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Floating Offshore Wind Turbines Control Progress and Challenges

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Message from the Guest Editors

Offshore generation has several advantages, such as its environment, where wind is stronger and more consistent than wind on land, compared to onshore wind power generation. However, offshore wind turbines—especially floating ones—experience considerable structural loads because of the coupled effect of wind and waves, leading to large blade–root and tower–base fatigue loadings. Moreover, wave- and wind-induced motion of the floating platform lead to a significantly different behavior than fixed offshore systems. Improving the control system and power harnessing strategy for floating offshore wind turbines is thus a key point to reduce the induced motions, therefore allowing power regulation and load reduction. In this context, this Special Issue aims to provide an open platform to share knowledge about floating offshore wind turbine control and modeling challenges. It particularly seeks original contributions regarding ideas, recent developments, or mature control strategies addressing both theoretical and experimental studies.



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Special Issue



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Message from the Editor-in-Chief

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