1. Record Nr. UNINA9910483312103321 Autore Wu Ziyin Titolo High-resolution Seafloor Survey and Applications / / by Ziyin Wu, Fanlin Yang, Yong Tang Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2021 Pubbl/distr/stampa 981-15-9750-2 **ISBN** Edizione [1st ed. 2021.] 1 online resource (XVIII, 400 p. 366 illus., 254 illus. in color.) Descrizione fisica 551.46084 Disciplina Soggetti Oceanography Geographic information systems Geology Geomorphology Geophysics Ocean Sciences Geographical Information System Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Multi-beam bathymetry technology -- Airborne LiDAR bathymetry technolog -- Side scan sonar and sub-bottom profiler detection technology -- Navigation and positioning technology --Water level measurement and vertical datum conversion technology --DTM and Seafloor mapping technology -- The delimitation of continental shelf based on seafloor graphics -- The application of submarine geomorphology -- The application of automatic recognition of seabed target -- The application of seafloor classification -- The application of research on international seabed resources. Sommario/riassunto This book focuses on the survey technology, post-processing technology, mapping technology and scientific application of the submarine topography and geomorphology in detail. High-resolution submarine geomorphology is a frontier branch of Marine Geology and marine surveying and mapping, which provides a direct basis to study the seabed surface, to understand the tectonic movement and

submarine evolution. In the past two decades, high-resolution submarine geomorphology with high-precision multi-beam echo

sounding, side-scan sonar and shallow bottom profile as the major techniques, is developing very quickly and is one of the frontiers of international marine science and technology. These high techniques promote the traditional submarine geomorphology to high-resolution and quantitative research. At present, high-resolution submarine geomorphology is widely used in the delimitation of the continental shelf and the international seabed resources survey, marine engineering and marine military applications. In order to facilitate readers to understand how to acquire and apply scientific research based on landform data, it highlights the combination of theory, technology and scientific application. This book is useful as a reference for professional and technical personnel in related fields and also as a textbook for both graduate and undergraduate students as well.