Impressum

NASE MORE, INTERNATIONAL JOURNAL OF MARITIME SCIENCE & TECHNOLOGY NAŠE MORE, MEĐUNARODNI ZNANSTVENI ČASOPIS ZA MORE I POMORSTVO

FOUNDED IN 1919

ISSN 0469-6255 E-ISSN 1848-6320 DOI 10.17818/NM UDK 656.6+338.48+008+001(05)=862

EDITORIAL OFFICE

International Journal of Maritime Science & Technology
University of Dubrovnik
Ćira Carića 4
20000 Dubrovnik, Croatia
www.nasemore.com
nasemore@unidu.hr

FOUNDER AND PUBLISHER

University of Dubrovnik Branitelja Dubrovnika 29 20000 Dubrovnik, Croatia

EDITOR-IN-CHIEF

Darijo Mišković, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

JUNIOR EDITOR

Maro Ćorak, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

ASSOCIATE EDITORS

Anamaria Bjelopera, PhD, University of Dubrovnik, Faculty of Electrical Engineering and Applied Computing, Croatia Branko Glamuzina, PhD, University of Dubrovnik, Department of Applied Ecology, Croatia Žarko Koboević, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

INTERNATIONAL EDITORIAL BOARD

Bojan Beškovnik, PhD, University of Ljubljana, Faculty of Maritime Studies and Transport, Slovenia Matko Bupić, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia Leszek Chybowski, PhD, Maritime University of Szczecin, Szczecin, Poland

Kevin Cullinane, University of Gothenburg, Sweden **Ivica Đurđević-Tomaš**, University of Dubrovnik, Faculty of Maritime Studies Croatia

Alessandro Farina, PhD, University of Pisa, Department of Civil and Industrial Engineering and University Centre of Logistic Systems, Italy Vlado Frančić, PhD, University of Rijeka, Croatia Jozef Gnap, PhD, University of Žilina, The Faculty of Operation and Economics of Transport and Communications, Slovak Republic

Denis Gračanin, PhD, Virginia Tech University, USA **Andrzej Grzadziela**, PhD, Polish Naval Academy, Gdyna. Poland

Nermin Hasanspahić, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia Nguyen Phung Hung, PhD, Ho Chi Minh City University of Transport, Vietnam

Maro Jelić, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

Mate Jurjević, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

Rudolf Kampf, PhD, Faculty of Business in Česke Budejovice, Czech

Josip Kasum, PhD, University of Split, University Department for Forensic Science, Croatia

Nikša Koboević, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

Pavel Kolpahchyan, PhD, Rostov State Transport University, Rostov, Russia

Srećko Krile, PhD, University of Dubrovnik, Faculty of Electrical Engineering and Applied Computing, Croatia

Martin Lazar, PhD, University of Dubrovnik, Faculty of Electrical Engineering and Applied Computing, Croatia

Irina Makarova, PhD, Kazan Federal University, Kazan, Russia

Francesc Xavier Martínez de Osés, PhD, Universitat Politecnica de Catalunya, BarcelonaTech, Nautical Science and Engineering Department, Spain Nikolai Nikolaevich Maiorov, St. Petersburg

State University of Aerospace Instrumentation (SUAI), Russia

Ivan Maršić, PhD, Rutgers, The State University of New Jersey, USA

Ivona Milić-Beran, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

Peter Monka, PhD, Technical University of Košice, Faculty of Manufacturing Technologies in Prešov, Slovak Republic

Igor Nesteruk, PhD, Institute of Hydromechanics, National Academy of Sciences of Ukraine, Kyiv, Ukraine

Ivana Palunko, PhD, University of Dubrovnik, Faculty of Electrical Engineering and Applied Computing, Croatia

Marijana Pećarević, PhD, University of Dubrovnik, Department of Aquaculture, Croatia Vladimir Perliouk, PhD, St. Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russia

Aleksandar Sladkowski, PhD, Silesian University of Technology, Faculty of Transport, Katowice, Poland

Ondrej Stopka, PhD, Institute of Technology and Business in České Budějovice, Department of Transport and Logistics, Czech Republic

Hakan Tozan, PhD, Marmara University in Turkey, Naval Academy, Turkey

Nguyen Duy Trinh, PhD, Ho Chi Minh City University of Transport, Vietnam

Elen Twrdy, PhD, University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia

Le Van Vang, PhD, Ho Chi Minh City University of Transport, Vietnam

Srđan Vujičić, PhD, University of Dubrovnik, Faculty of Maritime Studies, Croatia

Gong Xiang, PhD, School of Naval Architecture and Ocean Engineering, Huazhong University of Science and Technology, Wuhan, China

Wang Xiaodong, PhD, University of International Business and Economics, Bejing, China Kalman Žiha, PhD, University of Zagreb, Croatia

EDITORIAL SECRETARY

Davorka Turčinović, mag. oec.

ADVISORY BOARD - COMMERCE

Božica Đurđević, Croatian Radio, Dubrovnik Mato Franković, City of Dubrovnik, Dubrovnik Ivo Klaić, Dubrovnik-Neretva County, Dubrovnik Tomislav Macan, Dubrovnik Airport, Dubrovnik Marko Domijan, Atlantska plovidba d.d., Dubrovnik Željan Matić, County Port Authority, Dubrovnik Denis Orlić, Society of Friends of Dubrovnik Antiques, Dubrovnik

GRAPHIC DESIGN & EDITING

Katarina Banović, mag. oec. Davorka Turčinović, mag. oec.

COVER DESIGN

Marijana Lujo, dipl. oec.

COVER PHOTO

Lighthouse, G. Šebelić

ENGLISH TRANSLATION AND PROOF-READING

Lia Dragojević, M.A.

Martina Hrnić, univ. spec. philol.

PROOF READING

Samanta Paronić, PhD

CLASSIFICATION OF ARTICLES

Ana Pujo, Sc. librarian

WEB MASTER

Stjepo Hladilo, ing.

The Journal is printed in Croatia by Tiskara Zelina d.d., Zelina Edition: 300 copies

ABSTRACTING AND INDEXING

Woscc: ESCI, SCOPUS, EMBASE, GEOBASE, HRČAK, DOAJ, EBSCO PUBLISHING, PROQUEST, CABELL'S DIRECTORY, TRID

SUBSCRIPTION

Subscription runs for full calendar year. One year subsription rate is 25,20 €. Orders can be placed at University of Dubrovnik (for Naše more); Privredna banka Zagreb, account number 1110135015, IBAN: HR08 2340 0091 1101 3501 5; SWIFT No: PBZGHR2X

The journal is completely published on the Internet.

The Journal is financially supported by the following institutions: Ministry of Science, Education and Sports, University of Dubrovnik, Atlantska plovidba d.d., Dubrovnik Tourist Board, Dubrovnik-Neretva County, Society of Friends of Dubrovnik Antiques.



 $\ensuremath{\texttt{@}}$ University of Dubrovnik. All rights reserved.