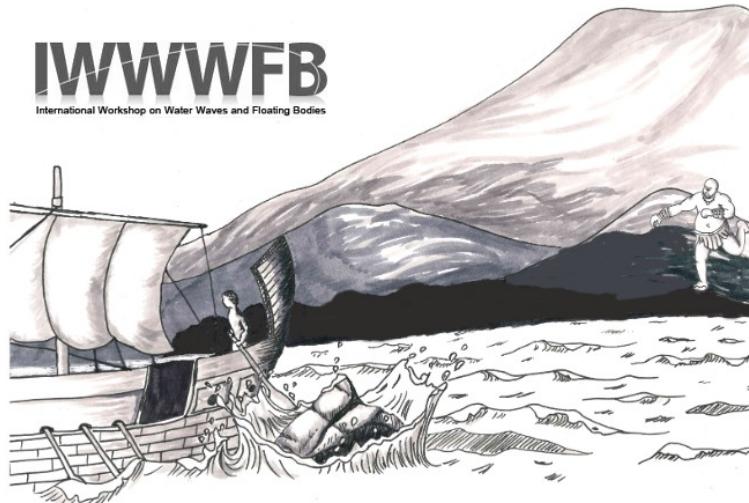# 37th International Workshop on Water Waves and Floating Bodies

10th-13th April, 2022, Giardini Naxos, Italy

Note for presenters

Presentations last 20 minutes plus 5 minutes for discussion. Due to the use of the hybrid format, online presentations, which comes from East mainly, are mostly scheduled in the morning sessions. Although online presentations are still 20 minutes plus 5 minutes for discussion, in the morning sections 5 additional minutes are added to compensate possible delays related to the change of the presenter and any issue with the internet connection. The presentations expected online at the moment are highlighted in green.

For the online presentation Gotomeeting links will be sent to registered participants. Separate links will be sent for the morning and afternoon sessions. Dedicated Gotomeeting sessions will be organized for the Steering Committee meeting and for the announcement at the Banquet in case someone wants to participate remotely.

Technical Programme

SUNDAY APRIL 10TH, 2022

Time		
11:00-13:00	**Registration**	
13:00-14:00	**Lunch**	
14:00-14:05	Welcome and Opening Remarks	
Session 1	**Chair: Yonghwan Kim**	
14:05-14:30	Nonlinear Effect on Ship Generated Mini-tsunamis (Tuck Fellowship winner)	J. Yao, X. Zhang, R.F. Beck
14:30-14:55	Speed-effect restoring forces on ship motions	X. Chen, L. Diebold and Y. Choi
14:55-15:20	On the generation process of upstream waves by a pressure distribution at critical speed	J. Grue
15:20-15:45	High-speed vessel moving along the edge of ice field	P. Marleaux, T.I. Khabakhpasheva, M. Abdel-Maksoud, A.A. Korobkin, K. Maki
15:45-16:10	Reduced Order Modelling for Dispersive and Nonlinear Water Wave Modelling	F. G. Eroglu, N. T. Mücke, A. P. Engsig-Karup
16:10-16:40	**Coffee Break**	

Session 2	Chair: Alessandro Iafrati	
16:40-17:05	Water wave interaction with an annular metamaterial cylinder	S. Zheng, R. Porter, H. Liang, D. Greaves
17:05-17:30	Energy budgets in the interaction between a surface gravity wave and a submerged cylindrical resonator	F. De Vita, M. Lorenzo, P. Pezzutto, F. De Lillo, F. Bosia, M. Onorato
17:30-17:55	METAREEF, a sustainable submerged floating metamaterial structure to attenuate surface gravity waves	M. Lorenzo, P. Pezzutto, F. Bosia, C. Camporeale, F. De Lillo, F. De Vita, C. Manes, F. Ventrella, M. Onorato
17:55-18:20	Wave power extraction from a metamaterial cylinder with internal paddle power take off mechanism	J. Huang, R. Porter
19:30	**Dinner**	

MONDAY APRIL 11TH, 2022

Session 3	Chair: John Grue	
08:30-09:00	Flexural gravity wave amplitudes in the vicinity of blocking point under shallow water approximation	S. Boral, T. Sahoo, M.H. Meylan
09:00-09:30	Generalised hybrid element method for oscillatory motion of multiple floating structures in oblique regular waves.	M.B.M. Khan, M.H. Meylan, H. Behera
09:30-10:00	Steady-state motion of a load on an ice cover with linearly variable thickness in a channel	K. Shishmarev, K. Zavyalova, T. Khabakhpasheva
10:00-10:30	The Cauchy-Poisson problem for a fluid with a shear flow and non-uniform compressed ice cover	I.V. Sturova
10:30-11:00	**Coffee Break**	

Session 4	Chair: Kevin Maki	
11:00-11:30	Decomposition of ship waves and time-frequency spectrograms	H. Liang, H. Santo, M. Si
11:30-12:00	Theoretical foundation of a new type of panel method	J. He, F. Noblesse
12:00-12:30	Analysis of the pressure field in a breaking wave	Y.M. Scolan
12:30-13:00	Wave-passing by ships in a single file formation	Z-M. Yuan
13:00-14:00	**Lunch**	

Session 5	Chair: Sime Malenica	
14:05-14:30	A study of a fixed trapezoidal section in regular waves using a generalized weak-scatterer model	C. Tong, Y. Shao, H.B. Bingham, F.-C.W. Hanssen
14:30-14:55	A very simple park interaction factor	C. Stavropoulou, M. Goteman
14:55-15:20	The wave-induced drift of objects of finite size	Q. Xiao, R. Calvert, S.Q. Yan, T. Adcock, T.S. van den Bremer
15:20-15:45	Elastic Responses of Wind-tracing Floating Offshore Wind Turbines	A. Lamei, M.Hayatdavoodi, H.R. Riggs

