

Towards Green Marine Technology and Transport



Editors:
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Towards Green Marine Technology and Transport

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Preface

This book presents the proceedings of the 16th International Maritime Association of the Mediterranean Congress held in Pula, Croatia between 21 and 24 September 2015, under the theme *Towards Green Marine Technology and Transport*.

The International Congress of International Maritime Association of the Mediterranean has nearly 37-year history since the first Congress of the International Maritime Association of East Mediterranean (IMAEM) held in Istanbul in 1978. It is a voluntary organization that was initially established in 1974 by institutions originating from Bulgaria, Egypt, Greece, Italy, Yugoslavia and Turkey, and was progressively enlarged to other Mediterranean countries and neighbouring regions.

The IMAEM Congresses were held every 3 years:

- 1st IMAEM Congresses was held in Istanbul, Turkey, in 1978,
- 2nd IMAEM Congresses was held in Trieste, Italy, in 1981,
- 3rd IMAEM Congresses was held in Athens, Greece, in 1984,
- 4th IMAEM Congresses was held in Varna, Bulgaria, in 1987,
- 5th IMAEM Congresses was held in Athens, Greece, in 1990.

After 1990, the name of the association, and of the Congresses, became the International Maritime Association of the Mediterranean (IMAM). It has remained constant, being an association of academic and professional institutions that aim to contribute to the efficient, economic and safe operation of ships, offshore and coastal structures and port infrastructures in order to promote the advancement of the use of the seas and coastal waters for a sustainable development of the societies.

The following Congresses were:

- 6th IMAM Congress was held in Varna, Bulgaria, in 1993,
- 7th IMAM Congress was held in Dubrovnik, Croatia, in 1995,
- 8th IMAM Congress was held in Istanbul, Turkey, in 1997,
- 9th IMAM Congress was held in Ischia, Italy, in 2000,
- 10th IMAM Congress was held in Crete, Greece, in 2002,
- 11th IMAM Congress was held in Lisbon, Portugal, in 2005,
- 12th IMAM Congress was held in Varna, Bulgaria, in 2007,
- 13th IMAM Congress was held in Istanbul, Turkey, in 2009,
- 14th IMAM Congress was held in Genova, Italy, in 2011,
- 15th IMAM Congress was held in A Coruña, Spain, in 2013.

This year it is the second time that the Congress is organized in Croatia. It was decided to share the responsibility of the organization between the Faculty of Engineering, University of Rijeka and Instituto Superior Técnico, Universidade de Lisboa, with the first one taking the responsibility of the conference organization and the responsibility of the paper evaluation and processing is shared between two universities.

The Congress is addressed to individuals from industry, research organizations, universities, government agencies, certifying authorities as well as designers, operators and owners who contribute to improved knowledge about the marine environment, ship and offshore design, building and maintenance technology, maritime transportation and port operation and exploitation, offshore oil and gas exploitation, nautical activities and marinas, fisheries and aquaculture, maritime safety and protection of the environment.

The Congress deals with aspects of theoretical and experimental research, design, production, operation and maintenance, including the economic impact of those activities. Most of the technological developments addressing ships or other maritime infrastructures have impact in either the maritime transportation or the exploitation of the resources of the sea, both living and mineral resources, as well as the recreational and leisure possibilities that the seas provide to mankind.

Like previous Congresses the present one has a wide scope by including, in addition to ships and maritime transportation, other topics of contemporary interest related with the sustainable exploitation of ocean and coastal resources and with renewable energy, areas that are believed to have become increasingly more important.

Amongst the topics covered in this year's event are the most updated aspects and developments in maritime transportation and exploitation of coastal and sea resources, with incidence not only in the Mediterranean area but with ever widening worldwide interest.

Contributions in this book deal with various aspects concerning the design and operation of vessels in maritime transportation, namely, hydrodynamics, seakeeping and manoeuvring, marine structures, machinery, resistance and propulsion systems, vessel design, and shipyard technology. Similarly, papers reflect a number of fundamental areas of the exploitation of ocean and coastal resources are included, such as marine environment, fisheries, maritime transportation, coastal and offshore development, safety and reliability, wave and wind modeling and renewable energies. Legal aspects are also considered.

The book is a result of the contributions of the authors that prepared their contents. The papers have been accepted after a review process based on the full text of the papers. Thanks are due to the Scientific Committee who had most of the responsibility of reviewing the papers and to an equally numerous group of anonymous reviewers that have helped the authors in delivering better papers by providing them constructive comments to improve the papers. Unfortunately several manuscripts that did not meet the quality criteria have not been included in the proceedings but we hope that this has contributed to a more consistent quality level of the papers included in these books.

Carlos Guedes Soares, Roko Dejhalla & Duško Pavletić
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