

Recorded: Bronkhorst (BW Offshore), De Winter, Velner (C-Job), Kana (TU Delft)
Enhancing Offshore Service Vessel Concept Design by Involving Seakeeping

Tuesday, 21 June 2022

Session Chair: Abels

09:00h Rouhan (Bureau Veritas), Audoire (Dassault Systèmes), Messina (Damen)
A Modular Ship Design, Construction and Pre-Approval Approach

09:25h Perez (Siemens)
Smart Technologies for Improving Design Tools

09:50h Jabary, Sprenger (Univ. of Rostock), Kleinsorge, Baumfalk (MMG),
Mewes, Neugebauer, Jiang, El Moctar (Univ. Duisburg-Essen)
*Development of a Unified Data Model to Improve Ship Operational
Performance Analyses*

10:15h coffee break

Session Chair: Gordon

10:45h Terün, Kana (TU Delft), Dekker (Erasmus Univ. Rotterdam)
*Assessing Alternative Fuel Types for Ultra Large Container Vessels in Face
of Uncertainty*

11:10h Serani, Diez (CNR-INM)
*Super-Parametrizing CAD Models for Efficient Shape Optimization via
Parametric Model Embedding*

11:35h Harries, Thies, Hauschulz (Friendship Systems), Marzi, Gatchell (HSVA)
*Comparing Hydrodynamics of Original and Remodeled Hull Forms and
Appendages for Digital Twins*

12:00h Boogaard, Alessi, Mallol, Wunsch, Clero, Amadori, Hirsch (NUMECA-
Cadence), Zampieri (Neural Concept), Hildebrandt (NUMECA Ing.-büro)
*Accelerating Marine Propeller Development in Early Design Stages Using
Machine Learning*

12:25h Lunch Pici all'aglione, water, wine
Tiramisu tradizionale, caffè

Session Chair: Harries

13:30h Ichinose, Taniguchi (NMRI)
*A Hull Form Design System Suitable for Machine Learning that Integrates
Deformation, Data Structure, and Analysis*

13:55h De Nucci, Brahan (USCG Academy)
A Digital Twin for the Formulation of Ice Accretion on Vessels

14:20h Abels, Gorris (TUHH)
*Using a VR Bridge Simulator for Hybrid Coupling of Maneuvering and
Engine Simulations*

14:45h coffee break

Session Chair: De Nucci

15:40h Elzabalany, Settler, Rost, Lödging (TU Hamburg)
*Digitalization of Maritime Commissioning: A System for Automatic Content
Creation and Augmented Reality-based Commissioning Execution*

16:05h Burggräf, Adlon, Schäfer, Fulterer (RWTH Aachen University)
*Enabling Individual Part Production Planning in Shipbuilding:
Machine-Learning-Assisted Prediction of Production Times*

16:30h Announcement of Compit 2023
Compit award given to Thomas Hildebrandt

Wednesday, 22 June 2022

Session Chair: Blom

09:00h Gaspar (NTNU)
Open and Collaborative Ship Design

09:25h Floreat, Alonso de los Ríos, Prieto, Seppälä (CADMATIC)
Standalone Intelligent General Arrangement Tool for Holistic Basic Design

09:50h Mukti, Pawling, Andrews (UCL)
*Development of an Early-Stage Design Tool for Rapid of Distributed Ship
Service Systems Modelling in Paramarine – A Submarine Case Study*

10:15h coffee break

Session Chair: Diez

10:45h Blom (BLOM Maritime), Stonestreet (AVEVA)
Exploiting Digital Point Clouds in E3D Design

11:10h Zerbst, Lutz, Danetsky (Prostep)
Concept to Reality: Implementing a Digital Twin for Ship Production

11:35h Milat, Frank (Alveus)
*Quick Patch Design and Repair Planning using Software Tool for Carbon-
Reinforced Epoxy Type of Repairs for Ship Structures*

12:00h Matsuo, Fujimoto, Takezawa (National Maritime Research Institute)
*Application of Augmented Reality Technology to Manufacturing in
Shipbuilding*

