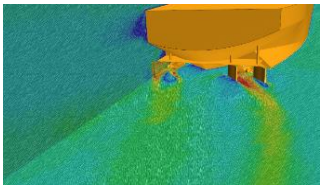
NuTTS 2021

11th – 13th October 2021, Mülheim an der Ruhr, Germany



Preliminary Programme

23rd Numerical Towing Tank Symposium

Monday 11 October

12:00	Registration
12:30	Lunch/Dinner
13:45	Welcome address & Honouring of Prof. Söding (V. Bertram, O. el Moctar)

14:10 - 15:50	Session 1, Chair: to be determined
14:10	Heinrich Söding (Hamburg University of Technology) *Nonlinear seakeeping by a potential method including hull vibrations and natural seaway*
14:35	Sime Malenica (Bureau Veritas) *Some aspects of the local hydro structure interactions during hydrodynamic impacts*
15:00	Dogni Yan, Arun Lakshmynarayanana, Tommi Mikkola, Spyros Hirdaris (Aalto Univ.) *Comparative study on numerical hydroelastic analysis of impact-induced loads*
15:25	Hendrik Simonis[1], Patrick Marleaux[2], Moustafa Abdel-Maksoud[2], Norbert Stuntz[1] [1](Bundeswehr Technical Center for Ships and Naval Weapons Maritime Technology and Research) [2]Hamburg Univ. of Technology *Dynamic stability analysis of a ship at high forward speed in calm water*
15:50	Coffee break

16:15 - 17:30	Session 2, Chair: to be determined
16:15	Apostolos Papanikolaou (National Technical Univ. of Athens) *Holistic ship design optimisation: what is the difference?*
16:40	Marek Kraskowski (Maritime Advanced Research Centre - CTO, Gdansk Univ. of Technology) *A method for optimization of Olympic canoes by global shaping*
17:05	Jörg Albrecht (Solarship) *Optimisation of the air circulation in the design of a solar houseboat catamaran*

17:30	Landrini Award
18:00	Dinner

Tuesday 12 October

08:20 - 10:25	Session 3, Chair: to be determined
08:20	Bram Starke (MARIN) *On the relation between measurable (AHR) and modelled (sand-grain) roughness heights to full-scale ship resistance*
08:45	Joseph Praful Tomy[1,2], Stephan Berger[1], Keun Woo Shin[1], Harry Bingham[2], Poul Anderson[2] [1]MAN Energy Solutions, [2]Technical Univ. of Denmark (DTU) *Hydrodynamic and hydroacoustic simulations of propeller-induced URN in a hull wake-field*
09:10	Carsten Schumann (SchiffsRat) *The validation of potential theory based predictions of full-scale resistance and propulsion characteristics*
09:35	Author to be announced later *Title to be announced later*
10:00	Mariana Lopez Pinto[1], Felipe Ruggeri[2], Claudio Mueller Prado Sampaio[1], Kazuo Nishimoto[1], Philip von Pritzelwitz[3] [1]Numerical Offshore Tank, Univ. of São Paulo, [2]Argonautica Engineering & Research, Brazil, [3]Vale Institute of Technology (ITV, Brazil *Numerical simulation of air lubrication system on large ore carrier*
10:25	Coffee break

10:50 - 13:00	Session 4, Chair: to be determined
10:50	Ronald A. Remmerswaal, Arthur E.P. Veldman (Univ. of Groningen) *Piecewise parabolic reconstruction methods for free-surface flow*
11:15	Hoyte C. Raven (MARIN) *Credibility of wave breaking computations by volume of fluid RANS codes*
11:40	Volker Bertram (DNVGL), Milovan Perić (Comet) *Chronological and critical review of steady free-surface flow computations*
12:05	Jannes Berndt, Robinson Perić, Moustafa Abdel-Maksoud (TUHH) *Recommendations on application of the HRIC scheme for simulation of free surface waves*
12:30	Yifu Zhang (Univ. of Southampton) *Evaluating the effects of drift angle on the self-propelled ship in waves using BEMt*
13:00	Lunch/Dinner

14:15 - 15:30	Session 5, Chair: to be determined
14:15	Leonie Walter[1], Jann Strybny[1], Reinhard Hinkelmann[2] [1]University of Applied Sciences, Emden/Leer [2]Institute of Civil Engineering, Technische Universität Berlin *Simulating the transport of suspended superquadric shapes with a fully-resolved CFD-DEM algorithm*
14:40	Keun Woo Shin (MAN Energy Solutions), Poul Andersen (Techn. Univ. of Denmark) *CFD prediction of cavitation inception on marine propellers*

15:05	Ville Viitanen[1], J. Peltola[1], A. Jaatinen-Värri[2] [1]VTT Technical Research Centre of Finland Ltd. [2] Lappeenranta Univ. of Technology *Eulerian-Eulerian multiphase flow and turbulence modelling of hydrofoil cavitation*
15:30	Coffee break

15:55 - 17:10	Session 6, Chair: to be determined
15:55	Hemant Sagar, Bettar el Moctar (Univ. of Duisburg-Essen) *A single cavitation bubble collapse in perspective of numerical simulations*
16:20	Ebrahim Kadivar[1], Mikhail V. Timoshevskiy[2], Konstantin S. Pervunin[2], Bettar el Moctar[1] [1]Univ. of Duisburg-Essen [2]Kutateladze Institute of Thermophysics, Siberian Branch of The Russian Academy of Sciences *Control of incipient cavitation on a benchmark hydrofoil using a Miniature Vortex Generator (MVG)*
16:45	Andreas Peters, Udo Lantermann, Bettar el Moctar (Univ. of Duisburg-Essen) *Compressible and multi-scale simulations of cavitating flows*
18:00	Dinner

Wednesday 13 October

08:20 - 11:15	Session 7, Chair: to be determined
08:20	Volker Bertram (DNV) *CFD in the context of performance monitoring*
08:45	Maurits van den Boogaard[1], Giacomo Alessi[1], Benoit Mallol[1], Dirk Wunsch[1], Nathan Clero[1], Dario Amadori[1], Luca Zampieri[2], Charles Hirsch[1] [1]NUMECA-Cadence [2]Neural Concept, Lausanne *Accelerating marine propeller development in early design stages using machine learning*
09:10	Auke van der Ploeg (MARIN) *Andersen acceleration for maritime applications*
09:35	Philipp Mucha (Siemens) *Application of hybrid-temporal LES to flows around ship hulls and ship superstructures*
10:00	Author to be announced later *Title to be announced later*
10:25	Mohsen Irannezhad[1], Rickard E. Bensow[1], Martin Kjellberg[2], Arash Eslamdoost[1] [1] Chalmers Univ. of Technology [2]SSPA Sweden AB *Towards uncertainty analysis of CFD simulation of ship responses in regular head waves*
10:50	Tiago Gomes (Instituto Superior Técnico, Lisboa), Sébastien Lemaire (MARIN), Guilherme Vaz (WavEC) *Verification study of sliding and overset grids methods*
11:15	Lunch/Dinner