

## Discovering The Ocean From Space The Unique Applications Of Satellite Oceanography Springer Praxis Books

From September 2007 to June 2008 the Space Studies Board conducted an international public seminar series, with each monthly talk highlighting a different topic in space and Earth science. The principal lectures from the series are compiled in *Forging the Future of Space Science*. The topics of these events covered the full spectrum of space and Earth science research, from global climate change, to the cosmic origins of life, to the exploration of the Moon and Mars, to the scientific research required to support human spaceflight. The prevailing messages throughout the seminar series as demonstrated by the lectures in this book are how much we have accomplished over the past 50 years, how profound are our discoveries, how much contributions from the space program affect our daily lives, and yet how much remains to be done. The age of discovery in space and Earth science is just beginning. Opportunities abound that will forever alter our destiny.

Selected by The New York Times Book Review as a Notable Book of the Year A revelatory tale of science, adventure, and modern myth. When the writer Donovan Hohn heard of the mysterious loss of thousands of bath toys at sea, he figured he would interview a few oceanographers, talk to a few beachcombers, and read up on Arctic science and geography. But questions can be like ocean currents: wade in too far, and they carry you away. Hohn's accidental odyssey pulls him into the secretive world of shipping conglomerates, the daring work of Arctic researchers, the lunatic risks of maverick sailors, and the shadowy world of Chinese toy factories. *Moby-Duck* is a journey into the heart of the sea and an adventure through science, myth, the global economy, and some of the worst weather imaginable. With each new discovery, Hohn learns of another loose thread, and with each successive chase, he comes closer to understanding where his castaway quarry comes from and where it goes. In the grand tradition of Tony Horwitz and David Quammen, *Moby-Duck* is a compulsively readable narrative of whimsy and curiosity.

"A 22-volume, highly illustrated, A-Z general encyclopedia for all ages, featuring sections on how to use World Book, other research aids, pronunciation key, a student guide to better writing, speaking, and research skills, and comprehensive index"--

Inside the epic quest to find life on the water-rich moons at the outer reaches of the solar system Where is the best place to find life beyond Earth? We often look to Mars as the most promising site in our solar system, but recent scientific missions have revealed that some of the most habitable real estate may actually lie farther away. Beneath the frozen crusts of several of the small, ice-covered moons of Jupiter and Saturn lurk vast oceans that may have existed for as long as Earth, and together may contain more than fifty times its total volume of liquid water. Could there be organisms living in their depths? *Alien Oceans* reveals the science behind the thrilling quest to find out. Kevin Peter Hand is one of today's leading NASA scientists, and his pioneering research has taken him on expeditions around the world. In this captivating account of scientific discovery, he brings together insights from planetary science, biology, and the adventures of scientists like himself to explain how we know that oceans exist within moons of the outer solar system, like Europa, Titan, and Enceladus. He shows how the exploration of Earth's oceans is informing our understanding of the potential habitability of these icy moons, and draws lessons from what we have learned about the origins of life on our own planet to consider how life could arise on these distant worlds. *Alien Oceans* describes what lies ahead in our search for life in our solar system and beyond, setting the stage for the transformative discoveries that may await us.

Ten years ago, world-renowned professors W. Chan Kim and Renee Mauborgne broke ground by introducing "blue ocean strategy," a new model for discovering uncontested markets that are ripe for growth. In this bound version of their bestselling Harvard Business Review classic article, they apply their concepts and tools to what is perhaps the greatest challenge of leadership: closing the gulf between the potential and the realized talent and energy of employees. Research indicates that this gulf is vast: According to Gallup, 70% of workers are disengaged from their jobs. If companies could find a way to convert them into engaged employees, the results could be transformative. The trouble is, managers lack a clear understanding of what changes they could make to bring out the best in everyone. In this article, Kim and Mauborgne offer a solution to that problem: a systematic approach to uncovering, at each level of the organization, which leadership acts and activities will inspire employees to give their all, and a process for getting managers throughout the company to start doing them. Blue ocean leadership works because the managers' "customers"--that is, the people managers oversee and report to--are involved in identifying what's effective and what isn't. Moreover, the approach doesn't require leaders to alter who they are, just to undertake a different set of tasks. And that kind of change is much easier to implement and track than changes to values and mind-sets. The Harvard Business Review Classics series offers you the opportunity to make seminal Harvard Business Review articles a part of your permanent management library. Each highly readable volume contains a groundbreaking idea that continues to shape best practices and inspire countless managers around the world--and will have a direct impact on you today and for years to come.

