

Tuesday, 6 October 2025

Session “Digital Twins” (Hydro)

Chair: Kay Dausendschön (Wärtsilä), Thomas Hildebrandt (Numeca)

- 08:40h Sven Albert, Thomas Hildebrandt (Numeca), Nathan Clero (Cadence)
America's Cup Level CFD Digital Twins
- 09:05h Thomas DeNucci, Hazel Mitrik (USCG Academy), Volker Bertram (DNV)
Ships in Sea-Ice: A Survey of Simulation Technology
- 09:30h Alex Shiri (RISE), Dmitry Ponkratov (Siemens), Qingshan Zhang (COSCO)
Self-Propulsion CFD Simulation of a Bulk Carrier Vessel with and without Pre-Swirl Stators
- 09:55h Emiliano Costa, Benedetto Di Paolo, Apostolos Krassas, Paolo Geremia (ENGYS), Corrado Groth, Marco Evangelos Biancolini (Univ Roma Tor Vergata), Marco Camponeschi, Ubaldo Cella, Emanuele Di Meo (RBF Morph)
Interactive Reduced Order Models for Ship Hull Design and Optimization Coupling an Open-Source CFD Tool with Advanced RBF Mesh Morphing

10:20h coffee break

Session “Next Generation AI - LLM”

Chair: Henrique Gaspar (NTNU), David Singer (Univ Michigan)

- 10:50h Kohei Matsuo (NMRI)
LLM-Based Extraction and Structuring of Design Information in Shipbuilding
- 11:15h Janica Bronson, Henrique Gaspar, Icaro Fonseca, Karolina Bierkowska (NTNU), Maryam Teimouribadeleh-dareh, Filip Ginter (UTU), Herbert Koelman (NHL Stenden)
A RAG-Based LLM Approach for Data Validation and Harmonization in Ship Design
- 11:40h Oxana Sachenkova (Linnaeus University)
Maritime AIoT: Natural Language Access to Sensor Data
- 12:05h Magnus Weidemann, Håvard Lien (VARD), Henrique Gaspar (NTNU)
AI-Assisted Misalignment Detection in Technical Ship Drawings

12:30h Lunch Pappardelle, zucchini flowers, chopped nuts, water, wine
Semifreddo al vin santo
caffè

Session “Next Generation AI - ML”

Chair: Alex Manohar (Univ Michigan), Tom de Nucci (UCG Academy)

- 13:50h Diego De León, Herbert Koelman (NHL Stenden)
Generative Algorithms in Early Ship Design: An Exploration of Hull Subdivision Generation
- 14:15h Jisang Ha, Henrique Gaspar (NTNU)
Two-Stage Conversion of GA Drawings into 3D Model Using Deep Learning
- 14:40h Christian Manohar, Alexander Manohar, Connor Arrigan, Christopher De Martinis, David Singer (Univ Michigan)
Investigating Minimum Sufficiency of Data and Feasibility of Peripheral Sensors for RUL Prediction for a Lab-Scale Ship Machinery Plant
- 15:05h Karolina Bierkowska, Henrique Gaspar (NTNU), Tomasz Hinz (Deltamarin)
Navigating AI in Naval Architecture: A Comparative Effectiveness Study of Machine Learning Models for Ship Stability

15:30h coffee break

Session “Robotics”

Chair: Robert Dane (Ocious), Helge Bjordal (Nagellid)

- 16:00h Marco Bibuli, Elena Ciappi, Elena Paifelman, Angelo Odetti (CNR)
From Conventional to Bio-Inspired Robotic Platforms
- 16:25h Kelli Vowels, Todd Kleperis (Tekmara)
Leveraging AI and Robotics for Profitable Marine Protected Area Enforcement
- 16:50h Robert Dane, Nick Rozenauers, Ian Milliner (Ocious)
Autonomy x 2: Sustainably Powered Smart Unmanned Surface Vessels
- 17:15h Sean Hickey, Joseph Serpa, Nickolas Vlahopoulos (Univ Michigan), Jonathon Smereka (US Army)
Enhancing Autonomous Underwater ROV Robustness Through AI-Driven Fault Discovery in Simulated Environments

