



Seas of Sustainability

Offshore Wind Energy Seminar Series

Challenges and recent progress of computational fluid dynamics in offshore wind



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**Tuesday | April 9, 2024 | 12pm | Donovan Hall G172
(Pizza and Soda provided)**

With the immense potential for wind energy in deep-water offshore areas, accompanying challenges become increasingly apparent. The complexity of operational conditions renders current engineering models less predictive, underscoring the growing importance and appeal of high-fidelity numerical methods like computational fluid dynamics (CFD). This seminar will showcase advancements in CFD, exemplified by Converge CFD, within the context of the floating offshore wind energy. It will explore current developments, applications, address pertinent challenges, and offer insightful perspectives for the field.

Bio: Dr. Xie is currently the Principal Research Engineer at Convergent Science: Development and application of CFD in wind energy. He graduated from Beihang University with Bachelor and Master's degrees, and later a Master's degree in mechanical engineering from Johns Hopkins University. He obtained his Ph.D in Ocean Engineering from the University of Delaware with a research focusing on numerical study of wind turbine wakes under various atmospheric stability conditions. As Principal Research Engineer at Convergent Science, he is working in enhancing and expanding the company's portfolio in renewable energy, especially in wind energy. As one of the key members, they have developed a state-of-the-art package for modeling of various types of wind turbines, environmental flows, and offshore wind turbine fluid-structure interactions.



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