Teacher digital resource package includes 2 CD-ROMs and 1 user guide. Includes Teacher curriculum guide, PowerPoint chapter presentations, an image gallery of photographs, illustrations, customizable presentations and student materials, Exam Assessment Suite, PuzzleView for creating word puzzles, and LessonView for dynamic lesson planning. Laboratory and activity disc includes the manual in both student and teacher editions and a lab materials list.

Over the past 50 years, thousands of satellites have been sent into space on missions to collect data about the Earth. Today, the ability to forecast weather, climate, and natural hazards depends critically on these satellite-based observations. At the request of the National Aeronautics and Space Administration, the National Research Council convened a committee to examine the scientific accomplishments that have resulted from space-based observations. This book describes how the ability to view the entire globe at once, uniquely available from satellite observations, has revolutionized Earth studies and ushered in a new era of multidisciplinary Earth sciences. In particular, the ability to gather satellite images frequently enough to create "movies" of the changing planet is improving the understanding of Earth's dynamic processes and helping society to manage limited resources and environmental challenges. The book concludes that continued Earth observations from space will be required to address scientific and societal challenges of the future.

The world's oceans account for roughly 71 percent of the planet's surface and 99 percent of its livable volume. Any study of this huge habitat requires a solid foundation in the principles that

underlie marine biology and physical and chemical oceanography, yet until now undergraduate textbooks have largely presented compilations of facts rather than explanations of principles. How the Ocean Works fills this gap, providing a concise and accessible college-level introduction to marine science that is also ideal for general readers. How are winds and currents driven? What is the dilemma of the two-layered ocean? Mark Denny explains key concepts like these in rich and fascinating detail. He explores early scientific knowledge of oceans, photosynthesis, trophic interactions and energy flow, and the impacts of human activities on marine and atmospheric systems. Focusing each chapter on a major topic and carefully explaining the principles and theory involved, Denny gives readers the conceptual building blocks needed to develop a coherent picture of the living ocean. How the Ocean Works is an indispensable resource that teaches readers how to think about the ocean--its biology, mechanics, and conservation. Provides a concise, up-to-date introduction to marine science Develops the conceptual basis needed to understand how the ocean works Explains fundamental principles and theory Includes color illustrations and informative diagrams Serves as a college textbook and a reference for general readers Some images inside the book are unavailable due to digital copyright restrictions.

From Astronaut Abby, the dynamic founder of The Mars Generation, comes a book about dreaming big, reaching for the stars, and making a plan for success! From the age of four, Abigail Harrison knew she wanted to go to space. At age eleven, she sat down and wrote out a plan--not just for how to become an astronaut, but how to be the first astronaut to set foot on Mars. With a degree in biology, internships at NASA, and a national organization founded to help kids reach for the stars themselves, Astronaut Abby is well on her way to achieving her dreams--and she wants to help others do the same! In this book, readers will find helpful advice and practical tips that can help set them on the path toward finding, reaching for, and achieving their goals. With examples from Abby's own life, interactive activities to get readers going, and plenty of fun illustrations along the way, this is the perfect guide for anyone--of any age--with big dreams and plenty of determination. It's time to reach for the stars! Praise for Dream Big!: "With friendly encouragement . . . the content and approach are general enough to appeal both to STEM-oriented fans of the author as well as those whose interests lie in other areas . . . Fun and helpful." --Kirkus Reviews "Any young person who wants to achieve their dreams will find this comprehensive book helpful." --Booklist "The conversational style is easy to understand. . . . There are eye-catching fonts, icons, think bubbles, and callouts. . . . A recommended purchase for middle school and high school libraries. Counselors assisting high schoolers with college preparation and educators teaching leadership classes will find many of the journaling activities very useful." --School Library Journal