17:40h Announcement COMPIT 2027

17:45h COMPIT Awards

Wednesday, 7 October 2025

Session “Smart Operation”

Chair: Ivana Melillo (GNV), Dmitry Ponkratov (Siemens)

- 08:40h Enes Bicer, Dennis Grebasch, Kay Dausendschön (Wärtsilä)
Vessel-based AIS
- 09:05h Nico Van Der Kolk (Albatros Digital)
2000 Digital Ships: A Scalable Method for Emissions Benchmarking and Independent Validation
- 09:30h Sergio Ribeiro e Silva, Miguel Bento Moreira (Univ Lisbon)
An Integrated Real-Time Ship Operation Optimisation System to Improve Energy Efficiency and Schedule Reliability of Shipping Navigation and Port Calls
- 09:55h Anisa Rizvanolli, Valeria Bartsch, Joshua Dibbern, Oliver Szal, Ole John (Fraunhofer CML)
Quantum Computing Optimisation for Maritime Logistics: Case Studies

10:20h coffee break

Session “Smart Vessels”

Chair: Kay Dausendschön (Wärtsilä), Thomas Hildebrandt (Numeca)

- 10:50h Nils Otten, Karsten Hochkirch (DNV)
Anti-Roll Apps for Container Ships
- 11:15h Lars Mikkelsen (UCL University College), Niels Haastrup (Fredericia College of Marine and Technical Engineering), Igor Kozin (SDU)
Barriers Retrofitting Ferries with Auto-Docking - A Case Study
- 11:40h Svein P. Berge, Pauline Bellingsmo (SINTEF)
Maritime AI for Trustworthy Decision-Making through Fundamental Research and Industry-Driven Applications
- 12:05h Erik Stensrud (DNV)
A 3D Digital Twin for Monitoring the Hull Condition and AI for Automating Detection of Defects

12:30h Lunch Risotto with seasonal vegetables, water, wine
Tiramisu
caffè

Session “Digital Twins”

Chair: Carsten Zerbst (PROSTEP), Dmitry Ponkratov (Siemens)

- 13:50h Helge Bjordal (Nagellid)
Digital Twin Combined with XR in Design, Training & Operation
- 14:15h Joanna Sieranski (Prostep)
Integrating Revit into Shipbuilding Design
- 14:40h Kohei Matsuo, Tomoyuki Taniguchi, Mizuki Morishita (NMRI),
Takayoshi Masui, Kazunori Aoki (NAPA)
Early-Stage Productivity Evaluation through Model-Based Shipbuilding: Connecting NAPA Models with Production Simulation
- 15:05h Ulrik Jorgensen, Svein P. Berge, Stian Skjong (SINTEF)
Seakeeping and Structural Simulation Using Open Simulation Platform with Live Data Integration

15:30h coffee break

Session “OCX”

Chair: Carsten Zerbst (PROSTEP), Ole Christian Astrup (DNV)

- 15:55h Ole Christian Astrup (DNV), Michael Polini (NN)
From Blueprints to Bytes: OCX is the Future for Model-based Class Approval
- 16:20h Florin-Ciprian Luli (Vard), Myeong-Jo Son (NAPA), Ole Christian Astrup (DNV)
3D Model-Based Approval in Reality
- 16:45h Juha Peippo (RMC), Jussi Puurula, Michael Pudd (RSD), Dmitry Ponkratov (Siemens)
Addressing Industry Concerns of Model-Based Approval
- 17:15h Myeong-Jo Son, Ludmila Seppälä, Francesco Oneto (NAPA), Bae-Jun Kwon (DNV)
The Extension on the Usage of OCX Beyond 3D Structural Approval

18:30h Dinner

bruschette miste (fegatini, pomodoro, formaggio e tartufo)
flan di zucchini
Tagliata di manzo rucola e grana (strips of beef, rucola, parmesan shavings)
Coffee Semifreddo
caffè
(all other drinks to be paid individually)