

ICMASS2020 PROGRAM

Date	Time (GMT+9)	Session Name	Paper	Main Author	Session Name	Paper	Main Author	
2020-11-11	15:00 - 15:20		Opening ceremony 1. Opening (Kwangil Lee, Organizer of ICMass2020) 2. Welcome - Weon-kyoung Jo (Deputy Mayor, Ulsan Metropolitan City for Economic Affairs) - Chang Yeong Kim (President, National IT Industry Promotion Agency of Korea) - H. E. Joanne Doornewaard (Ambassador, Embassy of Netherlands in Korea) - Frode Solberg (Ambassador, Embassy of Norway in Korea) - Ørnulf Jan Rødseth (Secretary, INAS) - Jarok Koo (President, Ulsan ICT Promotion Agency)					
	15:20 - 15:50		Keynote 1 : IMO Activities and strategy for MASS, Tunfors Henrik (Swedish Transport Agency, IMO MASS RSE WG, Sweden)					
	15:50 - 16:15		Break					
	16:15 - 17:00		Pannel Discussion : Automated Ships or remote control? Moderator: Ørnulf Jan Rødseth (SINTEF Ocean, Norway), Panelist : Svein David Medhaug(NMA), Jason McFarlane (Kongsberg), Thomas Porathe(NTNU), Yunseok Lee(KMOU), J. Van den Breck (HR), Mathew Melvin (Warsilla)					
	17:00 - 17:30		Break					
	17:30 - 17:55	Autonomous Navigation	Session Chair : JooHyun Woo (KMOU, Korea)		Design & Architecture	Session Chair : Svein Peter Berge (SINTEF Ocean, Norway)		
			"PREPaRE SHIPS"for automated ship passages by today's decision support tools by exchanging of future positions	Johannes Hüfmeier (RISE Univ, Sweden)		A taxonomy for autonomy in industrial autonomous mobile robots including autonomous merchant ships	Ørnulf Jan RØDSETH (SINTEF Ocean, Norway)	
			Technology development strategy for eco-friendly autonomous ships	Hojin Lee (KSOE, Korea)		A framework for description of autonomous ship systems and operations	Lars Andreas Lien Wenersberg (SINTEF Ocean, Norway)	
			Autonomous Navigation in Offshore Racing at 40kn+	Dipl. Ing. Raphael Biancale (BSB AI, Austria)		Autonomous Vessels As Ships – The Definition Conundrum	Mayank Suri (Jindal Global Law School, India)	
			Adaptive Neural Tracking Control for an Autonomous Azimuthing Stern Drive (ASD) Tug	Bernard Voon Ee HOW (TCOMS, Singapore)		Develop and Evaluate of Intelligent Autonomous-Ship Framework	Kyeong Deok Moon (ETRI, Korea)	
			Maritime environment recognition technology for MASS	Hanguen Kim (Seadronix, Korea)		Ocean Farm Plant Container Transport Autonomous Boat Concept Design Project	Jonghyun Park (KMOU, Korea)	
	17:55 - 18:05		Break					
	18:05 - 18:30	Autonomous Operation #1	Chair : Hans-Christoph Burmeister (Frounhofer CML, Germany)		Communication & System	Session Chair : Jungsik Jeong (IMMU, Korea)		
			Human Factors, autonomous ships and constrained coastal navigation	Thomas Porathe (NTNU, Norway)		Potential benefits of 5G for autonomous ships	Stig Petersen (SINTEF Digital, Norway)	
			Operational benefits of autonomous technologies	Jukka Merenluoto (OneSea, Finland)		LTE massive MIMO (Pre-5G) test with an updated boat user terminal solution for land-to-boat scenarios in Oslo fjord	KUN YANG (Super Radio AS, Norway)	
Competency requirements for safe operations of Autonomous Vessels			Tom Eystoe (Masterly, Norway)	5G -based shipbuilding and marine smart communication platform and convergence service		WooSung JUNG (ETRI, Korea)		
Journey towards Autonompous shipping			Mathew Melvin (Warsilla)	Emergency ship identification and distribution system proposal for radio disturbance		Seongmi Mun (Seanus, Korea)		
