

33rd International Workshop on Water Waves and Floating Bodies

4-7th April, 2018, Guidel-Plages, France



Technical Programme

WEDNESDAY APRIL 4TH, 2018

- 10:00 – 12:00 **Registration**
- 09:00 – 12:00 Visit of the submarine base in Lorient
- 12:30 – 13:40 **Lunch**
- 13:40 – 13:50 Welcome and Opening Remarks
- SESSION 1 CHAIR: ROBERT BECK
- 13:50 – 14:12 Validation of damaged ship hydrodynamics by a Domain Decomposition Approach using the Harmonic Polynomial Cell method and OpenFOAM (p.189) Siddiqui M.A., Greco M., Colicchio G., Faltinsen O.M.
- 14:12 – 14:34 Preliminary study on coupling of viscous and potential flow using domain decomposition and relaxation zones (p.25) Choi Y.M., Malenica Š, Bouscasse B., Sopheak S., Monroy C., Gentaz L., Ferrant P.
- 14:34 – 14:56 Hybrid modeling of wave structure interaction with overlapping viscous-inviscid domains (p.61) Harris J.C., O'Reilly C. M., Mivehchi A., Kuznetsov K., Janssen C. F., Grilli S. T., Dahl J. M.
- 14:56 – 15:18 Simulation of a fixed cylinder in waves using the SWENSE method within a weakly-compressible approach (p.53) Gouin M., Oger G., Le Touzé D.
- 15:18 – 15:35 **Coffee break**
- SESSION 2 CHAIR: ALEXANDR KOROBKIN
- 15:35 – 15:57 Robust computation of steady water waves of arbitrary length (p.29) Clamond D.
- 15:57 – 16:19 Nonlocal model for deep water waves of a potential flow (p.5) Bestehorn M., Tyvand P.A.
- 16:19 – 16:41 Dispersive shock water waves. Experiments and numerical comparisons (p.93) Kimmoun O., Hsu H.C., Chabchoub A.
- 16:41 – 17:03 Formation of waves riding on the forced free-surface flow (p.101) Kostikov V.K., Makarenko N.I.
- 17:03 – 17:20 **Coffee break**
- SESSION 3 CHAIR: DAVID EVANS
- 17:20 – 17:42 Transient wave run-up on cylinders due to wavefronts (p.117) Li R., Duan W.
- 17:42 – 18:04 Backward waves through array of rectangular columns (p.81) Iida T., Kashiwagi M.
- 18:04 – 18:26 Plate arrays as a water wave metamaterial (p.165) Porter R.
- 18:26 – 18:48 Rainbow trapping of water waves (p.157) Peter M.A., Bennetts L.G., Craster R.V.
- 18:48 – 19:10 **Welcome drinks reception**
- 19:30 **Dinner**