The world's oceans cover just over 70.8 per cent of the Earth's surface, and yet we know more about the moon than what lies beneath these dark waters. As early as 5000 BC, efforts have been made to map these oceans, establish trade routes and discover new lands. In more recent years, this energy has focused downwards, into the ocean's inky depths and shadowy seabeds. Award winning writer Carolyn Fry explores all of the above, narrating centuries of maritime exploration - from James Cook to James Cameron - and the fascinating discoveries which helped to map the world. This book is produced in collaboration with the National Maritime Museum. Based in Greenwich, London, this prestigious museum has the largest archives for maritime history in the world, comprising of more than 1.5 million items. Dedicated to conservation, educational outreach and cutting-edge research, the NMM is a world-leading institution in the study of maritime history. This beautifully illustrated full-color book includes an incredible selection of rare maps from their archives, from historic sea charts to topographic maps of the ocean floor. Mapping the Oceans combines remarkable history with cutting edge science, including all you need to know about this fantastic and tantalizing of phenomena - the sea.

Nonlinear Ocean Dynamics: Synthetic Aperture Radar delivers the critical tools needed to understand the latest technology surrounding the radar imaging of nonlinear waves, particularly microwave radar, as a main source to understand, analyze and apply concepts in the field of ocean dynamic surface. Filling the gap between modern physics quantum theory and applications of radar imaging of ocean dynamic surface, this reference is packed with technical details associated with the potentiality of synthetic aperture radar (SAR). The book also includes key methods needed to extract the value-added information necessary, such as wave spectra energy, current pattern velocity, internal waves, and more. This book also reveals novel speculation of a shallow coastal front: named as Quantized Marghany's Front. Rounding out with practical simulations of 4-D wave-current interaction patterns using using radar images, the book brings an effective new source of technology and applications for today's coastal scientists and engineers. Solves specific problems surrounding the nonlinearity of ocean surface dynamics in synthetic aperture radar data Helps develop new algorithms for retrieving ocean wave spectra and ocean current movements from synthetic aperture radar Includes over 100 equations that illustrate how to follow examples in the book

Understanding the Oceans brings together an internationally distinguished group of authors to explore the enormous advances in marine science made since the voyage of HMS Challenger a century ago. The book draws inspiration from the seminal contributions stemming from that voyage, and individual chapters show how succeeding generations of scientists have been influenced by its findings. Covering the whole spectrum of the marine sciences, the book has been written and edited very much with the non-specialist reader in mind. Marine scientists, whether students or researchers, will welcome this authoritative comprehensive overview of their subject and its history; other scientists will find the book to be an accessible and informative introduction to marine science and its historical roots.

The oceans cover 70% of the Earth's surface, and are critical components of Earth's climate system. This new edition of Encyclopedia of Ocean Sciences summarizes the breadth of knowledge about them, providing revised, up to date entries as well coverage of new topics in the field. New and expanded sections include microbial ecology, high latitude systems and the cryosphere, climate and climate change, hydrothermal and cold seep systems. The structure of the work provides a modern presentation of the field, reflecting the input and different perspective of chemical, physical and biological oceanography, the specialized area of expertise of each of the three Editors-in-Chief. In this framework maximum attention has been devoted to making this an organic and unified reference. Represents a one-stop. organic information resource on the breadth of ocean science research Reflects the input and different perspective of chemical, physical and biological oceanography, the specialized area of expertise of each of the three Editors-in-Chief New and expanded sections include microbial ecology, high latitude systems and climate change Provides scientifically reliable information at a foundational level, making this work a resource for students as well as active researches

