector  
(Panel discussion with Q&A from the audience)**

### **SAFETY, INNOVATION AND RESILIENCE IN THE MARITIME SECTOR**

The biggest challenges facing the shipping industry are environmental regulations, digitalisation, legal framework, rising costs, safety and human resources. Some of the most important questions are the following. What are the main challenges related to seafarers' mental health? Is there a possible alarming trend for the coming years regarding seafarers' mental health? How can living conditions on ships be improved? How can young people be encouraged to choose this profession? What needs to change to empower women in the maritime industry? How can maritime development be improved through a legal framework? How to deal with the accelerated development of technology? What are the risks of MASS? How will the shipping industry deal with cyber security in the operation of autonomous ships or remote control centre on shore? SOLAS and COLREGS are based on the definition of "master". So who will be the captain of MASS ships? What are the differences between shipping today and in the past (training, stress, multiculturalism)? Which personnel are most lacking?

**Moderator:** Captain **Heikki Koivisto**, Project Manager, Maritime Logistics Research Center at Satakunta University of Applied Sciences

#### **Panelists:**

**Romano Perić**, ITF Coordinator

**John Reid**, Training and Recruitment Manager, Seapeak

**Vitomir Bjelovučić** – Mooring Mariner at AET

**Srećko Ban** – Master Mariner RCCL

**Marko Domijan**, CEO, Atlantska Plovidba Plc

**Veljko Rusković**, GCL

**11:00 – 11:20 Coffee break**



## 11:30 – Presentations

		<b>Parallel session - ROOM A</b> <b>Session Chair: Astrid Zekić, Miho Kristić</b>	<b>Parallel session - ROOM B</b> <b>Session Chair: Maro Ćorak, Ivica Krmek</b>	<b>Parallel session – ROOM C</b> <b>Session Chair: Anamarija Falkoni, Zvonimir Šoša</b>
1.	<b>11:30 – 11:45</b>	<b>Darko Glujić</b> , Dean Bernečić, <b>Goran Vizentin</b> , Goran Vukelić, <b>Josip Orović</b> CFD FIRE MODELLING IN A VIRTUAL SHIP ENGINE ROOM	<b>Yordan Denev</b> CONTROL OF SHIP STRENGTH DURING HULL REPAIR	Mira Šorović, <b>Nexhat Kapidani</b> , Žarko Lukšić, <b>Vlado Frančić</b> , Marko Strabić, David Brčić, Zorica Đurović, Toni Maričević HARMONIZATION OF VTS TRAINING PROGRAMS – A CASE STUDY OF THE ADRIATIC-IONIAN REGION
2.	<b>11:45 – 12:00</b>	Rastislav Kazansky, Lucia Kucbelová, <b>Nina Mijoč</b> THE CAUSES OF PIRACY AS A SECURITY THREAT WITH REGARD TO FRAGILE STATES	<b>Ante Čalić</b> , Francisko Lukša, Nenad Vulić STRESS CONCENTRATION IN PROPELLER SHAFT SPOON SHAPED KEYWAY	Rafał Szłapczyński, <b>Mateusz Gil</b> , Joanna Szłapczyńska, Marcin Życzkowski, Jakub Montewka A CONCEPT OF HOLISTIC DECISION SUPPORT SYSTEM FOR MARITIME COLLISION AVOIDANCE – A FRAMEWORK WITH APPLICATION
3.	<b>12:00 – 12:15</b>	<b>Stipe Galić</b> , Zvonimir Lušić, Mate Vukić ANALYSIS OF SHIPS AND BOATS ACCIDENTS ON THE CROATIAN PART OF THE ADRIATIC SEA	<b>Yordan Denev</b> CORROSION WASTE IMPACT TO SHIP GIRDER STRENGTH THROUGH LIFE CYCLE	<b>Darijo Mišković</b> SEAFARERS' ATTITUDES TOWARDS MARITIME SAFETY REQUIREMENTS: INSIGHTS INTO REALITY
4.	<b>12:15 – 12:30</b>	<b>Ivica Đurđević-Tomaš</b> , Maro Ćorak OVERVIEW OF SHIP STABILITY AND HULL STRENGTH FROM PRACTICE ORIENTED AND DESIGN POINT OF VIEW	<b>Przemyslaw Krata</b> , Tomasz Hinz, Zbigniew Szozda, Spencer Dugan DEVELOPMENT OF A NEURAL NETWORK BASED DECISION SUPPORT TOOL PROVIDING OPERATIONAL GUIDANCE ON SHIP STABILITY	<b>Ivica Đurđević-Tomaš</b> , Darijo Mišković, Nermin Hasanspahić ASSESSMENT OF CRUISE SHIP SAFE ENTRANCE IN A PORT AS A PART OF THE DECISION SUPPORT SYSTEM