THURSDAY APRIL 5TH, 2018

SESSION 4	CHAIR: PAUL SCLAVOUNOS	
08:30 – 08:52	Numerical study of the hydrodynamic performance of a pile-restrained WEC-type floating breakwater (p.21)	Chen Q., Zang J., Zhao X., Ning D.
08:52 – 09:14	A second-order theory for wave energy converters with curved geometry (p.137)	Michele S., Renzi E., Sammarco P.
09:14 – 09:36	Time- and frequency-domain comparisons of the wavepiston wave energy converter (p.173)	Read R., Bingham H.B.
09:36 – 09:58	Hydrodynamic investigation of a dual-chamber OWC Wave Energy Converter (p.145)	Ning D., Wang R.Q., Gou Y.
09:58 – 10:20	Coffee break	
SESSION 5	CHAIR: ALESSANDRO IAFRATI	
10:20 – 10:42	Challenges in developing a SWENSE two-phase CFD solver for complex wave conditions (p.113)	Li Z., Bouscasse B., Ducrozet G., Gen-taz L., Ferrant P.
10:42 – 11:04	A combined CFD/Potential flow simulation method for prediction of hydrodynamic maneuvering forces (p.225)	White P.F., Beck R.F., Maki K.J., Piro D.J.
11:04 – 11:26	Linearized seakeeping using CFD (p.129)	Malenica Š, Vukcevic V.
11:26 – 11:48	Modelling nonlinear wave-body interaction with the Harmonic Polynomial Cell method combined with the Immersed Boundary Method on a fixed grid (p.177)	Robaux F., Benoit M.
11:48 – 12:10	A harmonic polynomial method based on Cartesian grids with local refinement for complex wave-body interactions (p.221)	Wang J., Faltinsen O.M.
12:10 – 13:25	Lunch	
SESSION 6	CHAIR: ŠIME MALENICA	
13:25 – 13:47	Wave Diffraction by Multiple Vertical Cylinders: The Nonlinear Shallow Water Wave Equations (p.65)	Hayatdavoodi M., Neill D. R., Ertekin R. C.
13:47 – 14:09	Wave transmission through vertical thin barriers with gaps in channels by a hyper singular BEM (p.209)	Teng B., Huang J., Zhao Y.F., Gou Y.
14:09 – 14:31	On natural modes in two-dimensional asymmetric and symmetric moonpools in finite water depth (p.73)	Huang H., Zhang X.
14:31 – 14:53	On sloshing modes in square or nearly square moonpools (p.141)	Molin B.
14:53 – 15:15	Coffee break	
SESSION 7	CHAIR: YONGHWAN KIM	
15:15 – 15:37	The uniform motion of an external load along the edge of the ice cover (p.201)	Sturova I. V., Tkacheva L. A.
15:37 – 15:59	Interaction of hydroelastic waves in ice cover with vertical walls (p.97)	Korobkin A.A., Malenica Š., Khabakhpasheva T.I.
15:59 – 16:21	Application of the hydroelastic theory of ships to the motion of ice shelves (p.133)	Meylan M. H., Bennetts L. G., Ilyas M., Lamichhane B., Peter M. A.
16:21 – 16:43	Head-on collision between two hydroelastic solitary waves under a thin ice sheet floating on shallow water (p.9)	Bhatti M.M., Lu D. Q.
16:43 – 17:00	Coffee break	
SESSION 8	CHAIR: BERNARD MOLIN	
17:00 – 17:22	Water impact near the edge of a floating ice sheet (p.89)	Khabakhpasheva T.I., Chen Y., Korobkin A.A., Maki K.
17:22 – 17:44	Boundary-integral relations in the theory of ship motions in regular waves (p.149)	Noblesse F.
17:44 – 18:06	Semi-analytical solution for wave diffraction-radiation by a truncated porous vertical cylinder (p.153)	Ouled Housseine C., Malenica Š
18:06 – 18:28	Wave energy conversion using machine learning forecasts and model predictive control. (p.181)	Sclavounos P.D. , Ma Y.
18:28 – 19:15	IWWF Steering Committee Meeting	
19:30	Dinner	

FRIDAY APRIL 6TH, 2018

SESSION 9 CHAIR: RODNEY EATOCK TAYLOR

08:30 – 08:52 Experimental study of the fast exit of a plate lifting from a water surface (p.213) Vega-Martinez P., Rodriguez-Rodriguez J., Khabakhpasheva T.I., Korobkin A.A.

08:52 – 09:14 Experiments on the water entry and/or exit of a cone(p.205) Tassin A., Breton T., Jacques N.

09:14 – 09:36 Effect of the body curvature on aircraft ditching hydrodynamics (p.77) Iafrati A.

09:36 – 09:58 An innovative EFD for studying ship seakeeping (p.85) Iwashita H., Kashiwagi M.

09:58 – 10:20 **Coffee break**

SESSION 10 CHAIR: MASASHI KASHIWAGI

10:20 – 10:42 The waterline integral in the Neumann-Kelvin theory of ship waves (p.69) He J., Noblesse F., Yang C.J., Li W., Delhommeau G.

10:42 – 11:04 Hydrodynamics of side wall effects through image Green function based TEBEM (p.13) Chen J., Duan W., Zhao B.B.

