

## Monday, 25 March 2019

### Session: Zen & the Art of CA Ship Design – Chair: Son

- 08:30h Gaspar (NTNU)  
*A Perspective on Past, Present and Future of Computer-Aided Ship Design*
- 09:00h Sears, Radosavljevic, Van Os (Siemens)  
*3D Conceptual Design of Families of Ships*
- 09:25h Bole (Aveva)  
*A Strategy for Closely Integrating Parametric Generation and Interactive Manipulation in Hull Surface Design*
- 09:50h Seppälä (Cadmatic)  
*Drawingless Production in Digital Data-Driven Shipbuilding*
- 10:15h Coffee Break**
- Session: Optimizers do it better – Chair: Goodwin**
- 10:45h Antognoli, Ficini (Univ Roma Tre), Bibuli, Diez, Durante, et al. (CNR)  
*Hydrodynamic Design Procedure via Multi-Objective Sampling, Metamodeling, and Optimisation*
- 11:10h Sobey, Blanchard, Grudniewski, Savasta (Univ Southampton)  
*There's No Free Lunch: A Study of Genetic Algorithm Use in Maritime Applications*
- 11:35h Van Dijk, Boogaart (Nesvesbu), De Vos (TU Delft)  
*Automatic Selection of an Optimal Power Plant Configuration*
- 12:00h Harries (Friendship Systems), et al.  
*Approach to Holistic Ship Design: Methods and Examples*
- 12:30h Lunch - Irish Stew**  
Warm apple crumble with crème Anglaise
- Session: All Simulations Great and Small – Chair: Sears**
- 13:45h MacPherson (Hydrocomp)  
*Coupling of Multi-Order Tools for Practical and Effective Simulation*
- 14:10h Goodwin (Altair), Dodkins (BAE Systems Maritime)  
*Simulation Driven Structural Design in Shipbuilding*
- 14:35h Donohue, Shields, Goodrum, Sypniewski, Singer (Univ of Michigan)  
*A Method for Rapid Generation and Analysis of Physically Plausible General Arrangement and Distributed System Configurations in Early Stage Ship Design*
- 15:00h Jeong, Shen, Kim, Min, Shin (SNU), Lee (Xinnos), Woo, Lee (KMOU)  
*Discrete Event Simulation for Strategic Shipyard Planning*
- 15:25h Coffee Break**
- Session: VR-tigo – Chair: Zerbst**
- 15:55h Spencer (Stirling Labs)  
*The Future of Ship Design: Collaboration in Virtual Reality*
- 16:20h Goh (Knud E. Hansen)  
*Use of Virtual Reality Tools for Ship Design*
- 16:45h Van der Tas, De Meester (DEKC Maritime)  
*Communicating Ship Designs via Virtual Reality*

17:10h Cassar, Bradbeer, Thomas (UCL)

We thank our sponsors: ABB, Altair, Aveva, benntec, Cadmatic, DNV GL, Friendship Systems, Korean Register, Prostep, SENER, Siemens, SSI

*The Implementation of Virtual Reality Software for Multidisciplinary Ship Design Revision*

17:35h DNV GL Compit Award 2019 given to Jialun Liu by Christian Cabos

## Tuesday, 26 March 2019

### Session: Come Together[, technologies] – Chair: Harries

- 09:00h Ommami, Bjermeland, Aksnes, Luxcey, Reinholdtsen (Sintef Ocean)  
*Application of Continuous Integration in Decision Support and Integrity Management Systems of Offshore Structures*
- 09:25h Sieranski, Zerbst (PROSTEP)  
*Automatic Geometry and Metadata Conversion in Ship Design Process*
- 09:50h Nowak, Stakkeland (ABB Marine)  
*Implementation of a Data Driven, Iterative Approach to Building Digital Twins*
- 10:15h Coffee Break**
- Session: Digital Twin – Chair: Bole**
- 10:45h Woo, Lee, Kim (KMOU), Lee (Xinnos), Shin (SNU)  
*Simulation-Based Shipbuilding Management System as Keystone for the Digital Twin Yard*
- 11:10h Jones, Goodwin (Altair)  
*The Development of the Intelligent Digital Twin for Autonomous Navigation Vessels*
- 11:35h Hulkkonen, Manderbacka (Napa), Sugimoto (ClassNK)  
*Digital Twin for Monitoring Remaining Fatigue Life of Critical Hull Structures*
- 12:00h Drazen, Mondoro, Grisso (NSWC-CD)  
*Use of Digital Twins to Enhance Operational Awareness and Guidance*
- 12:30h Lunch – Beef Lasagna**  
Tiramisu
- Session: Tutti Frutti – Chair: Perez**
- 13:45h Hollister (New Wave Systems)  
*OpenCalc: An Open Source Programming Framework for Engineering*
- 14:10h Wireman, Goodrum, Sypniewski, Singer (Univ of Michigan)  
*Leading Indicators of Design for Launch/ Recovery of Naval Autonomous Vehicles*
- 14:35h Colling, Hekkenberg (TU Delft)  
*Multi-Scenario Simulation Transport Model to Assess the Economics of Semi-Autonomous Platooning Concepts*
- 15:00h Kooij, Hekkenberg (TU Delft)  
*Towards Unmanned Cargo-Ships: The Effects of Automating Navigational Tasks on Crewing Levels*
- 15:25h Coffee Break**