Much of human experience can be distilled to saltwater: tears, sweat, and an enduring connection to the sea. In *Vast Expanses*, Helen M. Rozwadowski weaves a cultural, environmental, and geopolitical history of that relationship, a journey of tides and titanic forces reaching around the globe and across geological and evolutionary time. Our ancient connections with the sea have developed and multiplied through industrialization and globalization, a trajectory that runs counter to Western depictions of the ocean as a place remote from and immune to human influence. Rozwadowski argues that knowledge about the oceans—created through work and play, scientific investigation, and also through human ambitions for profiting from the sea—has played a central role in defining our relationship with this vast, trackless, and opaque place. It has helped us to exploit marine resources, control ocean space, extend imperial or national power, and attempt to refashion the sea into a more tractable arena for human activity. But while deepening knowledge of the ocean has animated and strengthened connections between people and the world's seas, to understand this history we must address questions of how, by whom, and why knowledge of the ocean was created and used—and how we create and use this knowledge today. Only then can we can forge a healthier relationship with our future sea.

"Understanding Tides, Surges, Tsunamis and Mean Sea-Level Changes Sea levels change for many reasons and on many timescales, and extreme sea levels can result in catastrophic coastal flooding, such as the Katrina storm surge in 2005 or the Sumatra tsunami in 2004. As global sea level rises, and coastal populations increase, understanding sea-level processes becomes key to plan future coastal defence effectively"--

Despite the fact that the vast majority of the earth's surface is made up of oceans, there has been surprisingly little work by geographers which critically examines the ocean-space and our knowledge and perceptions of it. This book employs a broad conceptual and methodological framework to analyse specific events that have contributed to the production of geographical knowledge about the ocean. These include, but are not limited to, Christopher Columbus' first transatlantic journey, the mapping of nonexistent islands, the establishment of transoceanic trade routes, the discovery of largescale water movements, the HMS Challenger expedition, the search for the elusive Terra Australis Incognita, the formulation of the theory of continental drift and the mapping of the seabed. Using a combination of original, empirical (archival, material and cartographic), and theoretical sources, this book uniquely brings together fascinating narratives throughout history to produce a representation and mapping of geographical oceanic knowledge. It questions how we know what we know about the oceans and how this knowledge is represented and mapped. The book then uses this representation and mapping as a way to coherently trace the evolution of oceanic spatial awareness. In recent years, particularly in historical geography, discovering and knowing the ocean-space has been a completely separate enterprise from discovering and colonising the lands beyond it. There has been such focus on studying colonised lands, yet the oceans between them have been neglected. This book gives the geographical ocean a voice to be acknowledged as a space where history, geography and indeed historical geography took place.

Highlighting new technologies, Remote Sensing of Natural Resources explores advanced remote sensing systems and algorithms for image processing, enhancement, feature extraction, data fusion, image classification, image-based modeling, image-based sampling design, map accuracy assessment and quality control. It also discusses their applications for

This book describes the development of ocean sciences over the past 50 years, highlighting the contributions of the National Science Foundation (NSF) to the field's progress. Many of the individuals who participated in the exciting discoveries in biological oceanography, chemical oceanography, physical oceanography, and marine geology and geophysics describe in the book how the discoveries were made possible by combinations of insightful individuals, new technology, and in some cases, serendipity. In addition to describing the advance of ocean science, the book examines the institutional structures and technology that made the advances possible and presents visions of the field's future. This book is the first-ever documentation of the history of NSF's Division of Ocean Sciences, how the structure of the division evolved to its present form, and the individuals who have been responsible for ocean sciences at NSF as "rotators" and career staff over the past 50 years.

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A wide variety of marginal basins, ranging from polar to equatorial regions, and a few sizeable enclosed basins, can all be included among the Asian Seas. The Arctic Ocean shelf seas off Siberia; the sheltered basins along the Pacific Ocean's western rim; the coastal seas of the northernmost Indian Ocean, including the semi-enclosed Red Sea and Persian Gulf; the Caspian Sea, the remnants of the Aral Sea and a score of brackish or freshwater lakes, such as Lake Balkhash and Lake Baykal; all exhibit a multiplicity of environmental features and processes.