11:04 – 11:26 Accurate evaluation of the Kochin function for added resistance using a high-order finite difference-based seakeeping code (p.1) Amini-Afshar M., Bingham H. B.

11:26 – 11:48 Study on asymptotic formula for added resistance in short waves (p.229) Yang K.-K., Kim Y., Jung Y.W.

11:48 – 13:20 **Lunch**

SESSION 11 CHAIR: BIN TENG

13:20 – 13:42 Unsteady waves generated by two ships with different speeds (p.233) Yuan Z.-M., Yeung R.W.

13:42 – 14:04 Long-period passing vessel forces on ships moored in a port (p.161) Pinkster J., van der Hout A.

14:04 – 14:26 Prediction of ship operation performance in waves by seakeeping-maneuvering coupled analysis (p.105) Lee J.-H., Kim Y.

14:26 – 14:48 Analysis of the generation phase of the upstream waves caused by a ship moving across a depth change (p.57) Grue J.

14:48 – 15:15 **Coffee break**

SESSION 12 CHAIR: RICHARD PORTER

15:15 – 15:37 Extraordinary transmission past cylinders in channels (p.41) Evans D.V., Porter R., Chaplin J.R.

15:37 – 15:59 An experimental setup for wave-body forces in shear currents(p.193) Smeltzer B.K., Æsøy E., Li Y., Ellingsen S.Å.

15:59 – 16:21 Wave energy park interactions in short-crested waves (p.49) Göteman M., Giassi M., McNatt C.

16:21 – 16:43 The behaviour of short waves in the presence of large long waves (p.169) Rainey R.C.T.

16:43 – 17:10 **Coffee break**

SESSION 13 CHAIR: JOHN GRUE

17:10 – 17:32 Numerical simulation of wave impact with air cavity effects (p.197) Song B., Zhang C.

17:32 – 17:54 Wave-making problem by a vertical cylinder: Neumann-Kelvin theory versus Neumann-Michell theory (p.109) Liang H., Chen X.B., Feng X.

17:54 – 18:16 Experimental and numerical investigation of sloshing in anti-roll tank using effective gravity angle. (p.37) Ercolanelli J., Le Boulluec M., Sclan Y.-M., Babarit A., Magaldi P.

18:16 – 18:38 Amplification of wave run-up in random waves driven by tertiary interactions (p.241) Zhao W., Taylor P.H., Wolgamot H.A., Eatock Taylor R.

18:45 – 19:45 **Drinks Reception**

19:45 **Banquet Dinner**

SATURDAY APRIL 7TH, 2018

SESSION 14 CHAIR: JUN ZANG

- 08:30 – 08:52 Numerical simulation of breaking waves using adaptive mesh approach (p.121) Liu C., Hu C.
- 08:52 – 09:14 A primary analysis of water wavefronts (p.17) Chen X.B., Li R., Zhao B.B.
- 09:14 – 09:36 The role of overtopping duration in greenwater loading (p.237) Zhang X., Wolgamot H., Draper S., Zhao W., Cheng L.
- 09:36 – 09:58 Reconstruction of an extreme wave profile with analytical methods (p.217) Vyzikas T., Prevosto M., Maisondieu C., Tassin A., Greaves D.
- 09:58 – 10:20 Numerical simulation of wave propagation over submerged reef (p.125) Li J., Zang J., Liu S., Jia W., Chen Q.
- 10:20 – 10:45 **Coffee break**

SESSION 15 CHAIR: HARRY BINGHAM

- 10:45 – 11:07 Flexural gravity wave blocking in a two-layer fluid (p.33) Das S., Sahoo T., Meylan M.H.
- 11:07 – 11:29 Steady solution of internal solitary waves in linear shear current (p.245) Zhao B.B., Wang Z., Duan W.Y., Yang W.Q., Ertekin R.C.
- 11:29 – 11:51 Efficient methodology of roll load prediction on 2D bodies in non-linear flows (p.45) Gadi R., Huijmans R.H.M., Akkerman I., Vant Veer R.
- 11:51 – 12:13 Closing Remarks
- 12:25 – 13:35 **Lunch**