

NuTTS 2026

19th – 21st October 2026

UNIVERSITÄT
DUISBURG
ESSEN

Open-Minded



Monday, 19. Oct. 2026

- 12:00 **Lunch & Reception**
- 12:50 **Opening and Welcome**
Jens Neugebauer¹
¹University of Duisburg-Essen
- 13:00 **On the Prediction of the Turning Circle Manoeuvre for an Inland Waterway Ship**
Guillermo Chillcce¹, Lahbib Zentari²
¹Deutsches Zentrum für Luft- und Raumfahrt (DLR), ²Federal Waterways Engineering and Research Institute (BAW), Germany
- 13:25 **Development of an ALE-Based RANS Method for Rotating-Arm Simulation of the BB2 Submarine**
Jun Hyeok Lee, Chang Hyuk Ji, Hyung Taek Ahn
University of Ulsan
- 13:50 **CFD simulations of zigzag manoeuvres using a simplified propeller representation**
Ivan Sulovsky¹, Andro Bakica², Hrvoje Jasak³, Jasna Prpić-Oršić¹
¹University of Rijeka, ²University of Split, ³University of Cambridge
- 14:15 **Comparison of Direct and Indirect System Identification for Hydrodynamic Derivatives of an Inland Waterway Ship in Deep and Shallow Water**
Jakob Rzeszutko¹, Lahbib Zentari², Bettar Ould el Moutar¹
¹Technische Universität Berlin, ²Federal Waterways Engineering and Research Institute (BAW), Germany
- 14:40 **Data-Driven Identification of Ship Manoeuvring Dynamics Using SINDy: Forward Greedy Selection and Sequential Backward Elimination for Model-Structure Identification**
Mahmoud Amer¹, Jens Neugebauer¹, Frédéric Kracht²
¹University of Duisburg-Essen, ²Development Centre for Ship Technology and Transport Systems (DST)
- 15:05 **Coffee Break**
- 15:40 **Actuator Line Method for Wind Assisted Ship Modelling**
Thibault Maubert^{1,2}, Adam Persson²
¹ISAE SUPAERO, ²Research Institutes of Sweden (RISE)
- 16:05 **Hydrodynamic Analysis of a Wind-Assisted Ship's Rudder**
Abdoul-Malik Bakari¹, Rui Lopes³, Alex Shiri², Arash Eslamdoost¹
¹Chalmers University of Technology, ²Research Institutes of Sweden (RISE) / SSPA, ³Kongsberg Maritime Sweden AB
- 16:30 **Experimental and numerical analysis of the wave-making resistance of a self-propelled KCS at drift**
Saeed Hosseinzadeh, Muhammed Talha Ozdenoglu, Tahsin Tezdogan, Joseph Banks, Dominic Taunton, Stephen Turnock
University of Southampton
- 16:55 **Numerical Investigation of Propeller Loads during Steady Turning Maneuver of the ONR Tumblehome**
Adwaith Nath¹, Heather Peng¹, Ayhan Akinturk², Wei Qiu¹
¹Memorial University of Newfoundland, ²National Research Council, Canada
- 17:20 **Landrini Award Ceremony**
- 18:00 **Dinner**

