

Title	Authors	Type
Design of an Autonomous Underwater Maintenance Dredger	Rolph Hijdra	Full paper
Biodosimetric Studies of Ballast Water Treatment	Li Hongying, H.Osman, C.W.KAng, T.Ba	Full paper
Development of an Automatic Analysis Methodology by Integration of Digital HullDesign, Model,Processing, and Evaluation	Xiuqing Xing, ChiWanLim, Chang Wei Kang, Jing Lou, Joo Hock Ang	Full paper
LTE massive MIMO(Pre-5G) test for land-to-land-boat scenarios in Oslo fjord	Kun Yang, Ning Zhou, Terje Røste, Heiki Neskvern, John Eriksen	Full paper
Collision Risk Inference Model based on Artificial Neural Network using Near-collision for Collision Avoidance of Autonomous Ship	Ho Namgung, Jung Sik Jeong,Joo-sung Kim,Kwang-II Kim	Full paper
Considerations on the regulatory issues for realization of Maritime Autonomous Surface ships	Megumi Shiokari, Susumi Ota	Full paper
From Manoeuvre Assistance to Maonoeuvre Automation	Agnes U.Schubert, Sandro Fisher, Sebastian Klaes, Michael Gluch, Michael Baldauf, Robert Damerius, Martin Kurowski, Torsten Jeinsch	Full paper
On estimating the hydrodynamic coefficients and environmental loads for a free-running vessel in waves	Lucas J.Yiew, Yuting Jin,Allan R.Magee	Full paper
The automated inland vessel	Edwin Verbergh, Edwin van Hassel	Full paper
Dynamic " Standing orders" for Autonomous Navigation System by means of Machine Learning	Tina Scheodweiler,Hans-Christoph Burmeister,Søren Hubner,Carlos Jahn	Full paper
On Risk of Digital Twin Implementation in Marine Industry: Learning from Aviation Industry	Michaela Ibrion,Nicola Paltrinieri,Amir R.Nejad	Full paper
MASS-Potential Applications in Superyacht	Chris Balls	Full paper
A Review of the current Collision Regulations to accommodate Multiple Ship Situations and MASS	Captain Frederick James Francis	Full paper
Experiences, main risks and mitigation of risks in autonomous transport systems	S.O.Johnsen,G.Jenssen,T.Moen,Å.S.Hoem	Full paper
NYK's Approach for Autonomous Naviagation-Structure of Action Planning System and Demonstration Experiments	Koji Kutsuna,Hideyuki Ando,Takuya Nakashima,Satoru Kuwahara,Shunya Nakamura	Full paper
Is Methanol a Future Marine Fuel For Shipping	Ming Liu,Chen Li,Eng Kiong Koh,Zhiqian Ang,Jasmine Siu Lee Lam	Full paper
Dynamic manoeuvres of KCS in regular waves with URANS computations	Yutinh Jin,Lucas J.Yiew,Yingying Zheng,Allan R.Magee	Full paper
Actuation system design and control for a scale model unmanned inland cargo vessel	Gerben Peeters,Rene Boonen,Muhammad Raheel Arzal,Ali Bin Junaid,Marcus Kotze,Maarten Vanierschot,Peter Slaets	Full paper
A Business Process Framework and Operations Map for Maritime Autonomous and Unmanned Shipping: MAUSOM	H.J.M Bastiaansen,E.Lazovik,E.den Breejen,J.van den Broek	Full paper
Urban mobility at sea and waterways in Norway	Jon H. Ulvensøen, Marius Stian Tannum	Full paper
Optimal Maneuvring and Control of Cooperative Vessels within Harbors	J.J.Gehrt,R.Zweigel,S.Roy,C.Buskens,M.Kurowski,T.Jeinsch,A.Sc hubert,M.Gluch,O.Simanski,E.Pairet-Garcia,W.bruhn,O.Struss,S.Kuklau and D.Abel	Full paper
The Autosea project: Developing closed-loop target tracking and collision avoidance systems	D.Kwame Minde Kufoalor, Bjrøn-Olav Holtung,Eik Wilthil,Ø. Kaarstad Helgesen,I.Berge Hagen, M.Brevik, T.A. Johansen	Full paper
Enabling Technologies for Maritime Autonomous Surface Ships	Kevin Heffner, Ørnulf Rødseth	Full paper
A taxonomy for autonomous vehicles for different transportation modes	Marialena Vagia, Ørnulf Rødseth	Full paper
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A Testbed for Realtime Maritime Cyber-Physical Systems-of-systems	Nick Ruessmeier;Axel Hahn	Full paper
Driving behavioural decision-making of MASS based on deep reinforcement learning and artificial potential field	Wang Cheng-bo,Zhang Xin-yu,Zhang Jia-wei,Ding Zhi-guo,AN Lan-Xuan	Full paper
A responsibility-centered approach to defining degrees of automation	Bård Myhre, Are Hellandsvik og Stig Petersen	Full paper
Approach to Estimate the Ship Center and Gravity based on Accelerations and Angular Velocities without Ship parameters	Sovanna Chhoeung,Axel Hahn, Steven C.Mallam	Full paper
Cost-Emission Relations for Maritime Logistics Support in Aquaculture	Hans Tobias Slette,B.E. Asbjørnslett,Kjetil Fagerholt	Full paper