Meaningful Human Control in Autonomous Shipping - An Overview			J. (Hans) van den Broek (University of Applied Sciences Rotterdam, Netherlands)	Prediction of vessel propulsion power from machine learning models based on synchronized AIS-, ship performance measurements and ECMWF weather data		Qin Liang (DNV-GL, Norway)		
18:30 - 18:40		Break						
18:40 - 19:05	Regulation & Standard	Session Chair : Hanseon Park (KMI, Korea)		Cyber Risk & Security	Session Chair : Ann-Sofie Pauwelyn (De Vlaamse Waterweg nv, Belgium)			
		Considerations on the common regulatory issues among the IMO instruments for realization of Maritime Autonomous Surface Ships	Shiokari, Megumi (MPAT, Japan)		The Need for a Public Key Infrastructure for Automated and Autonomous ships	Ørnulf Jan RØDSETH (SINTEF Ocean, Norway)		
		Study on the potential gaps and themes identified by IMO Regulatory Scoping Exercise(RSE) for the use of Maritime Autonomous Surface Ships(MASS)	Mincheol, Jo (KOMSA, Korea)		Impact of cyber risk on the safety of the MilliAmpere2 Autonomous Passenger Ship	Ahmed Amro (NTNU, Norway)		
		It is not all about the COLREGS: a case-based risk study for autonomous coastal ferries.	Dag Rutledal (NTNU, Norway)		Risk of Electronics Failure on Digitalization of Shipping Industry	Kim, Dong Hyun (KOMOS, Korea)		
		Research on using COLREGS by Navigation Decision Systems for Collision Avoidance	Chengbo Wang (Dallan Maritime Univ., China)		Towards the leading safety indicators in Maritime Autonomous Surface Ships operations	Krzysztof Wróbel (Gdynia Maritime University, Poland)		
		Introduction to SMART-Navigation in Korea	Hanjin Lee (SMART-Navigation, Korea)					

	15:00 – 15:30	Keynote 2 : Korea National R&D Program for an Autonomous Surface Ship and its Validation with Sea Test Bed, Jin Kim (KASS, Korea) Keynote 3 : ULSAN - ICT Roadmap with Smart Ship Project , Hyoncheol Park (UIPA, Korea)					
	15:30 – 15:45	Break					
	15:45 – 16:30	Pannel Discussion : New busines model Moderator : Kwangil Lee (KMOU, Korea), Panelist : Antoon Van Collie(Blue Line Logistics), Tom Eystoe (Masterly), Hamen van Dorsser(Port of Rotterdam), Ando Hideyuki(MTI), KyungSoo Ahn (Hyundai Global Service), Capt M Segar (Maritime and Port Authority of Singapore)					
	16:30 – 17:00	Break					
2020-11-12	17:00 – 17:25	Remote Control & Operation	Session Chair : James Fanshawe (UK Marine Alliance, UK)		Collision Avoidance	Session Chair : Sewon Kim (Sejong Univ, Korea)	
			Integrating accountability in the systems design of autonomous and remote-controlled operations	Bård Myhre (SINTEF Digital, Norway)		Process Map for Collision Avoidance based on Information Exchange for Autonomous Navigation of Vessel	Ho Namgung (MMU, Korea)
			Comparison of the Quality Requirements of Navigation Officers and Developers for the Remote Navigation System	Yun-Sok Lee Prof (KMOU, Korea)		A hybrid kinematic controller for resilient obstacle avoidance of autonomous ships	Mathias Marley (NTNU, Norway)
			Seafar Remote Shipmanagement: Shore Supported Shipping	Louis (SeaFar, Belgium)		Lipschitz Constrained Neural Networks for Robust Object Detection at Sea	Jonathan Becktor(Univ. of Denmark, Denmark)
			VTS and MASS – Responsibilities and consequences	Pia Meling (Masterly, Norway)		Visual surveillance and monitoring with Sensor fusion for Autonomous Ship	HyeonCheol Shin (KMOU, Korea)