**Session: Seeing Eye-to-Eye with A.I. – Chair: Seppälä**

- 15:55h Deul, Hoek, Moussault, Nijdam, Alblas, Hekkenberg (TU Delft)  
*Expert System for Cost Estimation in Shipyard Steel Assembly*
- 16:20h Munoz, Perez (Sener)  
*A.I. Technologies Applied to Naval CAD/CAM/CAE*
- 16:45h Stensrud et al. (DNV GL et al.)  
*Automating Inspections of Cargo and Ballast Tanks Using Drones*
- 17:10h Chatzikokolakis, Zissis, Vodas (Marine Traffic), et al.  
*BigDataOcean Project: Early Anomaly Detection from Big Maritime Data*
- 17:35h Weymouth (Univ Southampton)  
*Roll Damping Predictions using Physics-Based Machine Learning*
- 18:00h Announcement of Compit 2020

**Wednesday, 27 March 2019**

**Session: Digital Training – Chair: Köhler**

- 09:00h Bertram, Plowman (DNV GL)  
*A Hitchhiker's Guide to the Galaxy of Maritime e-Learning*
- 09:25h Kil, Byun, Lee, Son (Korean Register)  
*Development of Real-Time Emergency Response Training Simulator for Collective Ship Crews Based on Virtual and Mixed Reality*
- 09:50h Gehrke, Köhler (benntec Systemtechnik)  
*Modular and Interactive Simulation Training Environment (SimTE) for Customer-Specific Maritime Training*

**10:15h Coffee Break**

**Session: Smooth Operator – Chair: Nowak**

- 10:45h Cady (Sirehna)  
*Microservices to Reduce Ship Emissions?*
- 11:10h Son, Kim, Jo, Lee (Korean Register), Oh, Roh (SNU)  
*Big Data Analysis Application: Brake Power and Fuel Oil Consumption Estimation based on Public History Voyage Data of Ships*
- 11:35h Erikstad (NTNU)  
*Quantifying Value vs. Cost in Digital Ship Operations Services*
- 12:00h Uzun, Demirel, Coraddu, Turan (Univ Strathclyde)  
*Life-cycle Assessment of an Antifouling Coating based on a Time-Dependent Biofouling Model*
- 12:30h Lunch** - Chicken Curry & rice  
Lemon & passionfruit tart

**Session: Autonomy now! – Chair: Bons**

- 13:45h Porathe (NTNU)  
*Autonomous Ships and the COLREGs: Automation Transparency and Interaction with Manned Ships*
- 14:10h Wahlström (VTT), Forster (UCSD), Karvonen, Puustinen, Saariluoma (JYU)  
*Perspective-taking in Anticipatory Maritime Navigation – Implications for Developing Autonomous Ships*
- 14:35h Berge, Hagaseth (Sintef), Kvam (Kongsberg Seatex)  
*Hull-to-Hull Positioning for Maritime Autonomous Surface Ship (MASS)*
- 15:00h Steidel, Hahn (Offis)  
*MTCAS: An Assistance System for Collision Avoidance at Sea*
- 15:25h Coffee Break**
- Session: Unmanned Ships on the Horizon – Chair: Cabos**
- 16:20h Eriksen (Svendborg Int. Mar. Academy)  
*Autonomous Ships - Changing Perception and Expectations*
- 16:45h Medhaug (Norwegian Maritime Administration)  
*Future of Autonomous Shipping from an Administration Point of View*
- 17:10h Walther, Schulte, Jahn (Fraunhofer CML)  
*Shoreside Assistance for Remote-Controlled Tugs*
- 17:35h Yan, Ma, Liu, Wang (Wuhan Univ. of Technology)  
*Applying the Navigation Brain System to Inland Ferries*

**19:00h DNV GL Dinner**

- Red onion, tomato & basil tartlet  
Half Honey Roast Duck with apricot & cranberry stuffing, redcurrant jus  
Roast Irish Sirloin with Yorkshire pudding, roast potato & creamy peppercorn sauce  
Eton Mess  
Irish Coffee

Vegetarian alternative available if booked by 11.3.2019