Tuesday, 20. Oct. 2026

- 9:00 **Numerical and Experimental Analysis of a Hydrofoil Performance in Waves**
Nils Lundqvist¹, Alex Shiri², Arash Eslamdoost¹
¹Chalmers University of Technology, ²Research Institutes of Sweden (RISE) / SSPA
- 9:25 **CFD modeling of surf-riding and broaching dynamic instabilities for the ONRT vessel subject to stern-quartering wave conditions**
Etienne Fichers, Benoit Mallol
Cadence Design Systems
- 9:50 **Progressive development of a CFD framework for parametric rolling and the identification of green water as the dominant saturation mechanism**
Anton Turk¹, Zoran Čarija¹, Jakov Čarija², Jasna Prpić-Oršić¹
¹University of Rijeka, ²AITAC d.o.o.
- 10:15 **Nonlinear potentialFreeSurfaceFoam**
Joshua Patrick Davidson¹, Pal Schmitt², Christian Windt³, Gabriel Barajas¹, Javier L. Lara¹
¹Universidad de Cantabria, ²Queen's University of Belfast, ³Technische Universität Braunschweig
- 10:40 **Coffee Break**
- 11:15 **Echo-Driven Modulation of Laser-Induced Cavitation Bubbles in Cylindrical Confinement**
Mazyar Dawoodian, Bettar Ould el Moutar
Technische Universität Berlin
- 11:40 **Interaction between reflected shock waves and laser-induced cavitation bubbles near a solid boundary**
Gohar Moloudi¹, Mazyar Dawoodian², Sasan Rezaee¹, Bettar Ould el Moutar²
¹University of Duisburg-Essen, ²Technische Universität Berlin
- 12:05 **Modelling cavitation of lifting surfaces for use during preliminary design**
Raul Bajimaya, Stephen Watson
QinetiQ
- 12:30 **Lunch**
- 13:30 **Investigation of Simplified Bulbous Bow Shapes for Small Cargo Ship**
Yoshihisa Okada¹, Manaka Isobe¹, Mai Kishikawa², Kenji Mokuo²
¹Nakashima Propeller Co., Ltd., ²Fluid Techno Co., Ltd.
- 13:55 **Research of a Hybrid Bulbous Bow for Small Cargo Ships by CFD**
Manaka Isobe¹, Yoshihisa Okada¹, Mai Kishikawa², Kenji Mokuo²
¹Nakashima Propeller Co., Ltd., ²Fluid Techno Co., Ltd.
- 14:20 **A Zonal URANS-SLH Hybrid Approach for Accurate Prediction of Ship Resistance and Stern Wake**
Morteza Feizbakhsh, Nikolai Kornev
University of Rostock
- 14:45 **Extension of Granville's Similarity Law for Heterogeneous Hull Roughness**
Hasan Ozturk, Tahsin Tezdogan, Kang Ren, Stephen Turnock
University of Southampton
- 15:10 **Coffee Break**

- 15:45 **Improving Hybrid RANS/LES Simulation of Ship Flows through Turbulence Forcing**
Antoine Monot¹, Christophe Friess², Emmanuel Guilmineau¹, Michel Visonneau¹, Jeroen Wackers¹
¹Centrale Nantes, ²Aix Marseille Université
- 16:10 **Numerical and Experimental Investigation of Inland Waterway Ship-Bank Interaction Using Scale-Resolving Simulation**
Melissa Böhm¹, Lahbib Zentari¹, Bettar Ould el Moutar², Benjamin Friedhoff³
¹Federal Waterways Engineering and Research Institute (BAW), Germany, ²Technische Universität Berlin, ³Development Centre for Ship Technology and Transport Systems (DST)
- 16:35 **Numerical and Experimental Investigation of Phase-Transition During Sloshing Impacts**
Andreas Peters¹, Simon Tödter¹, Mohammad Zehab Ud Din¹, Bettar Ould el Moutar²
¹University of Duisburg-Essen, ²Technische Universität Berlin
- 17:00 **Announcement of NuTTS 2027**
- 18:00 **Dinner**

Wednesday, 21. Sep. 2026

- 9:00 **Hydrodynamic Analysis of a Hybrid Wave Energy Converter–Floating Offshore Wind Turbine Farm Using a 3D Boundary Element Method: Workflow Development and Numerical Challenges**
Sergio Ribeiro e Silva, Giacomo Fatano
University of Lisbon
- 9:25 **Partly implicit coupling of sub grids and across interfaces**
Auke van der Ploeg
Maritime Research Institute Netherlands (MARIN)
- 9:50 **Rapid Prediction of Marine Propeller Performance Using Artificial Neural Networks**
Alper Yildirim¹, Robert Mutton², Batuhan Aktas¹, Mehmet Atlar¹
¹University of Strathclyde, ²Stone Marine Propulsion
- 10:15 **Coffee Break**
- 10:45 **A Representation Learning Framework for Efficient Exploration of Ship Hull Design Spaces**
Daniel Akinmulewo^{1,2}, Florian Sprenger¹
¹University of Rostock, ²Schiffbau-Versuchsanstalt (SVA) Potsdam GmbH
- 11:10 **High-Fidelity Optimization of Generic Hull Forms and Energy Saving Devices**
Ivan Zeman, Luuk Halsema, Perry van Oossanen
Van Oossanen Naval Architects
- 11:35 **Use of a Computationally Lightweight Analysis Approach for Early Stage AUV Hull Form Optimisation**
Henry Hallam, Joseph Banks, Stephen Turnock
University of Southampton
- 12:00 **Closing Remarks**
Andreas Peters¹, Udo Lantermann¹
¹University of Duisburg-Essen
- 12:15 **Lunch**