# The 2nd International Symposium on Marine Renewable Energy System Dynamics

Organized by Research Institute for Applied Mechanics (RIAM), Kyushu University

Date: January 15-16, 2024

Venue: Meeting Room at 2<sup>nd</sup> Floor of RIAM

Kyushu University, 6-1 Kasuga-koen, Kasuga, Fukuoka 816-8580, Japan

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#### **TIME TABLE**

12:50 -13:00	Opening Address by Ye Li
Session 1	Advanced Theoretical, Numerical, and Experimental Research
13:00 - 13:40	Cheng Liu (Shanghai Jiao Tong University, China)
	<u>Invited Lecture</u>
	Numerical Method in the Simulation of Two-Phase Flow with Adaptive Mesh
13:40 - 14:05	Seiya Watanabe (RIAM, Kyushu University)
	Lattice Boltzmann Simulation of a Multi-Rotor Diffuser Augmented Wind Turbine
14:05 - 14:30	Jun Leng (Shanghai Jiao Tong University, China)
	A Fluid-Structure Interaction Model for Large Wind Turbines based on Flexible Multibody
	Dynamics and Actuator Line Method
14:30 – 14:55	Yingyi Liu (RIAM, Kyushu University)
	3p Effect of a Downstream Horizontal Axis Turbine in Partially Waked Flows
14:55 – 15:20	Hiroki Yamazaki, Hidetsugu Iwashita, Keigo Okazaki, Takahiro Tsuchimoto (Hiroshima
	University)
	Unsteady Ship-Side Wave Measurement of a Ship Advancing in Waves by Image Analysis

# 15:20 - 15:30 Break

#### Session 2 Ocean Renewable Energy Technology

15:30 - 16:10	Ning Ma (Shanghai Jiao Tong University, China)
	Invited Lecture
	Direct Stability Assessment of an Offshore Supply Vessel
16:10 - 16:35	Zhiqiang Hu (Newcastle University, UK)
	Offshore Wind and Artificial Intelligence: Steps to Real-time Monitoring and Digital Twins
	for Offshore Wind Turbines
16:35 - 17:00	Hongzhong Zhu (RIAM, Kyushu University)
	Control of Floating Type Hybrid Wind-Wave Energy System for Floater Motion Reduction

17:00 - 17:25	Binzhen Zhou (South China University of Technology, China)
	Development of Oscillating Body Wave Energy Converter Related Hybrid Systems
17:25 - 17:50	Yusaku Kyozuka (Nagasaki University)
	Impact of Tidal Array Interactions on Power Production: a Case Study in Naru Strait, Goto,
	Nagasaki

## Session 3 Floating Offshore Wind Turbine

Session 5	Floating Offshore wind Turbine
9:20 - 10:00	Motohiko Murai (Yokohama National University)
	<u>Invited Lecture</u>
	A Problem of Long Period Yaw Motion of 15MW Class Floating Offshore Wind Turbine
10:00 - 10:25	Hoseong Yang, Young-Ho LEE (KMOU, Korea)
	A Study on the Uncertainty Analysis of FOWT Response Using Engineering Tools Based on
	the Potential Method and CFD
10:25 - 10:50	Sangwon Lee (Jeju National University, Korea)
	Ultimate Load Analysis for Large Floating Offshore Wind Turbines under Wind-Wave
	Misalignment Condition
10:50-11:15	Yarong Zhou (Shanghai Jiao Tong University, China)
	A Model Reference Adaptive Control Framework for Floating Offshore Wind Turbines with
	Collective and Individual Blade Pitch Strategy
11:15 - 11:40	Lijun Zhang (Shanghai Jiao Tong University, China)
	Study on the Interaction of Floating Offshore Wind Turbines Under Wind and Wave Coupling
	Conditions
11:40 - 12:05	Ryoya Hisamatsu (Kyushu University)
	Experimental and Numerical Study of the Dynamics of Water Intake Riser for OTEC
	Application
12:05 - 12:30	Shiu-Wu Chau (National Taiwan University, Taiwan, R.O.C.)
	Hydrodynamic Property Prediction of Floating Bodies via a Viscous Approach

12:30 - 12:35 Closing Address by Changhong Hu	
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