

n Smart and Autonomous Navigation Technology of
Ships

**1st International High-level Forum
on Smart and Autonomous Navigation
Technology of Ships**

**5th International Conference of Naval
Architecture and Marine Engineering (ICNAME
2021). High-level Forum on Green Ship
Technology**

NOVEMBER 16-17, 2021.



Russian Transport University, Harbin Engineering University, Tokyo University of Marine Science and Technology, Norwegian University of Science and Technology, Wuhan University of Technology, Satakunta University of Applied Sciences

with support of International Maritime Organization, Industry Association MARINET, Innovation & Cooperation in Naval Architecture & Marine Engineering (ICNAME) Alliance, China Association of the National Shipbuilding Industry

are organizing the 1st International High-level Forum on Smart and Autonomous Navigation Technology of Ships which will be held on November 16-17, 2021.

The autonomous navigation is undoubtedly one of the most important areas of the maritime transport development. Global efforts in this area shall be resulted in improving safety of navigation and efficiency of the shipping industry, implementing better working conditions for seafarers. Currently major maritime countries develop different technologies and approaches for the autonomous navigation, this topic is also in the focus of attention of the IMO. These developments are represented by various MASS trials, and sharing information on this practical experience is extremely important for harmonization of approaches, smooth and rapid implementation of the new technologies in the world maritime fleet. Universities play significant role in coordination and development of such projects and researches in every country. During the conference universities of China, Japan, Finland, Korea, Norway and Russia participating in the MASS trials will present developments and achievements in these countries and will share their practical experience for further international cooperation. Taking into account the COVID-19 pandemic, the conference to be held as a video conference. The preliminary conference program is attached. For your very appreciated joining the conference, please contact info@anav.org or icname@sina.com

The conference program

5th International Conference of Naval Architecture and Marine Engineering (ICNAME 2021). Opening Ceremony

Time	Topic	Speaker	Organization
<i>November 16 (GMT, London Time)</i>			
6:00-6:05	Opening Speech	Yan GAO	Chair of the University Council, Harbin Engineering University, China
6:05-6:10	Opening Speech	Alexander Pinskiy	Chairman, Board of Supervisors, Marinet Industry Association, Russia
6:10-6:15	Opening Speech	Miao XU	General Manager Assistant, China State Shipbuilding Corporation Limited, China
6:15-6:20	Opening Speech	Dacheng GUO	Chairman, China Association of the National Shipbuilding Industry, China

6:20-6:50	Keynote Speech: Safety Technology and Solutions to Application of Cell Power on Ships in China	Xiaofeng LUO	Director of Wuhan Rules & Research Institute, China Classification Society, China
6:50-7:30	Meeting for the Establishment of the International Smart and Autonomous Navigation Ships Joint Lab	Alexander Klimov	Rector, Russian University of Transport
		Guihua XIA	Vice President, Harbin Engineering University
		TBD	Norwegian University of Science and Technology
		Zuyuan LIU	Vice President, Wuhan University of Technology

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Time	Topic	Speaker	Organization
<i>November 16 (GMT, London Time)</i>			
9:00-9:20	Welcome Speeches	Alexander Klimov	Rector of Russian University of Transport Chairman of ICNAME
		Guihua XIA	Director of the Maritime Safety Division of the International Maritime Organization
		Heike Deggim	
9:20-9:50	Development of Research on Smart and Autonomous Ship Technology in China	Xinping YAN	Academician, the Chinese Academy of Engineering; Professor, Wuhan University of Technology
9:50-10:20	Recent Development on MASS in Japan	Etsuro Shimizu	Tokyo University of Marine Science and Technology
10:20-10:50	Digitalizing Maritime Operations	Janne Lahtinen	Satakunta University of Applied Sciences, Finland
10:50-11:00	Coffee Break		
11:00-11:30	KASS Project and Validation Plan for an Autonomous Ship	Jin Kim	Korea Research Institute of Ships and Ocean Engineering (KRISO)
11:30-12:00	Smart and Autonomous Vessel Development in Norway	Nesvåg, Odd Magne	Head of Section for Control Systems in Classification, DNV GL, Norway

12:00-12:30	a-Navigation Development in Russia	Alexander Pinskiy	Russian University of Transport, Chairman of Marinet Industry Association
12:30-12:40	Closing Remarks		
November 17 (GMT, London Time)			
6:00-6:30	Virtual-real Interaction Testing of Intelligent Ships	Jialun LIU	Associate Professor, Wuhan University of Technology, China
6:30-7:00	The Research Work on the Intelligent Ship	Qidan ZHU	Professor, Harbin Engineering University, China
7:00-7:30	BV Rules Development for Smart Ship	Laurent Verney	Bureau Veritas, France
7:30-8:00	Remote Support, Distributed Maritime Capabilities	Hans Petter Hildre	Professor, Norwegian University of Science and Technology
8:00-8:10	Coffe Break		
8:10-8:40	Introduction of Research on Autonomous Ships in NMRI	Ryohei Sawada	National Institute of Maritime, Port and Aviation Technology, Japan
8:40-9:10	Autonomous Navigation in Marine Port Waters	Dmitry Studenikin	Vice-Rector, Admiral Ushakov Maritime State University, Russia
9:10-9:40	Towards the safe autonomous navigation	Bolbot Victor	Aalto University, Finland
9:40-9:50	Closing Remarks		

High-level Forum on Green Ship Technology

Time	Topic	Speaker	Organization
November 16 (GMT, London Time)			
8:00-8:30	Progress and Challenges in High Efficiency and Clean Combustion of Marine Engines Fueled with Ammonia	Zunhua ZHANG	Professor, Wuhan University of Technology, China
8:30-9:00	On the Safe Navigation of Energy-Efficient Ships in Adverse Conditions	Shukui LIU	Nanyang Technological University, Singapore
9:00-9:30	An Introduction on Green Ship Technologies towards IMO Upcoming Regulations	Jie ZHANG	Associate Professor, Harbin Engineering University, China

9:30-10:00	Tendencies in the Evolution of Green Shipping	Carlos Guedes Soares	Professor, University of Lisbon, Portugal
10:00-10:10	Closing Remarks		
	<i>November 17 (GMT, London Time)</i>		
6:00-6:30	Technology of Ammonia Fuel Engine of Zero-Carbon Marine Power	Long LIU	Professor, Harbin Engineering University, China
6:30-7:00	Zero-Emission Fuel Application of Autonomous Vessel Routing in Northern Sea Route(between Russia and South Asia)	Sewon Kim	Assistant Professor, Sejong University, Korea
7:00-7:30	The Stable, Clean and High-Efficiency Burning and Pollution Emission Biological Effect of Carbon Neutral Methyl Alcohol Fuel	Haifeng LIU	Professor, Tianjin University, China
7:30-7:40	Coffe Break		
7:40-8:10	Maritime Forecast to 2050: An Energy Transition Outlook for Shipping	Tore Longva	Principal Consultant, DNV GL, Norway
8:10-8:40	BV Rules Development for Green ship	Blandine Vicard	Director of Environment Department, Bureau Veritas
8:40-9:10	Discussion and Exchange		