ShipWave 2023 – Workshop programme

Wednesday 22 March 2023

	Arrival	
Time	Agenda	Location/Room
13:00 - 14:30	Registration open & Welcome reception	Hotel foyer
14:30 - 17:00	Icebreaker boat trip	Ferry terminal “Rüschpark”
17:00 - 17:15	Welcome address Ingrid Holzwarth, German Federal Waterways Engineering and Research Institute and Nils Goseberg, Leichtweiß Institute, TU Braunschweig and Coastal Research Centre, Germany	Zeppelin
17:15 - 18:00	Opening address: Ship waves and methods: the BAW perspective on estuarine waterways Ingrid Holzwarth and Gregor Melling, German Federal Waterways Engineering and Research Institute, Germany	Zeppelin
18:00 - 19.30	Hotel check-in / free time / socialising / networking	Hotel foyer
19:30	Dinner	Hotel restaurant

Thursday 23 March 2023

08:45 - 09:30	Keynote address: Evolving narratives of ship wake science and management Tarmo Soomere and Kevin Parnell, Wave Engineering Laboratory, Department of Cybernetics, School of Science, Tallinn University of Technology, Estonia	Zeppelin
	Technical presentations – Ship wave effects and design 1 Session chair: Luca Zaggia, National Research Council, Institute of Geosciences and Earth Resources, Padova, Italy	
09:30 - 09:45	Ship Effects – case study of the St. Lawrence River, Canada Michael Davies, Coldwater Consulting Ltd., Canada	Zeppelin
09:45 - 10:00	Russell’s solitary wave in 21st century Scotland Momchil Terziev, Department of Naval Architecture, Ocean and Marine Engineering, University of Strathclyde, Glasgow, UK	Zeppelin
10:00 - 10:15	A design method for rock groynes subject to ship wave-induced overflowing Arne Seemann, German Federal Waterways Engineering and Research Institute, Germany	Zeppelin
10:15 - 10:30	Malamocco-Marghera Navigation Channel (Venice Lagoon): Study of operational and structural solutions to achieve a sustainable navigation Hisham Elsafti, DHI WASY GmbH, Germany	Zeppelin
10:30 - 11:00	Coffee break	Lilienthal

Interactive session 1 – World café		
11:00 - 12:30	Topic: Region-specific experiences and issues associated with ship-induced waves. E.g. scale and nature of issues / geographical commonalities and differences / management and mitigation strategies / design against ship-induced loads / knowledge gaps. Discussion in breakout groups with participants from different geographic backgrounds. Session will be moderated; the discussion outcomes will be documented and provide input for the fish bowl (interactive session 3).	Zeppelin & Lilienthal
12:30 - 13:30	Lunch break	Hotel restaurant
Technical presentations – Ship waves in lab and field Session chair: Carolin Gesing, Federal Waterways Engineering and Research Institute, Karlsruhe, Germany		
13:30 - 13.45	Pressure and velocity measurements of low-frequency cargo vessel wake in the Savannah River, Georgia, USA Alexandra Muscalus, Georgia Institute of Technology, School of Ocean Science and Engineering, USA	Zeppelin
13:45 - 14:00	New methods for in-situ measurement of shallow-draft vessel wake impacts along coastal waterways Rachel Bain, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS, USA	Zeppelin
14:00 - 14:15	Over 25 years of in situ ship wave measurements at BAW, where does the future lead to? Hanne Jansch, German Federal Waterways Engineering and Research Institute, Germany	Zeppelin
14:15 - 14:30	Analysis of ship waves along the Scheldt estuary Dieter Meire, Flanders Hydraulics, Antwerp, Belgium	Zeppelin
14:30 - 14:45	The importance of full-scale trials when quantifying and managing vessel wave wake in confined waterways Gregor MacFarlane, Australian Maritime College, University of Tasmania, Australia	Zeppelin
14:45 - 15:15	Coffee break	Lilienthal
Technical presentations – Ship wave effects and design 2 Session chair: Charlotte van der Vorm, Rijkswaterstaat, Utrecht, Netherlands		
15:15 - 15:30	Estimation of extreme primary ship-induced wave loads by the application of the Non-Parametric Bayesian Networks Sargol Memar, Department of Civil Engineering and Geosciences, TU Delft, Delft, The Netherlands	Zeppelin
15:30 - 15:45	Waterway bank erosion risk model by oceangoing ships Raul Redondo, Siport21, Spain	Zeppelin
15:45 - 16:00	A geohydraulic analysis of sediment shear strength during drawdown Laura Dechant, German Federal Waterways Engineering and Research Institute, Germany	Zeppelin
Interactive session 2 – World café		
16:00 - 17:30	Topic: Method-specific exchanges. E.g. methodological state of the art / challenges and shortcomings / interfaces to other methods / future developments and improvements. Discussion in breakout groups according to participant's method expertise (e.g. numerical, experimental, observational, design). Session will be moderated; the discussion outcomes will be documented and provide input for the fish bowl (interactive session 3).	Zeppelin & Lilienthal
17:30 - 19:00	Free time / socialising / networking	
19:00	Dinner	Hotel restaurant

Friday 24 March 2023		
Technical presentations – Numerical modelling 1 Session chair: Christian Windt, Leichtweiß-Institut, TU Braunschweig, Germany		
09:00 - 09:15	A semi-implicit finite volume scheme for a simplified hydrostatic model for fluid-structure interaction Cristian Brutto, Laboratory of Applied Mathematics, University of Trento, Trento, Italy	Zeppelin
09:15 - 09:30	Development of a numerical towing tank and comparison with experimental results: study of the flow around a vessel in a restricted waterway Pablo Nieutin-Redon, Institut Pprime, Department of Fluids, Thermal and Combustion, HYDÉE team, University of Poitiers, France	Zeppelin
09:30 - 09:45	Systematic validation of an efficient numerical tool to predict long-period primary waves Leon-Carlos Dempwolff, Leichtweiß-Institut, TU Braunschweig, Germany	Zeppelin
09:45 – 10:00	Ship-induced wave force effects on moored ship using reduced two-layer nonhydrostatic model Mohammad Saidee Hasan, IHE Delft Institute for Water Education, Netherlands | Delft University of Technology, Netherlands | Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh	Zeppelin
10:00 - 10:30	Coffee break	Lilienthal
Technical presentations – Numerical modelling 2 Session chair: Arne van der Hout, Deltares / TU Delft, Netherlands		
10:30 - 10:45	Numerical modeling of low-frequency cargo vessel wake in the Savannah River, Georgia, USA Kevin Haas, Georgia Institute of Technology, USA	Zeppelin
10:45 - 11:00	Simulation and validation of ship induced waves in shallow and confined water conditions Christian Kochanowski, German Federal Waterways Engineering and Research Institute, Germany	Zeppelin
11:00 - 11:15	Intermission	
Interactive session 3 – Final group discussion		
11:15 - 12:30	Moderated discussion: i) synthesis of world cafés; ii) concrete steps & developments required in the face of future challenges; iii) barriers to successfully tackling these steps; iv) conclusion / outlook	Zeppelin
12:30 - 13:30	Lunch break	Hotel restaurant
13:30 - 16:30	Field trip: Ship wave basin of Federal Waterways Engineering and Research Institute (BAW)	Bus transfer from hotel
16:30	Departure	Bus transfer