



Modern Trends in Nonlinear Dynamics in Ocean Engineering

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Message from the Guest Editors

With the development of science and technology, the exploitation of ocean resources has become an effective pathway to obtain sources of great economic value. However, more complex and harsh operating environments have resulted from the high uncertainty and remarkable destructive power in extreme sea conditions, such as typhoons, huge waves, and internal waves. Consequently, nonlinear phenomena exist in ocean engineering structures, such as marine systems and floating platforms. It is therefore necessary for scholars to study the nonlinear dynamics in ocean engineering, elucidate the dynamic mechanisms, and establish appropriate control methods to suppress the nonlinear vibration. Meanwhile, marine environmental noise induced by the nonlinear vibration has a certain research value and application prospects in the fields of engineering and marine health. By extracting and analyzing the numerical characteristics of marine environmental noise, its application value in engineering fields, such as hydrodynamics, ship dynamics, and fluid dynamics, as well as the impact of marine noise on marine organisms and human perception can be explored.





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