34^{th} International Workshop on Water Waves and Floating Bodies
7th-10th April, 2019, Newcastle, Australia

Technical Programme

Sunday April 7th, 2019

10:00 – 12:00	**Registration**	
12:00 – 13:00	**Lunch**	
13:00 – 13:15	Welcome and Opening Remarks	
Session 1	Chair: Yonghwan Kim	
13:15 – 13:40	Simulation of Two-Body Interaction in Waves with the Immersed Boundary Method (p.117)	W. Meng and W. Qiu
13:40 – 14:05	A Nonlinear Potential-Flow Model For Wave-Structure Interaction Directional Energy Transfer due to Third-Order Interactions during an Extreme Wave Event (p.5)	D Barratt, H.B. Bingham, P.H. Taylor, T.S. van den Bremer, and T.A.A. Adcock
14:05 – 14:30	On the periodic waves interacting with linear shear currents (p.205)	B.B. Zhao, W.Y. Duan, W.Q. Yang, and S. Huang
14:30 – 14:55	On wave diffraction-radiation by bodies with porous thin plates (p.133)	C. Ouled Housseine
14:55 – 15:20	Real-time prediction of unidirectional irregular waves (p.157)	D. Skene, H. Wolgamot, J. Geldard, P. Taylor, and S. Draper
15:20 – 15:50	**Coffee break**	
Session 2	Chair: Xiaobo Chen	
15:50 – 16:15	A Nonlinear Potential-Flow Model for Wave-Structure Interaction Using High-Order Finite Differences On Overlapping Grids (p. 1)	M. Amini-Afshar, H.B. Bingham, W.D. Henshaw, and R. Read
16:15 – 16:40	Severe Wave-Body Interactions: a Potential-Flow HPC Method and its Strong Domain-Decomposition Coupling with a Level-Set Navier-Stokes Solver (p.53)	F.C.W. Hanssen, G. Colicchio, and M. Greco
16:40 – 17:05	Analysis of 2D Singular Effect on Nonlinear Wave Forces with Application of Scaled Boundary FEM (p.173)	B. Teng and Y. Qian
17:05 – 17:30	Application of the High-Level Green-Naghdi model on internal solitary waves with a free surface (p.185)	Z. Wang, B.B. Zhao, W.Y. Duan, and T.Y. Zhang
19:00	**Dinner**	

Monday April 8th, 2019

Session 3	Chair: Bin Teng	
08:35 – 09:00	Mysterious wavefront uncovered (p.17)	X. Chen, B. Zhao and R. Li
09:00 – 09:25	Poincare's velocity representation in time domain free surface flow (p.21)	Y.M. Choi, S. Malenica, A.H. Clement, B. Bouscasse, and P. Ferrant
09:25 – 09:50	Effect of wave paddle motions on water waves (p.93)	H. Liang, Y.Z. Law, H. Santo, and E.S. Chan
09:50 – 10:15	An extension to the linear shallow water equation (p.149)	R. Porter
10:15 –10:35	On the Four-wave Resonant Interactions in Finite Water Depth (p.97)	S. Liu and X. Zhang
10:35 – 11:00	**Coffee break**	
Session 4	Chair: Alessandro Iafrati	
11:00 – 11:25	Effect of a submerged plate on flexural-gravity wave blocking (p.29)	S. Das, T. Sahoo, and M.H. Meylan
11:25 – 11:50	Gap resonance driven by linear, quadratic and cubic wave excitation (p.209)	W. Zhao, P.H. Taylor, H.A. Wolgamot, and R. Eatock Taylor
11:50 – 12.15	Oblique scattering by a thick rectangular barrier in deep water (p.25)	B.C. Das, S. De, and B.N. Mandal
12:15 – 12:40	A graded resonator array for amplification of water waves (p.137)	M.A. Peter, L.G. Bennetts, and R.V. Craster
12:40 – 14:00	**Lunch**	
Session 5	Chair: Šime Malenica	
14:00 – 14:25	Comparison of wave-body interaction modelling methods for the study of reactively controlled point absorber wave energy converter (p.33)	B. Ding, P.Y. Wuillaume, F. Meng, A. Babarit, B. Schubert, N. Sergiienko, and B. Cazzolato
14:25 – 14:50	Numerical investigation of the performance of a pile-restrained WEC-type dual-floating breakwater system (p.37)	H. Ding, J. Zang, C. Blenkinsopp, D. Ning, X. Zhao, Q. Chen, and J. Gao
14:50 – 15:15	A study of reactively controlled floating point absorber in wave tank experiments (p.193)	Q. Xu, Y. Li, B. Ding, Z. Lin, and B. Cazzolato
15:15 – 15:40	Modelling motion instabilities of a submerged wave energy converter (p.153)	D. Rijnsdorp, J. Orszaghova, D. Skene, H. Wolgamot, and A. Rafiee
15:40– 16:10	**Coffee break**	
Session 6	Chair: Rodney Eatock Taylor	
16:10 – 16:35	A fast method for optimization of large wave energy converter arrays (p.177)	G. Tokic and D.K.P. Yue
16:35 – 17:00	Hydrodynamic study of energy harvesting breakwater with parabolic openings (p.201)	C. Zhang, D. Ning, and B. Teng
17:00 – 17:25	Wave interaction with a floating circular flexible porous membrane in a two-layer fluid (p.9)	H. Behera, S.A. Selvan, and V.K. Gupta
17:25 – 17:50	Wave interaction with a shallowly submerged step (p.105)	G. McCauley, H. Wolgamot, S. Draper, and J. Orszaghova
18:00 – 19:00	**IWWWFB Steering Committee Meeting**	
19:00	**Dinner**	

