

## Monday, 14 May 2018

### Let Me Challenge your Design Paradigms – Chair: Koelman

- 08:30h Andrews (UCL)  
*Does the Future Ship Designer Need to be a Human Factors Expert?*
- 09:00h Bole (Aveva)  
*Can Parametric Hull Surface Generation ever be a Viable Solution in the Ship Design Process?*
- 09:25h Koelman, Veelo (SARC)  
*Mind the Gap: A Procedure to Convert Solid-Model Shape to a Set of NURBS Patches*
- 09:50h Ebrahimi, Brett, Garcia (Ulstein International)  
*Fast-Track Vessel Concept Design Analysis (FTCDA)*
- 10:15h Coffee Break**
- Game Changers in Design – Chair: Van Os**
- 10:45h Koch, Kreutzer, Roppelt (Atlantec Enterprise Solutions)  
*Cloudless Skies in Early Design?*
- 11:10h Cassetta (Azimut Yachts), Fischer (COSTFACT)  
*Parametric Cost Prediction by Azimut Yachts*
- 11:35h Gaspar (NTNU)  
*Data-Driven Ship Design*
- 12:00h Palluch, Harries (Friendship Systems), Praefke (ISA Propulsion)  
*Appification of Propeller Modeling and Design via CAESES*
- 12:30h Lunch** - Risotto with truffle cream and grana shavings  
Apple and raisin strudel & vanilla ice cream
- Smart Simulation – Chair: Gaspar**
- 13:45h MacPherson (Hydrocomp)  
*A Highly-Efficient Propeller Actuator Disk Replacement*
- 14:10h Vaz, Metropolo, Ramos, Ramirez, Novaes, Monteiro (UFRJ)  
*Computational Tool for Improvement of Ships Performance*
- 14:35h Fonseca, Gaspar (NTNU), Ryan, Giles (UCL)  
*An Open and Collaborative Object-Oriented Taxonomy for Simulation of Marine Operations*
- 15:00h Son, Lee, Park, Lee (Korean Register)  
*Mobile Visualization for Finite Element Model and Assessment Result of Whole Ship*
- 15:25h Coffee Break**
- Digital Twins, Really? – Chair: Perez**
- 15:55h Cabos (DNV GL)  
*Digital Model or Digital Twin?*
- 16:20h Morais, Waldie, Larkins (SSI)  
*The Digital Twin Journey*
- 16:45h Van Os (Siemens Industry Software)  
*The Digital Twin throughout the Lifecycle*

- 17:10h Niepert, Grau (Prostep)  
*Model-Based Class Approval and Site Inspection*
- 17:35h Moser, Astrup (DNV GL)  
*Approaching the Class Verification Process based on the Exchange of a Digital Twin*
- 18:00h DNV GL Compit Award 2018 given to (tbd)

## Tuesday, 15 May 2018

### Boldly Exploring Design Spaces – Chair: Harries

- 08:30h De Vos, Duchateau, Stapersma, Van Oers (TU Delft)  
*Design Space Exploration for Integrated onboard Energy Systems using GAs and First-Principle Dimension Prediction*
- 09:00h Guerrero, Cominetti, Pralits (Univ Genova), Lombardi, Arpa (Optimad)  
*Efficient Shape Optimization and Exploratory Data Analysis using an Open-Source Framework*
- 09:25h Wackers, Queutey, Visonneau (ECN), Pellegrini, Serani, Diez (INSEAN)  
*CFD-Based Shape Optimization under Limited Computational Resources – A Study on Adaptive Multi-Fidelity Metamodeling*
- 09:50h Van der Ploeg (Marin)  
*Improving an Already Optimized Ship by Making its Stern Asymmetric*
- 10:15h Coffee Break**
- Smart Yards – Chair: Niepert**
- 10:45h Gunawan, Hamada, Deguchi (Hiroshima Univ.), Yamamoto, Morita (Tsuneishi)  
*Optimizing Pipe Routing in Engine Rooms*
- 11:10h Fischer, Sender, Roisch (Fraunhofer IGP), Flügge (Univ. Rostock)  
*Capturing As-Built Building Progress Data for Efficient Control of Outfitting Processes in Shipbuilding*
- 11:35h Woo, Lee (KMOU), Lee (Xinnos), Jeong (SNU)  
*Shipyard DES Framework*
- 12:00h Woo, Kim (KMOU), Lee (Xinnos), Jeong (SNU)  
*Machine Learning in Ship Production*
- 12:30h Lunch** - Risotto with salmon and Ligurian pesto  
Hazelnut parfait
- Big Data & Machine Learning – Chair: Bole**
- 13:45h Perez (SENER)  
*Design Rules Evaluation through Technologies of Treatment of Big Data*
- 14:10h Erikstad (SAP Fedem)  
*Design Patterns for Digital Twin Solutions in Marine Systems Design and Operations*
- 14:35h Holm (Rise Viktoria)  
*Fast Decoding of Automatic Identification Systems (AIS) Data*
- 15:00h Cepeda, Premoli, De Oliveira, Caprace (UFRJ)  
*Estimating Ship Emissions Based on AIS Big Data*
- 15:25h Coffee Break**