12:25h Lunch Lasagna alla verdure
Panna cotta

Session Chair: Zerbst

- 13:30h Stensrud (DNV), Klausen (ScoutDI)
Towards Remote Inspections of Maritime Vessels Using Drones Instrumented with Computer Vision and Hyperspectral Imaging
- 13:55h Bibuli, Odetti, Caccia, Presicci, Ferretti, Aracri (CNR)
Networked Robots and IoT: Real Time Data Acquisition at its Finest
- 14:20h Tani, Ruscio, Bresciani, Costanzi, Caiti (Univ. Pisa)
Visual Inspection of Underwater Structures using an AUV: A Preliminary Simulative Evaluation
- 14:45h coffee break**
- Session Chair: Perez**
- 15:15h Son, Seppälä, Merikanto (NAPA), Aae, Astrup (DNV)
Utilization of OCX as Part of 3D Model Based Approval in Ship Design Process
- 15:40h Bitomsky, Danetzky, Zerbst (Prostep)
OCX Revisited: The New Data Exchange Standard?

Thursday, 23 June 2022

Session Chair: Seppälä

- 09:00h Mikkelsen, Stochholm (UCL)
Transparent Charge Plans for Battery Driven Ferries using an Intelligent Multi-Agent Software System
- 09:25h Stochholm, Mikkelsen (UCL)
Clustering Variations within Ferry Operational Patterns by Applying Unsupervised Machine Learning
- 09:50h Orlandi, Cappugi, Mari, Pasi, Ortolani (Lamma)
Meteorological Navigation by an ECDIS-Like System: Discussing the Algorithms and Demonstrating the Functionalities for Conventional Propulsion and for Sail-assisted Ships
- 10:15h Bellingmo, Murray, Jørgensen, Pobitzer, Berge (SINTEF), Rørhus (NES)
Evaluation of Ship Energy Models and Route Optimization

10:40h coffee break

Session Chair: Rødseth

- 11:10h Pinskiy (Russian University of Transport)
Autonomous Shipping in Real Conditions: The Practical Experience
- 11:35h Mancarella et al. (Aphia), Carlino et al. (Fincantieri NexTech)
A Novel Integrated Multi-System Approach for Situational Awareness in Maritime Environment

- 12:00h Daehlen, Sandvik, Jørgensen (SINTEF)

Model Predictive Approach for Realistic Operational Decisions in Sea Passage Simulation

- 12:25h Lunch** Maremmani Burro e salvia (~spinach ravioli), water, wine semifreddo al vin santo, caffè

Session Chair: Son

- 13:30h Genschorek, Holzki (TU Berlin)
Using Deep Reinforcement Learning for Energy Efficient Automated Berthing Manoeuvres in Inland Navigation
- 13:55h Hagaseth, Rødseth, Meland, Wille, Murray (SINTEF), Meling (Massterly)
Methodology for Approval of Autonomous Ship System CONOPS
- 14:20h Rødseth, Hagaseth (SINTEF)
Developments toward a Common Maritime ICT Architecture
- 14:45h Brug, Van der Waa, Maccatrozzo, Van den Broek (TNO)
Dynamic Task Allocation Algorithms within Intelligent Operator Support Concepts for Shore Control Centres

15:10h coffee break

Session Chair: Hildebrandt

- 15:40h Procee (NHL)
Human Machine Interface for Ships with Wind-Assisted Propulsion
- 16:05h Plowman, Bernhardt (DNV)
Experience from Two Years of Delivering Maritime Trainings Digitally in Covid-19 Times
- 16:30h Bertram (DNV)
Some light relief – A.I. for training development: A case study

19:00h Dinner

- Bruschette miste (fegatini, Pomodoro, Formaggio e tartufo)
flan di zucchini
Tagliata di manzo rucola e grana (strips of beef, rucola, parmesan shavings)
Cheese platter
Coffee, water, red/white wine IGT Cavalier tranquillo