

## **AEROELASTIC SIMULATION OF OFFSHORE FLOATING WIND TURBINES BY COUPLING FREE WAKE METHOD**

Minu JEON<sup>1\*</sup>, Seunghoon LEE<sup>1</sup>, and Soogab LEE<sup>2</sup>

<sup>1</sup> *Department of Aerospace and Mechanical Engineering, Seoul National University, Seoul, Korea*

<sup>2</sup> *Center for Environmental Noise and Vibration Research, Seoul National University, Seoul, Korea*

\* *corresponding author ([ase55@snu.ac.kr](mailto:ase55@snu.ac.kr))*

While onshore wind turbine has simple flow state, the offshore floating wind turbines (OFWT) has complex flow states during floating platform's motion. So, aerodynamic model plays an important role in the dynamic simulation of OFWT systems. The present work analyzes the unsteady aerodynamics of offshore floating wind turbines by substituting FAST's AeroDyn for free wake method (FVM). Several cases of validations were conducted with unsteady aerodynamic experimental data, for which no aerodynamic experimental data of OFWT is currently available. The results show better performance than blade element momentum method, which is conventionally used method.

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