Understanding the peculiarities of such a large and varied collection of marine and coastal types requires integrated observation systems, among which orbital remote sensing must play an essential role. This volume reviews the current potential of Earth Observations in assessing the many Asian seascapes, using both passive and active techniques in diverse spectral regions, such as measuring reflected visible and near-infrared sunlight and surface emissions in the thermal infrared and microwave range, or surface reflection of transmitted radar pulses in the microwave range. An in-depth evaluation of the available spectral regions and observation techniques, as well as of novel multi-technique methods, ensures that suitable tools are indeed accessible for exploring and managing the wealth of resources that the Asian Seas have to offer.

This book offers a unique multidisciplinary integration of the physics of turbulence and remote sensing technology. Remote Sensing of Turbulence provides a new vision on the research of turbulence and summarizes the current and future challenges of monitoring turbulence remotely. The book emphasizes sophisticated geophysical applications, detection, and recognition of complex turbulent flows in oceans and the atmosphere. Through several techniques based on microwave and optical/IR observations, the text explores the technological capabilities and tools for the detection of turbulence, their signatures, and variability. FEATURES Covers the fundamental aspects of turbulence problems with a broad geophysical scope for a wide audience of readers Provides a complete description of remote-sensing capabilities for observing turbulence in the earth's environment Establishes the state-of-the-art remote-sensing techniques and methods of data analysis for turbulence detection Investigates and evaluates turbulence detection signatures, their properties, and variability Provides cutting-edge remote-sensing applications for space-based monitoring and forecasts of turbulence in oceans and the atmosphere This book is a great resource for applied physicists, the professional remote sensing community, ecologists, geophysicists, and earth scientists.

"This book explains how astronomers discover new planets"--Provided by publisher.

For decades, previous editions of John Knauss's seminal work have struck a balance between purely descriptive texts and mathematically rigorous ones, giving a wide range of marine scientists access to the fundamental principles of physical oceanography. Newell Garfield continues this tradition, delivering valuable updates that highlight the book's resourceful presentation and concise effectiveness. The authors include historical and current research, along with a 12-page color insert, to illuminate their perspective that the world ocean is tumultuous and continually helps to shape global environmental processes. The Third Edition builds a solid foundation that readers will find straightforward and lucid. It presents valuable insight into our understanding of the world ocean by:

- Encompassing essential oceanic processes such as the transfer of heat across the ocean surface, the distribution of temperature and salinity, and the effect of the earth's rotation on the ocean.
- Providing sensible and well-defined explanations of the roles played by a stratified ocean, global balances, and equations of motion.
- Discussing cogent topics such as major currents, tides, waves, coastal oceans, semienclosed seas, and sound and optics.

Optical Remote Sensing is one of the main technologies used in sea surface monitoring. Optical Remote Sensing of Ocean Hydrodynamics investigates and demonstrates capabilities of optical remote sensing technology for enhanced observations and detection of ocean environments. It provides extensive knowledge of physical principles and capabilities of optical

observations of the oceans at high spatial resolution, 1-4m, and on the observations of surface wave hydrodynamic processes. It also describes the implementation of spectral-statistical and fusion algorithms for analyses of multispectral optical databases and establishes physics-based criteria for detection of complex wave phenomena and hydrodynamic disturbances including assessment and management of optical databases. This book explains the physical principles of high-resolution optical imagery of the ocean surface, discusses for the first time the capabilities of observing hydrodynamic processes and events, and emphasizes the integration of optical measurements and enhanced data analysis. It also covers both the assessment and the interpretation of dynamic multispectral optical databases and includes applications for advanced studies and nonacoustic detection. This book is an invaluable resource for researchers, industry professionals, engineers, and students working on cross-disciplinary problems in ocean hydrodynamics, optical remote sensing of the ocean and sea surface remote sensing. Readers in the fields of geosciences and remote sensing, applied physics, oceanography, satellite observation technology, and optical engineering will learn the theory and practice of optical interactions with the ocean.

