Preface by Prof. Shenoi

Thanks for the publication of the special edition.

I am simultaneously humbled and honoured by the gesture of the Editor and his team of Associate Editors and Editorial Board Members to bring out this special issue; I also extend my thanks to the eminent scholars who have penned articles here.

The Journal of Engineering for the Maritime Environment (JEME) was initiated at the start of this century after discussions involving staff in the Institution of Mechanical Engineers, Royal Institution of Naval Architects and the Institute for Marine Engineering, Science and Technology in the UK and consultations with fellow academic colleagues from around the world. The spur for its creation was the need for a forum to stimulate thought and discussion on engineering issues affecting the design, production and operation of engineering artefacts in the maritime environment. The Editorial in the first issue of JEME in June 2020 had the message contained the following two paragraphs.

‘As we enter the 21st century it is apparent that the wide-ranging and rapid developments in the scientific and technological knowledge base, coupled with the interdisciplinary nature of solutions to the social problems and issues, point to the need for new avenues for discussing progress. Traditional approaches to problem solving, where an engineer addressed his or her own peers within a particular discipline and where the solution set was rather restrictive in coverage, have been superseded. Naval architects need to interface with mechanical or structural engineers, marine engineers frequently need to consult electrical or control engineers and there is a need for all engineers dealing with the maritime engineering problems to consider the social and economic consequences of their decisions. The ship, or another such maritime engineering artefact, is also only a ‘component’ in an overall system of delivering people or cargoes from one place to another or indeed for creating wealth.

Existing forums for discussion do not adequately address the concerns of such a concept. Most current journals are very discipline specific, with experts talking to one another within their own specialisms. It is, however, important for the experts’ views to be more widely disseminated and for discussion to be more comprehensive in coverage. Coverage in this Journal seeks to address the engineering artefact as a system in itself and the manner in which its performance is better characterised. Importantly, encouragement will be given to the treatment of the artefact as a component or facilitator of a larger goal, that is, the cargo transport chain, the fisheries chain, oil and mineral wealth exploitation chain – from the production fields to the ports’.

Those words in the first Editorial are still valid today. JEME has evolved over the past 19 years to straddle the traditional boundaries of naval architecture, marine engineering, offshore/ocean engineering, coastal engineering and port engineering; encourage advances in new techniques involving cross-disciplinary technologies; and focus on the technology and underpinning sciences that enable better understanding and utilisation of the life cycle of maritime assets (design, production, operation, disposal) in the maritime environment. The original motivation and the subsequent evolution are illustrated by the breadth and depth of topics covered by the expert authors in this special issue.

I close this brief note by thanking the Editor for his gesture of initiating this special issue and wishing him and his team the very best in the coming years which will see exciting developments in our field facilitating better understanding of the underpinning sciences, improving industrial applications and enabling wider societal benefits.

Professor Ajit Shenoi
Founding Editor of JEME
Southampton, 31 March 2021.