

Schedule of the 1st European Workshop on Maritime Systems Resilience and Security (MARESEC 2021)

Session 0 - Welcome

Time 09:00 – 09:10
Room MARESEC main
Session Chair Frank Sill Torres

Session A1 - Situation Awareness

Time 09:10 – 10:30
Room Ocean
Session Chair Jannis Stoppe

ID	Start	Title	Authors
A1-1	09:10	EO-ALERT: A Satellite Architecture for Autonomous Maritime Monitoring in Almost-Real-Time	Murray Kerr, Stefania Cornara, Stefania Tonetti, Stefan Wiehle, Otto Koudelka, Enrico Magli, Riccardo Freddi, Silvia Fraile and Cecilia Marcos
A1-2	09:30	Situational Awareness for Maritime Surveillance	Irene López García, Alberto Gallego Rapado, Manuel Plaza Jiménez and Ignacio Isabel González
A1-3	09:50	MARLIN: An IoT Sensor Network for Improving Maritime Situational Awareness	Tino Flenker and Jannis Stoppe
A1-4	10:10	Towards optical maritime surveillance with high-altitude platforms	Jorg Brauchle, Ralf Berger, Tina Hiebert and Daniel Hein

Session B1 - Resilience

Time 09:10 – 10:30
Room Port
Session Chair Frank Sill Torres

ID	Start	Title	Authors
B1-1	09:10	Cyber-Physical Security and Resilience for Offshore Wind Farms	Jennifer Mielniczek, Jennifer Mielniczek, Corinna Köpke, Kushal Srivastava, Egon Schröder
B1-2	09:30	Cyber-resilient Navigation in Coastal Waters	Roberto Galeazzi, Mogens Blanke, Dimitrios Dagdilelis, Morten C. Nissov, Rasmus H. Andersen and Josef Oehmen
B1-3	09:50	Design for Resilience: The Role of Integrated Safety and Security Assessment	Josef Oehmen, Nelson Carreras Guzman and Roberto Galeazzi
B1-4	10:10	Rebound Features of Offshore Wind Farm with Operation and Maintenance Service	Bartosz Skobiej, Arto Niemi, Nikolai Kulev and Frank Sill Torres

Session A2 - Autonomous systems

Time 10:50 – 12:00

Room Ocean

Session Chair David Heuskin

ID	Start	Title	Authors
A2-1	10:50	A Feasibility Analysis of Tether Localisation for Mobile Robots	Yasin Alhamwy, Simon Watson, Joaquin Carrasco, Glen Cooper and Kurt Geihs
A2-2	11:10	An Energy Consumption Model for Autonomous Underwater Vehicles in OMNeT++	Helge Parzyjegla, Robert Hamann and Peter Danielis
A2-3	11:30	ESANAV: Enhanced Surrounding Awareness and Navigation for Autonomous Vessels	Michael Wilby, Patrick Talon, Juan Ignacio Bravo Pérez-Villar and Paulo Rosa
A2-S	11:50	Robotic Infrared Vision: Enabling operation in fog and low-light environments	Leonard Günzel

Session B2 - ELSA

Time 10:50 – 12:00

Room Port

Session Chair Carl Wrede

ID	Start	Title	Authors
B2-1	10:50	Enhanced Transparency: Improving Maritime Cyber Governance	Rory Hopcraft, Kemedi Moara-Nkwe, Kimberly Tam and Kevin Jones
B2-2	11:10	Resilience, Acceptability and the Postcolonial Moment – Towards a Culture-Sensitive Approach to Security Research in Maritime Contexts	Bruno Arich-Gerz and Nicola Wendt
B2-3	11:30	Marine environmental ethics: an ecocentric renaissance?	Colin von Negenborn
B2-S	11:50	Responsible Technology Transfer: Market Introduction of Passive Scanning Systems (COSMICS)	Verena Nickel

