

22<sup>nd</sup> Conference on  
Computer Applications and Information Technology in the Maritime Industries  
**COMPIT'23**

Drübeck / Germany, 23-25 May 2023  
Dedicated to Prof. Horst Nowacki's 90<sup>th</sup> birthday

**Topics:** Artificial Intelligence / Big Data / CAX Techniques / Digital Twin / Simulations /  
Virtual & Augmented Reality / Robotics / Autonomous Technology  
In Design, Production and Operation of Maritime Systems

**Organiser:** Volker Bertram ([volker.bertram@dnv.com](mailto:volker.bertram@dnv.com) or [volker@vb-conferences.com](mailto:volker@vb-conferences.com))

**Advisory Committee:**

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Kohei Matsuo NMRI, Japan  
Rodrigo Perez Siemens, Spain  
Ludmila Seppälä Cadmatic, Finland  
Carsten Zerbst Prostep, Germany

**Venue:** The conference will be held in the Abbey Drübeck in Drübeck near Wernigerode



**Format:** Papers to the above topics are invited and will be selected by a committee.

**Deadlines:** anytime Optional "early warning" of intent to submit paper  
22.1.2023 First round of abstract selection (1/2 of available slots)  
**22.2.2023 Final round of abstract selection** (remaining 1/2 of slots)  
22.3.2022 Payment due for authors  
20.4.2022 Final papers due (50 € surcharge for late submission)

**Fees:** **650 € / 325 €** regular / PhD student – early registration (by 30.2.2023)  
**750 € / 375 €** regular / PhD student – late registration

Fees are subject to German VAT  
Fees include proceedings, lunches, coffee breaks and conference dinner

**Sponsors:** Tutech Innovation, BETA CAE, DNV Maritime Academy, Friendship Systems, Numeca, Prostep, SARC (further sponsors to be announced)

**Media partners:** Hansa, Royal Institution of Naval Architects

**Information:** [www.compit.info](http://www.compit.info)

**Contact:** [volker@vb-conferences.com](mailto:volker@vb-conferences.com)

### **Already accepted abstracts (only first author shown)**

Ole A. Alsos (NTNU) - *Lessons Learned from the Trial Operation MilliAmpere2, an Urban Autonomous Passenger Ferry*

Ole C. Astrup (DNV) – *Enhancing the 3D Approval Process using Functional Zones in Ship Design*

Pauline R. Bellingmo (SINTEF Ocean) - *Automated Mooring*

Daniel Brahan (USCG) - *Numerical Simulation of Sea Spray Events in Extreme Weather Conditions*

Thomas DeNucci (USCG) - *Improving Vessel Safety with a Digital Twin for Ice Accretion*

Samuel J. Edwards (NSWC-CD) – *Operator Guidance Informed by AI-Augmented Simulations*

Stein Ove Erikstad (NTNU) – *An Engineering Design Framework for Digital Service Applied to the Development of Arctic Navigation Decision Support Service*

Henrique Gaspar (NTNU) - *The Use of Chat GPT and similar AI in Marine Engineering: Challenges and Opportunities*

Eva Ioannou (BETA CAE Systems) - *Elevating Maritime Design to a Higher Level with Advanced Engineering Simulation*

Rosa Kannengießer (PROSTEP) - *Enable the Best Shipbuilding Toolset*

Woo-Sung Kil (Korean Register) - *Development of Existing Ship Familiarization Training System Based on Virtual Reality Using 360 Degree Imagery*

Henry Maathuis (NHL Stenden) - *Transfer Learning for Semantic Ship Defect Segmentation*

Lars L. Mikkelsen (UCL) – *Towards Transparent Operational Support for Battery-Driven Ferries using an Intelligent Multi-Agent Software System – A Case Study*

Navneet Saxena (IIT) – *ML-Based Resistance and Powering Prediction of the BSRA Trawler Series*

Erik Stensrud (DNV) – *Concept of a New Drone-Based Hull Survey Process*

### **Received abstracts to be evaluated by 22.2. (only first author shown)**

Osama Ahmed (Friendship Systems) - *Parametrics, Simulation, DoE and Machine Learning for the Design of a Planing Boat*

Marcus Bentin (HS Emden/Leer) - *Applying Neural Nets to Derive Empirical Design Formulas for Harbor Tugs*

Volker Bertram (DNV) – *3D Mapping of Underwater Hulls for Robotic Guidance*

Volker Bertram (DNV) – *CAVE Matrix Reloaded*

Andrea Coraddu (TU Delft) – *A Novel Decoupled Parametrization for AI-based Optimal Design of the Delft Systematic Yacht Hull Series*

Jon S. Dæhlen (Sintef Ocean) - *Open-Source Web Service for Fast and Reliable Handling of Weather Data for Use in Maritime Simulations*

Roberta Ferretti (CNR) – *Procedures for Maneuverability Characterization: From Ships to Marine Robots*

Henrique Gaspar (NTNU) - *Can European Shipyards be Smarter? A Proposal from the SEUS Project*

Thomas Hildebrandt (Numeca) – *Optimization of an Electric Catamaran*

Herbert Koelman (SARC) – *Tell Me More*

Emin Ç. Nakilcioğlu (Fraunhofer CML) - *Adaptation and Optimization of Automatic Speech Recognition (ASR) for the Maritime Domain in the Field of VHF Communication*

Tracy Plowman (DNV) – *Strategic Analysis for Maritime Training in the 21st Century*

Simon Stochholm (UCL) - *Towards Refining Related Ferry Operational Patterns with Unsupervised Learning - A Case Study*

Dejan Zagar (Univ Ljubljana) - *The Biometrical Measurements Concept: Increasing Maritime Safety, Including Biometrical Readings on Ship's Bridge and IoT*

Carsten Zerbst (PROSTEP) - *OCX on the Way from Research to Industry Practice*

**Further expected abstracts (more to be added at a later stage; only first author shown)**

Axel Hahn (DLR) – *New Developments in Systems Engineering for Future Maritime Mobility*

Jia-Lun Liu (WUT) – *Autonomous shipping project*

Stephan Procee (NHL) – *WASP propulsion assessment using better wind models*

Ludmila Seppälä (Cadmatic) – *Trends in smart ship design*