

Preface

This book contains selected papers from the *Fourth International Conference on Computational Methods in Marine Engineering*, held at Instituto Superior Técnico from the Technical University of Lisbon in Portugal in September 2011. The previous editions of the conference were held in Oslo, Norway (2005), Barcelona, Spain (2007) and Trondheim, Norway (2009).

Nowadays, computational methods are an essential tool of Engineering, which includes a major field of interest in Marine applications, such as the maritime and offshore industries and engineering challenges related to the marine environment and renewable energies. The 2011 Conference included 8 invited plenary lectures and 86 presentations distributed by 10 thematic sessions that covered many of the most relevant topics of marine engineering of nowadays. This book contains 16 selected papers from the Conference that cover “CFD for Offshore Applications”, “Fluid-Structure Interaction”, “Isogeometric Methods for Marine Engineering”, “Marine/Offshore Renewable Energy”, “Maneuvering and Seakeeping”, “Propulsion and Cavitation” and “Ship Hydrodynamics”. The papers were selected with the help of the recognized experts that collaborated in the organization of the thematic sessions of the Conference, which guarantees the high quality of the papers included in this book.

MARINE 2011 was organized in the framework of the Thematic Conferences of the European Community on Computational Methods in Applied Sciences (ECCOMAS). MARINE 2011 is also a Special Interest Conference of the IACM.

The conference was jointly organized by Instituto Superior Técnico of the Technical University of Lisbon, the Norwegian University of Science and Technology, SINTEF, and International Center for Numerical Methods in Engineering (CIMNE) in co-operation with the Technical University of Catalonia (UPC). We acknowledge the financial support from the sponsors: Maritime Research Institute Netherlands, Office for Naval Research Global, EDP Inovação and Caixa Geral de Depósitos.

Lisbon

Luís Eça
Eugenio Ñate
Julio García
Trond Kvamsdal
Pål Bergan

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Eca, L.; Oñate, E.; García-Espinosa, J.; Kvamsdal, T.;
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