

# International Symposium on Novel Computational and Experimental Methods for Complicated Fluid-Structure Interactions

January 20-21, 2020

Meeting Room at 2<sup>nd</sup> Floor, RIAM, Kyushu University, Kasuga, Fukuoka, Japan

Organized by  
Research Institute for Applied Mechanics, Kyushu University

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## TIME TABLE

### 20 January (Monday)

13:00 - 13:10	Opening Address by Changhong Hu
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#### Session 1

Chair: Changhong Hu

13:10 - 13:50	<b>Takayuki Aoki</b> (Tokyo Institute of Technology) <i>Invited Lecture</i> Weakly Compressible Flow Computations for Incompressible Two-phase flows and Fluid-Structure Interactions
13:50 - 14:20	<b>Mohamed Kamra</b> (RIAM, Kyushu University) Development of Unstructured Mesh CFD Code for Fluid-Structure Interactions
14:20 - 14:50	<b>Weiwun Zhao</b> , Decheng Wan (Shanghai Jiao Tong University, China) Numerical Investigations of Vortex-Induced Vibration of Flexible Riser under Motions of Floating Platform
14:50 - 15:20	<b>Seiya Watanabe</b> (RIAM, Kyushu University) Large-scale FSI Simulations for Free-surface Flow Using Lattice Boltzmann Method with Adaptive Mesh Refinement

15:20 - 15:50	Coffee break
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#### Session 2

Chair: Decheng Wan

15:50 - 16:30	<b>Young-Ho Lee</b> (Korea Maritime & Ocean University, Korea) <i>Invited Lecture</i> KMOU Offshore Energy Research Activities and KOREA Strategy on Floating Offshore Wind Development
16:30 - 17:00	<b>Yuan Zhuang</b> , Decheng Wan (Shanghai Jiao Tong University, China) Combined Solver HOS and naoe-FOAM-SJTU for Wave-Structure Interactions
17:00 - 17:30	<b>Takao Fukumoto</b> (Hiroshima University) Estimation of Hydrodynamic Forces by Integrating Unsteady-Pressure Distribution Measured with FBG Pressure Sensors
17:30 - 18:00	<b>Kurniawan Waskito</b> , Masashi Kashiwagi, Hidetsugu Iwashita, Munehiko Hinatsu (Osaka University) Prediction of Nonlinear Wave Loads Using Measured Pressure Distribution on Ship Hull
18:00 - 18:30	<b>Isshiki Hiroshi</b> (Institute of Numerical Analysis) Node Generation in Numerical Calculation by Stochastic Sampling – Application to Interpolation of a Function and Solution of Burgers Equation Using Collocation Method

18:30 - 20:30	Dinner Party
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## 21 January (Tuesday)

### Session 3

Chair: Tomoaki Utsunomiya

9:20 - 10:00	<b>Ye Li</b> (Shanghai Jiao Tong University, China) <i>Invited Lecture</i> Numerical and Experimental Investigation of Offshore Renewable Energy System
10:00 - 10:30	<b>Lin Yang, Q.W. Ma and Kangping Liao</b> (Harbin Engineering University, China) Coupled Aero-Elastic Analysis of a Wind Turbine System using CFD and Finite Element Method
10:30 - 11:00	<b>Zhiqiang Hu</b> (Newcastle University, UK) A Machine Learning based Software-In-the-Loop method to Predict and Monitor the global dynamic responses of floating wind turbine system
11:00 - 11:30	<b>Decheng Wan</b> (Shanghai Jiao Tong University, China) Large-Eddy Simulations of Complex Wake Flows around Large Wind Farm in Real Wind Environments
11:30 - 12:00	<b>Tarek Dief, Mostafa Rushdi, Amr Halawa, Shigeo Yoshida</b> (RIAM, Kyushu University) Hardware-in-the-Loop (HIL) and Experimental Results for the 7 kW Pumping Kite Power System

12:00 - 13:20	Lunch break
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### Session 4

Chair: Yingyi Liu

13:20 - 14:00	<b>Christopher Vogel</b> (Oxford University, UK) <i>Invited Lecture</i> Multi-Scale Fluid Dynamics in Offshore Renewable Energy
14:00 - 14:30	<b>Dezhi Ning</b> (Dalian University of Technology, China) Hydrodynamic Performance of a Dual-Chamber OWC Wave Energy Converter
14:30 - 15:00	<b>Guojian Chen</b> (Bureau Veritas Marine China Co., ltd) Windmill R&D progressing in BV
15:00 - 15:30	<b>Ying Gou</b> (Dalian University of Technology, China) Vertical Motion Response of a Submerged Body Induced by Internal Solitary Waves
15:30 - 16:00	<b>Guanghua He</b> (Harbin Institute of Technology, China) Study on a Wave Energy Converter with eight round Floats

16:00 - 16:10	Closing Address by Decheng Wan
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