**LUNCH 12:30 –**

**BREAK 13:30**

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| <b>5.</b> | <b>13:30 –<br/>13:45</b> | <b>Miho Kristić</b> , Tonći Biočić,<br>Nermin Hasanspahić,<br>Srđan Vujičić, Maro Car<br>USAGE OF SAFETY DEPTH<br>SETTING IN ROUTE<br>PLANNING                                       | <b>Maro Ćorak</b> , Antonio<br>Mikulić, Joško Parunov<br>LONG-TERM VWBM OF<br>LARGE CONTAINER SHIPS<br>ACCORDING TO THE NEW<br>IACS REC. NO 34 REV 2 | Chavdar Alexandrov,<br><b>Nikolay Ivanov</b> , Igljika<br>Ivanova-Slavova<br>SUSTAINABLE SHIP<br>RECYCLING – WHAT IS THE<br>CURRENT SITUATION   |
| <b>6.</b> | <b>13:45 –<br/>14:00</b> | <b>Lea Vojković</b> , Srđan<br>Vujičić, Josipa Vujević,<br>Dejan Lovrinčević<br>ANALYSIS OF INACCURATE<br>DEPTH DATA USING<br>ECDIS AND<br>RECOMMENDATIONS FOR<br>IMPROVING ACCURACY | <b>Joško Parunov</b><br>NUMERICAL AND<br>EXPERIMENTAL<br>SIMULATIONS IN DESIGN<br>OF A TOURIST<br>SUBMARINE  | <b>Ivica Đurđević-Tomaš</b> ,<br>Darijo Mišković, Nermin<br>Hasanspahić<br>DETERMINATION OF<br>MARITIME ROUTES AND<br>TRAFFIC FLOWS IN THE<br>IMPLEMENTATION OF<br>MARITIME SPATIAL<br>PLANNING |
| <b>7.</b> | <b>14:00 –<br/>14:15</b> | <b>Tonći Biočić</b> , Vlado<br>Frančić, Nermin<br>Hasanspahić, Lovro Maglić<br>THE MOST SIGNIFICANT<br>PSC DEFICIENCIES  | <b>Rositsa Bakalova</b><br>METHOD FOR<br>EVALUATION THE<br>ECONOMIC EFFICIENCY<br>DUE TO THE USE OF<br>COMPOUND MARINE<br>DIESEL FUELS               | <b>Ivan Carević</b> , Tomislav<br>Sunko, Toni Mišković,<br>Marin Delić<br>CROATIAN COAST<br>GUARD'S ACTIVITIES IN<br>THE MARINE FISHERIES<br>CONTROL  |
| <b>8.</b> | <b>14:15 –<br/>14:30</b> |  | <b>Ladislav Stazić</b> , Branko<br>Lalić, Danijel Bartulović<br>SHIP COMPONENTS<br>IDENTIFICATION SYSTEMS  |   |

\* to be confirmed

### **18:30 – 20:00 – Karaka boat tour\***

\*Meeting point: 17:30 Student dorm reception (bus transfer) – google link

18:15 The old port of Dubrovnik - google link

### **20:30 – Gala dinner**

