

X International Conference on Computational Methods in Marine Engineering
MARINE 2023

Invited Session:

Numerical models and Experimental Analysis of floating offshore wind energy systems

Organizer: Krish Sharman

Co-organizer: Jonathan Colby

Floating systems are needed when wind energy systems are located in water depths where fixed foundations are too expensive. A floating platform that is moored to the seabed with an operating wind turbine responds dynamically to the ocean environment and prediction of these motions are important for estimation of fatigue damage on vulnerable components. At the other end, the entire system needs to be designed to withstand extreme environments over its lifetime, all the while focusing on maximizing power production. This session will feature a cross-section of research that supports development and implementation of numerical techniques, with the aid of experimental validation.

Authors	Title	Contact
Azin Lamei, Masoud Hayatdavoodi, H. Ronald Riggs	Coupled waves, current and wind loads on elastic floating offshore wind turbines	Masoud Hayatdavoodi < m.hayatdavoodi@dundee.ac.uk >
Seung-Yoon Han, Sylvain Delacroix, Dwi Lestari, Benjamin Bouscasse, Vincent Leroy, Félicien Bonnefoy, Jean-Christophe Gilloteaux, David Le Touzé	Study of hydrodynamic loads on a truncated circular cylinder with a heave plate in irregular seas	S-Y Han, seung-yoon.han@ec-nantes.fr
Vincent Leroy, Sylvain Delacroix, Vincent Arnal, Jean-Christophe Gilloteaux, Felicien Bonnefoy	Experimental analysis of the dynamic response and control of a floating wind turbine using a hybrid modelling approach	Vincent.leroy@ec-nantes.fr
Tomas Lopez-Olocco, Leo M. González Gutiérrez and Krish Thiagarajan	Hybrid Mooring Systems for a Spar FOWT under regular waves: a numerical and experimental study	Tomas Lopez tomas.lopez@upm.es
Jonathan Colby, Amy Robertson, Jason Jonkman	The role of international standards and certification in the development, validation, and implementation of numerical models for floating offshore wind turbines (FOWTs)	Jonathan Colby streamwisesev@gmail.com