**A Different Game thanks to VR & Co. – Chair: Morais**

- 15:55h Bertram, Plowman (DNV GL)  
*Virtual Reality for Maritime Training – A Survey*
- 16:20h Friedewald, Meluzov (TUHH)  
*Modular Authoring of Augmented-Reality-based Service Instructions*
- 16:45h Kil, Son, Lee (Korean Register)  
*Development of Multi-Purpose VR Simulator for a Ship from 3D CAD Model*
- 17:10h Jacquenot, Maisonneuve (Sirehna)  
*Virtual Reality in the Field of Numerical Marine Simulation*
- 17:35h Announcement of Compit 2019

**Wednesday, 16 May 2018**

**Achtung, Baby! – Chair: Cabos**

- 08:30h Procee (NHL)  
*Collision Avoidance Improved by Augmented Reality*
- 09:00h Tank (OFFIS), Brinkmann, Hahn (University of Oldenburg)  
*Vessel-in-the-Loop Platform for V&V of Highly Automated Maritime Systems*
- 09:25h Le Gallic, Rolinat, Casanova, Friebe, Waller (Åland Univ.)  
*Situational Awareness for a Wind-Propelled Marine Research ASV*
- 09:50h Morel (Naval Group)  
*Autonomous Detection of Suspicious Vessel Activities*

**10:15h Coffee Break**

**Smart Navigation – Chair: Payer**

- 10:45h Kano, Endo (NMRI)  
*On the Operator's Navigation Indicators – From Collecting Data to Operational Evaluation*
- 11:10h Orihara, Yoshida (JMUC)  
*Weather Routing Simulation as a Tool for Evaluating Ship Performance in Operation*
- 11:35h Orlandi, Capecechi, Fibbi (LaMMA), Costalli (Aleph)  
*Sensitivity Analysis of Route Optimization Solutions on Different Computational Approaches for Powering Performances in the Seaway*
- 12:00h Mannarini (CMCC), Subramani, Lermusiaux (MIT), Pinardi (Univ. Bologna)  
*Comparing VISIR to the Level-Set Equation Solution of the Ship Route Planning Problem in Dynamic Ocean Waves*

**12:30h Lunch** - Maccheroncini pasta, sausage ragout on broad bean cream  
Passito wine panna cotta

**Unmanned Ship on the Horizon – Chair: Stark**

- 13:45h Schubert, Gluch, Benedict, Kupas, Hagendorf, Simanski (Univ. Wismar)  
*Conception of Navigation Assistance System Integrating New Sensor Technologies and Model Based Prediction*
- 14:10h Karlsson (Swedish Maritime Administration)  
*Sea Traffic Management – The Route to the Future*

We thank our sponsors: Aveva, DNV GL, Friendship Systems, Prostep, SARC, SENER, Siemens, SSI

- 14:35h Merenluoto (DIMECC)  
*One Sea: Steps towards Autonomous Maritime Operations*
- 15:00h Matsuo (NMRI)  
*Japan's 2050 Vision and R&D Roadmap for Maritime Information Technology and Robotics*

**15:25h Coffee Break**

**Get Real on Artificial Intelligence – Chair: Plowman**

- 15:55h Bertram (DNV GL)  
*Demystifying Artificial Intelligence for Maritime Applications*
- 16:20h Gkerekos, Lazakis (University of Strathclyde)  
*Leveraging Big Data for Fuel Oil Consumption Modelling*
- 16:45h Xie, Hamre, Stensrud, Raeissi (DNV GL)  
*Automatic Detection of Vessel Cracks in Drone-Based Inspections Using Convolutional Neural Networks*
- 17:10h Lewis (Eauligo)  
*Bee-Swarm Inspired Cooperative Robotics and Augmented Reality for Seafloor Exploration*

**DNV GL Dinner (in Cardiff Castle)**

Aperitif – Prosecco and nibbles  
Fresh cheese wrapped in speck, red chicory and summer truffle vinaigrette  
Risotto with truffle cream and grana shavings  
Tagliata di Manzo rucola e grana (strips of fillet of beef and rocket)  
Semifreddo agli amaretti e coulis al cacao (macaroon parfait)  
Wine & water

Vegetarian alternative available if booked by 11.5.2018

Backup Paper: Emilio F. Campana (CNR), Volker Bertram (DNV GL)  
*Ship Hull Optimization – An Attempt to Determine Position and Course of the State of the Art*