			Maritime Autonomous Surface Ships and the future on Vessel Traffic Service. A port perspective.	Harmen van Dorsser (Port of Rotterdam, Netherlands)		A study on construction of ML data set for safe harbour steaming and berthing.	Heeyong Lee (GMT, Korea)
	17:25 – 17:35	Break					
	17:35 – 18:00	Autonomous Operation #2	Session Chair : Lars Andreas Wennersberg (SINTEF Ocean, Norway)		Digital Twin & Data Modeling	Session Chair : Stig Petersen (SINTEF Digital, Norway)	
			Additional Test Manoeuvres for Autonomous Inland Vessels	Gerben Peeters (KU Leuven, Belgium)		Standardized Navigational Data for Situational Awareness during Simultaneous Maritime Operations	Marianne Hagaseth(SINTEF Ocean, Norway)
			Lessons Learned Automating 10 Vessels Over 10 Years	Mohamed Saad Ibn Seddik (bikSAIL, USA)		Voyage performance evaluation based on a digital twin model	Quan Zhou(Seastel Marine System, Canada)
			Towards Autonomus Superyacht Navigation	Chris Balls (Cayman Islands Ship Registry, Cayman Islands)		From Sensors to MASS: Digital Representation of the Perceived Environment enabling Ship Navigation	Hans-Christoph Burmeister (Frounhofer CML, Germany)
			Technology Development and Navigation Verification of Autonomous Ship on the Love River	S K Chou (SOIC, Taiwan)		S-100 Demonstrator and information availability	Svein Skjaeveland (Electronic Chart Center, Norway)
Towards for the smart port - Port of Ulsan Perspective			Sejin Choi (UPA, Korea)	Port and Ship Digital Twin Application in Maritime Supply Chain		Sewon Kim (Sejong Univ, Korea)	
Machine Learning based automatic berthing system of KCS			Soyeon BAEK (KMOU, Korea)	Research on Ontology-based Situation Understanding and Decision-making Approach for Maritime Autonomous Surface Ships		AN Lan-xuan (Dalian Maritime Univ, China)	
18:00 – 18:10	Break						
18:10 – 18:35	Smart Shipping	Session Chair : Jukka Merenluoto (OneSea, Finland)		Simulation & Analysis	Session Chair : Johannes Hüffmeier (RISE Univ, Sweden)		
		Smart Shipping on the inland waterways	Ann-Sofie Pauwelyn (De Vlaamse Waterweg nv, Belgium)		Towards an Investigation of a MASS-assisted Anti-Grounding Service through simulated nautical Scenarios in a Ship Handling Simulator	Vincent E. Schneider Mr(Frounhofer CML, Germany)	
		NYK approach for autonomous ship – current status and way forward	Satoru Kuwahara Mr (MTI, Japan)		Autoferry Gemini: a real-time simulation platform for EMR sensors on autonomous ships	Kjetil Vasstein (NTNU, Norway)	
		AEGIS: Advanced, efficient and green intermodal systems	Ørnulf Jan Rødseth (SINTEF Ocean, Norway)		Global linked simulations - a key to the evaluation of future transport concepts and navigation tools	Robert Grundmann (Frounhofer CML, Germany)	
		AUTOSHIP and the Bigger Picture of Autonomous Shipping	Jason McFarlane (Kongsberg, Norway)		Analysis of Manoeuvring Characteristics through Sea Trials and Simulations	Seung-Gi Gug (KMOU, Korea)	
		Reaping the benefits of autonomy for integrated Maritime logistics	James Fanshawe (UK Marine Alliance, UK)		Evaluation of Navigation System Performance Requirements for Safe Autonomous Navigation.	Svein P. Berge (SINTEF Ocean, Korea)	
18:35 – 19:00	Break						
	19:00 – 19:20	Closing 1. Summary of ICMASS 2020 (Prof. Kwangil Lee) 2. ICMASS 2021 Introduction (MPA, Singapore) 3. Closing remarks (Prof. Kwangil Lee)					