A large body of recent oceanographic research has shown that the Antarctic Circumpolar Current (ACC), an ocean current that flows from west to east around Antarctica, plays a crucial role in global ocean circulation. The region where the cold waters of the ACC meet and mingle with the warmer waters of the north defines a distinct border - the Antarctic Convergence - which fluctuates with the seasons, but which encompasses a discrete body of water and a unique ecologic region. The Convergence concentrates nutrients, which promotes marine plant life, and which, in turn, allows for a greater abundance of animal life. In 2000, the International Hydrographic Organization delimited the waters within the Convergence as a fifth world ocean - the Southern Ocean - by combining the southern portions of the Atlantic Ocean, Indian Ocean, and Pacific Ocean. The Southern Ocean extends from the coast of Antarctica north to 60 degrees south latitude, which coincides with the Antarctic Treaty Limit and which approximates the extent of the Antarctic Convergence. As such, the Southern Ocean is now the fourth largest of the world's five oceans (after the Pacific Ocean, Atlantic Ocean, and Indian Ocean, but larger than the Arctic Ocean).

"What does everyone in the modern world need to know? [The author's] answer to this most difficult of questions uniquely combines the hard-won truths of ancient tradition with the stunning revelations of cutting-edge scientific research. [The author discusses] discussing discipline, freedom, adventure and responsibility, distilling the world's wisdom into 12 practical and profound rules for life"--

This volume describes and evaluates the major current research developments in the ocean sciences. Topics include advances in measuring ocean phenomena from space, <sup>in situ</sup> instruments, and the development of fully integrated observing systems that allow investigators to take environmental snapshots of areas that must be monitored in order to protect property and save lives. The authors emphasize that today's successful oceanographic programs rely on multidisciplinary, integrated, and task-organized teams of varying professionals, marine technicians, and oceanographers. Also discussed are the World Wide Web, distributed databases, and computer models that allow research and operational oceanographers to share information to build useful products and make new discoveries.

The Cat in the Hat takes readers on an out of this world reading adventure through outer space! The Cat in the Hat's Learning Library is a nonfiction picture book series that introduces beginning readers ages 5-8 to important basic concepts. Learn about the solar system, planets, the constellations, and astronauts, and explore the wonders of space with the help of everyone's favorite Cat in the Hat! Perfect for aspiring astronauts, or any kid who loves learning and science. The universe is a mysterious place. We are only just learning what happens in space. Featuring beloved characters from Dr. Seuss's The Cat in the Hat, the Learning Library are unjacketed hardcover picture books that explore a range of nonfiction topics about the world we live in and include an index, glossary, and suggestions for further reading.

This book offers a survey of the contribution of satellite data to the study of the ocean, focusing on the special insights that only satellite data can bring to oceanography. Topics range from ocean waves to ocean biology, spanning scales from basins to estuaries. Some chapters cover applications to pure research while others show how satellite data can be used operationally for tasks such as pollution monitoring or oil-spill detection.

Collects illustrations and maps that visualize the vast expanse of the universe, chronicling three thousand years of human observation of the universe.

"The incredible variety of marine life--in numbers, body form, behavior, and more--is at the heart of Citizens of the Sea, an irresistible plunge into the surprising world beneath the waves."-from inside cover.

If you have ever wondered about space travel, now you have the opportunity to understand it more fully than ever before. Traveling into space and even emigrating to nearby worlds may soon become part of the human experience. Scientists, engineers, and investors are working hard to make space tourism and colonization a reality. As astronauts can attest, extraterrestrial travel is incomparably thrilling. To make the most of the experience requires serious physical and mental adaptations in virtually every aspect of life, from eating to intimacy. Everyone who goes into space sees Earth and life on it from a profoundly different perspective than they had before liftoff. Astronomer and former NASA/ASEE scientist Neil F. Comins has written the go-to book for anyone interested in space exploration. He describes the wonders that travelers will encounter—weightlessness, unparalleled views of Earth and the cosmos, and the opportunity to walk on another world—as well as the dangers: radiation, projectiles, unbreathable atmospheres, and potential equipment failures. He also provides insights into specific trips to destinations including suborbital flights, space stations, the Moon, asteroids, comets, and Mars—the top candidate for colonization. Although many challenges are technical, Comins outlines them in clear language for all readers. He synthesizes key issues and cutting-edge research in astronomy, physics, biology, psychology, and sociology to create a complete manual for the ultimate voyage.

