1. Record Nr. UNINA9911018743003321

Autore	Shadmani Alireza
Titolo	Ocean Wave Energy Technology : Fundamentals of Wave Farm Design / / by Alireza Shadmani, Mohammad Reza Nikoo, Amir H. Gandomi
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-95040-2
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (294 pages)
Altri autori (Persone)	NikooMohammad Reza GandomiAmir H
Disciplina	621.312136
Soggetti	Wind power Renewable energy sources Computational intelligence Offshore structures Artificial intelligence Wind Energy Renewable Energy Computational Intelligence Offshore Engineering Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Wave Energy Fundamentals and Calculation -- 2. Boundary Element Methods -- 3. Wave Energy Converter Principles and Geometry Design -- 4. Layout Design Characteristics and Cost Evaluation -- 5. Power Take-Off Control of WECs.
Sommario/riassunto	This book demonstrates the transformative power of optimization algorithms in advancing ocean wave energy. It blends theory with practice to explain how computational optimization can dramatically enhance the efficiency and performance of wave energy converters - devices that harness the power of ocean waves for renewable energy. The books illustrations and detailed tables provide visual and comparative insights into the interactions between various algorithmic approaches and wave energy systems, helping make complex

engineering concepts accessible to non-specialists. With real-world case studies and innovative perspectives on algorithmic optimization in wave farm design, this book serves as a comprehensive gateway to understanding not only the fundamentals of wave energy but also the cutting-edge techniques steering the field toward a more sustainable future.