Session A3 - Information Fusion/Extraction 1

Time 13:00 – 14:00

Room Ocean

Session Chair Edgardo Solano Carrillo

ID	Start	Title	Authors
A3-1	13:00	Comparison of detectability of ship wake components between C- and X-Band Synthetic Aperture Radar (SAR)	Björn Tings, James Imber, Stefan Wiehle and Sven Jacobsen
A3-2	13:20	Deep Learning Based Oil Spill Detection Using Sentinel-1 SAR Data	Yi-Jie Yang and Suman Singha
A3-3	13:40	The COSMICS (Container Scanning by Muon-based Imaging using Cosmic rayS) project	Sarah Barnes, Maurice Stephan, Frank Sill Torres, Alexander Gabriel, Arto Niemi, Carl Wrede and Nicola Wendt

Session B3 - Sensors

Time 13:00 – 14:00

Room Port

Session Chair Sven Schröder

ID	Start	Title	Authors
B3-1	13:00	A Gated-Viewing instrument for maritime security and search and rescue applications	Enno Peters, Jendrik Schmidt, Susanne Wollgarten and Matthias Mischung
B3-2	13:20	Advanced acoustic imaging systems for underwater close-range volumetric navigation, object detection and identification	Michael Ehrhardt
B3-3	13:40	Monitoring offshore structures during project planning, installation and operation	Stefan Raimund

Session A4 - Cyber-Security 1

Time 14:20 – 15:20

Room Ocean

Session Chair Jannis Stoppe

ID	Start	Title	Authors
A4-1	14:20	Cyber Security Test Environment for Bridge Systems	Christian Hemminghaus, Mari Schmidt and Jan Bauer
A4-2	14:40	Where are my containers?	Marc Asendorf, Hasanur Jaman Seam, Christian Maeder, Salva Daneshgadeh Çakmakçı and Bernhard J. Berger
A4-3	15:00	From an Informed Maritime Community to Cyber Resilient Ports	Salva Daneshgadeh Akmak, Jil Tietjen, Bernhard J. Berger and Christian Maeder

Session B4 - Communication

Time 14:20 – 15:20

Room Port

Session Chair Enno Peters

ID	Start	Title	Authors
B4-1	14:20	Security challenges in multi-modal communication	Karin Bernsmed, Per Håkon Meland, Ravi Borgaonkar, Guillaume Bour and Egil Wille
B4-2	14:40	Redesign of communication systems at the German maritime SAR service by using TETRA technology	Niklas Frings, Sylvia Bach and Frank Fiedrich
B4-3	15:00	Modeling Underwater Communication for Autonomous Underwater Vehicles in OMNeT++	Peter Danielis, Mostafa Assem Mohamed Ali and Helge Parzyjeglá

Session A5 - Cyber-Security 2

Time 15:40 – 16:40

Room Ocean

Session Chair Malte Struck

ID	Start	Title	Authors
A5-1	15:40	Threat Modeling Knowledge for the Maritime Community	Bernhard J. Berger, Christian Maeder and Salva Daneshgadeh Çakmakçı
A5-2	16:00	A Review of Maritime Cyber Security Regulations	Aljoscha Windhorst and Jannis Stoppe
A5-3	16:20	IT Security Monitoring at a Port Terminal Operator	Jens Wettlaufer, Matthias Marx, Jens Lindemann and Hannes Federrath

Session B5 - Information Fusion/Extraction 2

Time 15:40 – 16:50

Room Port

Session Chair Edgardo Solano Carrillo

ID	Start	Title	Authors
B5-1	15:40	A Framework for Extended Multisensor Multitarget Tracking with Vessel Size Categorization	Aman Kumar and Jaya Shradha Fowdur
B5-2	16:00	Maritime Traffic Representation and Association with Graph and Machine Learning Techniques	Jaya Shradha Fowdur, Sandeep Kumar Singh, Juan C. Machuca and Daniel Arias Medina
B5-3	16:20	Enhancing the underwater vision to increase the safety of heavy underwater works by Intersensory learning – a use case in the European DeeperSense research project	Christian Illing and Tom Runge
B5-S	16:40	Single Page Applications – Modular situational awareness tools for data visualization	Tobias Höbbel

Session E - Closing

Time 16:50 – 17:00

Room MARESEC main

Session Chair Frank Sill Torres