15:45-16:10	Efficient Computation of the Linear Radiation Problem using a Spectral Element Method	J. Visbech, A.P. Engsig-Karup, H.B. Bingham
16:10-16:40	**Coffee Break**	
Session 6 16:40-17:05	**Chair: Alexander Korobkin** The Challenges of Computing Wave Added Resistance Using Maruo's Formulation and The Kochin Function	M. Amini-Afshar, H.B. Bingham
17:05-17:30	Experimental and numerical 2D wedge entry in water with entrained air	M. van der Eijk, P.R. Wellens
17:30-17:55	Multisection approach for the vertical water impact of a fuselage	A. Del Buono, A. Iafrati
17:55-18:20	Numerical Simulation of Turbulent Structures under Breaking Waves	Z. Xie, M.Brocchini, P. Lin
18:30-19:30	**IWWWFB Steering Committee Meeting**	
19:30	**Dinner**	

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TUESDAY APRIL 12TH, 2022

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Session 7	**Chair: Richard Porter**	
08:30-09:00	Experimental study on wave breaking and evolution of wave groups with high steepness	K. Zheng, B.B. Zhao, W.Y. Duan
09:00-09:30	Modelling a dam break flow in a moving reference frame	M. Gao, S. Draper, L. Chen, H. Wolgamot, L. Cheng
09:30-10:00	Impulsive impact of a body submerged in an open container	Y.A. Semenov, Y.N. Savchenko, G.Y. Savchenko
10:00-10:30	Modelling design waves in a Numerical Wave Flume based on a higher-order Moving Particle Semi-Implicit Method	E. Renzi, F. Dias
10:30-11:00	**Coffee Break**	
Session 8	**Chair: Xiaobo Chen**	
11:00-11:30	Time dependent motion due to sinusoidal ocean bottom oscillation	S. Das, M.H. Meylan
11:30-12:00	Extension of MCC-FS model to bottom time-varying problems	B.B. Zhao, T.Y. Zhang, L.J. Li, Z. Wang, W.Y. Duan, M. Hayatdavoodi
12:00-12:30	On the modulation of a plane wave to oblique perturbations in finite water depth	J. Yang, J. Yao, X. Zhang
12:30-13:00	Trapped waves within the blocking frequency under compressed sea ice and two-dimensional current	S. Saha, S. Das, S.N. Bora
13:00-14:00	**Lunch**	
Session 9	**Chair: Mike Meylan**	
14:05-14:30	Waves generated by moving disturbances on the seafloor	Y. Chen, M. Hayatdavoodi,b, B. Zhao, R. Cengiz Ertekin
14:30-14:55	Derivation of some steady gravity wave equations for uneven bottoms	D. Clamond
14:55-15:20	Added mass and damping of structures with angular symmetry	S.Malenica, J.N. Newman

15:20-15:45	Floe size distributions in irregular sea states	N. Mokus, F. Montiel
15:45-16:10	Level-Crossing Conditioning in second-order water waves	R. Hascoët
16:10-16:40	**Coffee Break**	

Session 10   **Chair: Robert Beck**

16:40-17:05	New cut cell method for finite differences approximation of the Poisson Equations applied to a semi-averaged model for water waves propagation	G. Colicchio, M. Antuono
17:05-17:30	A High-order Pseudospectral Incompressible Navier-Stokes Free Surface Model in 2D	M.E. Bitsch, A.D. Melander, A.P. Engsig-Karup
17:30-17:55	Influence of Rigid/Deformable Foil Shape on the Hydrodynamic Loads and Performance	H. Xu, M. Greco, C. Lugni
17:55-18:20	Two-Dimensional Planing in Water of Finite Depth	Z. Zhang, K.J. Maki, L.J. Doctros
19:30	**Banquet**	

<p align="center">WEDNESDAY APRIL 13TH, 2022</p>

Session 11   **Chair: Masoud Hayatdavoodi**

08:30-09:00	Study on Numerical PMM Tests in Incident Waves	Z. Zhu, B-S. Kim, S. Wang, Y. Kim
09:00-09:30	Enhanced Wave-Field Reconstruction Based on Stochastic Characteristics of Shadowing Effects	Y-S. Nam, J-H. Lee, Y. Liu, Y. Kim
09:30-10:00	Local resonances within an array of C-shaped cylinders in water waves	J. Xu, D.Z. Ning, L. Chen, C.W. Zhang, B. Teng
10:00-10:30	Body-Exact Computations of Vertical Plane Motions	R. Subramanian, R.F. Beck
10:30-11:00	**Coffee Break**	

Session 12   **Chair: Harry Bingham**

11:00-11:30	Wave energy absorption amongst arrays of point absorbers with a non-regular geometry	Y. Liu , S. Zheng, H. Liang, P. Cong
11:30-12:00	Numerical investigation of the survivability of a wave energy converter	H. Ding, J. Zang
12:00-12:30	Experimental study on short design waves for extreme response of a floating hinged raft wave energy converter	S. Jin, T. Tosdevin, M. Hann, D. Greaves
12:30-13:00	Generalizing the optimal axisymmetric point-absorber wave energy converter to irregular waves	E.C. Edwards, M. Hann, D. Greaves, D.K.P. Yue
13:00-14:00	**Lunch**	