Session 7	Chair: Kevin Maki	
08:35 – 09:00	Nonlinear wave diffraction and radiation around a ship-shaped FPSO in oblique seas (p.13)	L. Chen, P.H. Taylor, S. Draper, H. Wolgamot, L. Cheng, and D.Z. Ning
09:00 – 09:25	Simplified models for waves due to steadily moving ships and submerged bodies (p.109)	S.W. McCue, R. Pethiyagoda, and T.J. Moroney
09:25 – 09:50	Time-frequency analysis of wakes produced by turning ships (p.141)	R. Pethiyagoda, T.J. Moroney, and S.W. McCue
09:50 – 10:15	Simple analytical approximations to farfield or short ship waves (p.189)	H. Wu, J. He, and F. Noblesse
10:15 –10:35	Initial experimental validation of a pressure impulse model for a vertical circular cylinder (p.49)	A. Ghadirian and H. Bredmose
10:35 – 11:00	**Coffee break**	
Session 8	Chair: Mashashi Kashiwagi	
11:00 – 11:25	An experimental model of wind-induced rafting of pancake ice floating on waves (p.41)	A. Dolatshah, L.G. Bennetts, M.H. Meylan, J. P. Monty, and A. Toffoli
11:25 – 11:50	On nonlinear wave interaction with deformable ice sheets (p.61)	M. Hayatdavoodi, V. Kostikov, R. Cengiz Ertekin, and Y. Chen
11:50 – 12.15	Wave-induced drift of a thin floating plate: A numerical experiment (p.169)	S. Tavakoli, F. Nelli, L.G. Bennetts, and A. Toffoli
12:15 – 12:40	Numerical simulation of hydroelastic waves along a semi-infinite ice floe (p.69)	L. Huang, A. Dolatshah, P. Cardiff, L. Bennetts, A. Toffoli, Z. Tukovic and G. Thomas
12:40 – 14:00	**Lunch**	
Session 9	Chair: Bernard Molin	
14:00 – 14:25	On Piston and Sloshing Mode Resonances in Three-dimensional Moonpool of Vessels in Fixed and Free-floating Conditions (p.65)	H. Huang, X. Xu, and X. Zhang
14:25 – 14:50	Predictions of Ship Turning Circle Maneuvers Using A Combined Computational Fluid Dynamics and Potential Flow Approach (p.181)	P.F. White, B.G. Knight, K.J. Maki, D.J. Piro, and R.F. Beck
14:50 – 15:15	Experiments on a barge rolling next to a wall (p.121)	I. A. Milne, O. Kimmoun, B. Molin, and J. M. R. Graham
15:15 – 15:40	Study on Added Resistance with Measured Unsteady Pressure Distribution on Ship-hull Surface (p.81)	M. Kashiwagi, H. Iwashita, S. Miura, and M. Hinatsu
15:40– 16:10	**Coffee break**	
Session 10	Chair: Richard Porter	
16:10 – 16:35	Moving Pressure Distribution in an Ice Channel (p.165)	I.V. Sturova and L.A. Tkacheva
16:35 – 17:00	Study on Sensitivity of Ship Added Resistance to Wave Slope (p.85)	B.S. Kim, K.K. Yang, and Y. Kim
17:00 – 17:25	Water wave scattering by asymmetric trench beneath ice cover (p.145)	S. Paul and S. De
17:25 – 17:50	Numerical simulation of interface deformation and wave resistance caused by a given pressure load moving in an ice-breaking channel (p.129)	B.Y. Ni and L. D. Zeng
19:00	**Banquet Dinner**	

Wednesday April 10th, 2019

Session 11	Chair: Robert Beck	
09:00 – 09:25	Study on water column impact without/with air cavity (p.161)	B. Song and C. Zhang
09:25 – 09:50	Nonlinear Stochastic Prediction of Extreme Deck Slamming on Offshore Platform in Irregular Waves (p.125)	H.S. Nam and Y. Kim
09:50 – 10:15	Cavitation/ventilation phenomena during the water impact with horizontal velocity of double curvature shaped bodies (p.73)	A. Iafrati and S. Grizzi
10:15 –10:35	A Fictitious Body Continuation model for the vertical water entry of 2D asymmetric bodies with flow separation (p.57)	R. Hascoet, N. Jacques, Y.M.Scolan, and A. Tassin
10:35 – 11:00	**Coffee break**	
Session 12	Chair: Harry Bingham	
11:00 – 11:25	A Linear Elasticity Model for Ice Shelf Vibrations (p.77)	B. Kalyanaraman, M.H. Meylan, B. Lamichhane, and L.G. Bennetts
11:25 – 11:50	Modelling of Wave-structure Interaction for Cylindrical Structures using a Spectral Element Multigrid Method (p.89)	W. Laskowski, H.B. Bingham, and A.P. Engsig-Karup
11:50 – 12.15	A non-hydrostatic model for nonlinear water waves interacting with structures (p.101)	Y. Ma, C. Ai, C. Yuan, and G. Dong
12:15 – 12:40	Second order interaction of flexural gravity waves with bottom mounted vertical circular cylinder (p.113)	S. Malenica, A.A. Korobkin, T.I. Khabakhpasheva, and S.H. Kwon
13:00 – 14:00	**Lunch**	