

1. Record Nr.	UNINA9910647486903321
Titolo	Artificial intelligence oceanography // edited by Xiaofeng Li, Fan Wang
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-19-6375-4
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (xii, 346 pages) : illustrations (chiefly color)
Altri autori (Persone)	LiXiaofeng WangFan
Disciplina	551.46
Soggetti	Oceanography - Data processing Artificial intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Theory and technology of artificial intelligence for oceanography -- Satellite data-driven internal wave forecast model based on machine learning techniques -- Detection and analysis of marine macroalgae based on artificial intelligence -- Tropical cyclone intensity estimation from geostationary satellite imagery -- Reconstructing marine environmental data based on deep learning -- Detecting oceanic processes from space-borne sar imagery using machine learning -- Deep convolutional neural networks-based coastal inundation mapping for un-defined least developed countries: taking madagascar and mozambique as examples -- Ai- based mesoscale eddy study -- Classifying sea ice types from sar images based on deep fully convolutional networks -- Detecting ships and extracting ship's size from SAR images based on deep learning -- Quality control of ocean temperature and salinity data based on machine learning technology -- automatic extraction of internal wave signature from multiple satellite sensors based on deep convolutional neural networks -- Automatic extraction of waterlines from large-scale tidal flats on SAR images and applications based on deep convolutional neural networks -- Forecast of tropical instability waves using deep learning -- Sea surface height prediction based on artificial intelligence.
Sommario/riassunto	This open access book invites readers to learn how to develop artificial intelligence (AI)-based algorithms to perform their research in

oceanography. Various examples are exhibited to guide details of how to feed the big ocean data into the AI models to analyze and achieve optimized results. The number of scholars engaged in AI oceanography research will increase exponentially in the next decade. Therefore, this book will serve as a benchmark providing insights for scholars and graduate students interested in oceanography, computer science, and remote sensing.