Vents and seeps are the epitome of life in extreme environments, but there is much more to these systems than just black smokers or hydrocarbon seeps. Many other ecosystems are characterized by moving fluids and this book provides an overview of the different habitats, their specific conditions as well as the technical challenges that have to be met when studying them. The book provides the current state of the art and will be a valuable resource for everybody that has an interest in such environments.

This book covers the fundamental principles of measuring oceans from space, and also contains state-of-the-art developments in data analysis and interpretation and in sensors. Completely new will be

material covering advances in oceanography that have grown out of remote sensing, including some of the global applications of the data. The variety of applications of remotely sensed data to ocean science has grown significantly and new areas of science are emerging to exploit the global datasets being recovered by satellites, particularly in relation to climate and climate change, basin-scale, air-sea interaction processes (e.g. El Niño) and the modelling, forecasting and prediction of the ocean.

Meet some of nature's most fantastic underwater creatures in this beautifully illustrated exploration of the sea. Get ready for a deep dive into THE WORLD'S GREAT OCEANS, and discover the DIVERSITY OF LIFE that exists in the DEEP BLUE SEA. Whether you're traveling long-haul with LEATHERBACK TURTLES across the Pacific, snoozing with SEA OTTERS, or ice-bathing with a WALRUS, this book brings together EPIC OCEAN ADVENTURES from the high seas to the ocean floor. With over 30 scenes to explore, young nature adventurers will find hundreds of things to spot, with facts to learn on every page.

NEW YORK TIMES BESTSELLER #1 WALL STREET JOURNAL BESTSELLER USA TODAY BESTSELLER BLUE OCEAN SHIFT is the essential follow up to Blue Ocean Strategy, the classic and 3.6 million copy global bestseller by world-renowned professors W. Chan Kim and Renee Mauborgne. Drawing on more than a decade of new work, Kim and Mauborgne show you how to move beyond competing, inspire your people's confidence, and seize new growth, guiding you step-by-step through how to take your organization from a red ocean crowded with competition to a blue ocean of uncontested market space. By combining the insights of human psychology with practical market-creating tools and real-world guidance, Kim and Mauborgne deliver the definitive guide to shift yourself, your team, or your organization to new heights of confidence, market creation, and growth. They show why nondisruptive creation is as important as disruption in seizing new growth. BLUE OCEAN SHIFT is packed with all-new research and examples of how leaders in diverse industries and organizations made the shift and created new markets by applying the process and tools outlined in the book. Whether you are a cash-strapped startup or a large, established company, nonprofit or national government, you will learn how to move from red to blue oceans in a way that builds your people's confidence so that they own and drive the process. With battle-tested lessons learned from successes and failures in the field, BLUE OCEAN SHIFT is critical reading for leaders, managers, and entrepreneurs alike. You'll learn what works, what doesn't, and how to avoid the pitfalls along the way. This book will empower you to succeed as you embark on your own blue ocean journey. BLUE OCEAN SHIFT is indispensable for anyone committed to building a compelling future.

The African Seas include marginal basins of two major oceans, the Atlantic and the Indian, a miniature ocean, the Mediterranean Sea, and an infant ocean, the Red Sea. Understanding the wide spectrum of environmental features and processes of such a varied collection of marine and coastal regions requires that in situ observation systems be integrated and actually guided, by the application of orbital remote sensing techniques. This volume reviews the current potential of Earth Observations to help in the exploration of the marginal seas around Africa, by virtue of both passive and active techniques, working in several spectral ranges – i.e. measuring either reflected visible and near-infrared sunlight, as well as surface emissions in the thermal infrared and microwave spectral regions, or again the surface reflection of transmitted lidar or radar impulses of visible or microwave radiation. The in-depth evaluation of the advantages offered by each technique and spectral region and in particular by the development of advanced multi-technique systems, contributes to the assessment of the abundant natural resources that the Seas of Africa have to offer, of those in dear need of being – sustainably – exploited and of others that should be protected and maintained in their still pristine conditions.

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