AJA method and AJA Canvas as a Design Tool for marine Autonomous Operations with a test case scenario: the detection, inspection and tracking of a waste water plume.	Maralena Vagia, Esten Ingar Grønli, Aksel Andreas Transeth, Magnus Bjerkgeng, Fredrik Bakkevig Haugli and Gorm Johansen	Full paper
Use of Proximity Zones for Vessel Operation in Inland Waterways	Marcus Kotze, Ali Bin Junaid, Mohammed Raheel Afzal, Gerben Peeters, Peter Slaets	Full paper
HUMANE - a human perspective on autonomous shipping	M. Lutzhoft, A. Pikor, J.V. Earthy, E.S. Peterson	Full paper
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Study on Automatic Collision Avoidance System and Method for Evaluating Collision Avoidance Manoeuvring Results	Shinya Nakamura, Satoru Kuwahara, Koji Kutsuna, Takuya Nakashima, Hideyuki Ando	Full paper
Integrated Maritime Autonomous Transport Systems (IMAT)	Kay Fjørtoft, Tony Haugen	Full paper
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Prediction of vessel propulsion power using machine learning on AIS data, ship performance measurements and weather data	Hans Anton Tvette, Henrik Brinks, Qin Liang	Full paper
The conceptual design of digital services for human vibration and motion comfort on ships	Anriette Bekker, Stein Ove Erikstad, Karel Kruger	Full paper
On Engineering Education for Multidisciplinary, Digitalized Marine Engineering: Case Study of Integrated Team & Research Based Learning	Amir R. Nejad, Yuriko Aoyanagi, Michaela Ibrion	Full paper
Using the BIMCO Shipping KPI Database to Identify costs and benefits of e-navigation solutions	Kay Fjørtoft, Dag Atle Nesheim	Full paper
Simplifying interactions between autonomous and conventional ships with e-navigation	Thomas Porathe, Ørnulf Jan Rødseth	Full paper
Autonomous marine vehicles in sea surveillance as one of the COMPASS2020 project concerns	Sanja Bauk, Nexhat Kapidani, Žarko Lukšić, Filipe Rodrigues, Luís Sousa	Full paper
Feasibility Study of Automated Process of Ship Navigation and A Concept of Action Planning System (APS)	Koji Kutsuna, Satoru Kuwahara, Hideyuki Ando, Shinya Nakamura, Takuya Nakashima	Full paper
Enhanced test framework for safety assurance of autonomous navigation	Andreas Brandsæter, Knut Erik Knutsen, Vegard Kamsvåg	Presentation only
Strategy of the Ministry of Transport, Infrastructure and Watermanagement for Public private organization og Smart Shipping in the Netherlands	Patrick Potgraven	Presentation only
Simulator-based Verification og Autonomous Navigation Systems	Tom Arne Pedersen, Jon Arne Glomsrud	Presentation only
Seaworthiness Through Intelligent Trajectory Control	Guy A. Meadows, Robert Shuchman, Joseph Burns	Presentation only
Development of Smart Digital Twin for Maritime Industry via O2 DES Framework and High-Level Architecture (HLA)	Haobin Li, Hermann Chong Seng Lim, Xiaoming Yang	Presentation only
Maneuvering Motion Simulation to Support Berthing Operation of Small Crafts	Eiko Saito, Masayoshi Numano, Keiko Miyacaki	Presentation only
One Sea-vision and roadmap for autonomous maritime transport system	Jukka Merenluoto	Presentation only
Enhanced MASS Situational Awareness using Virtual Navigation Aids	R. Glenn Wright	Presentation only
Maritime digitalization, opportunities for the maritime e-Nav industry when moving to Intelligent Navigation	Bjørn Åge Hjøllø	Presentation only
Ensuring High-Throughput Container Operations in Fully Automated Storage Yard of a Next Generation Transshipment Port	Zhaomeng Zhu and NGP Project Team	Presentation only
Optimal vessel speed and weather effects	Roar Adland, Pierre Cariou, Francois-Charles Wolff	Presentation only
Autonomous maritime navigation: state of the art and futures perspectives	Ywen Gu, Stein W. Wallace, Mario Guajardo, Julio Cesar Goetz	Presentation only
Simulation-based Digital Twin for Next Generation Ports	Chenhao Zhou, LooHay Lee	Presentation only
Small MASS assisting manned merchant vessels: The anti-grounding case	Vincent Focke, Cosmin Delea, Johannes Oeffner, Hans-Christoph Burmeister, Carlos Jahn	Poster
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Operational data within the S-100 framework: challenges for the common maritime data structure	Yongqing Zhu, Renuga Kanagavelu, Ricardo Shirota Filho, Theint Theint Aye, Rick Siow Mong Goh	Presentation only
Risk-based appraisal of MASS performance-Considerations, challenges and possible approaches	Kie Hian Chua; Dimitrios Konovessis	Presentation only
Technology levels for maritime traffic coordination: towards the internet of intelligent ships	Mikael Wahlstrom, Eetu Heikkila, Gøran Granholm	Presentation only
User-centered design of remote-pilotage: Work styles to be considered	Tuisku Salonen, Mikael Wahlstrøm, Hannu Karvonen	Presentation only

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Robust Guidance and Predictive Control for Marine Surface Vessels in Presence of Parameter Uncertainties and Disturbances	Max Lutz, Thomas Meurer	Presentation only
Introduction and assessment of basic design concepts for autonomous ships in maritime transport systems for short sea shipping	Victoria Gribkovskaia, Elizabeth Lindsatd, Håvard Nordahl, Henning BORGÉN	Presentation only
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An Efficient Computational Framework for Big Maritime Traffic Data Preprocessing	Xiuju Fu, Haiyan Xu, Vasundhara Jayaraman, Nasri Bin Oyhma, Liye Zhang, Zhe Xiao, Rick Goh	Presentation only
Commercial and operational aspects of autonomous ships	Tom Eystø	Presentation only
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