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Titolo	Field techniques for sea ice research / / edited by Hajo Eicken ... [et al.]
Pubbl/distr/stampa	Fairbanks, : University of Alaska Press, c2009
ISBN	9781602231078 1602231079
Edizione	[1st ed.]
Descrizione fisica	1 online resource (590 p.)
Altri autori (Persone)	EickenHajo
Disciplina	551.34/3
Soggetti	Oceanography - Fieldwork Sea ice Sea ice - Measurement
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface; Foreword; Chapter 1: Introduction; Chapter 2: The Sea Ice System Services Framework; Chapter 3.1: Field Techniques for Snow Observations on Sea Ice; Chapter 3.2: Ice Thickness and RoughnessMeasurements; Chapter 3.3: Ice Sampling and Basic Sea Ice Core Analysis; Chapter 3.4: Thermal, Electrical, and Hydraulic Properties of Sea Ice; Chapter 3.5: Ice Strength: In Situ Measurement; Chapter 3.6: Sea Ice Optics Measurements; Chapter 3.7: Measurements and Modeling of Ice-Ocean Interaction; Chapter 3.8: Biogeochemical Properties of Sea Ice. Chapter 3.9: Assessment of the Abundance and Diversity of Sea Ice BiotaChapter 3.10: Studying Seals in Their Sea Ice Habitat; Chapter 3.11: Community-Based Observation Programs and Indigenous and Local Sea Ice Knowledge; Chapter 3.12: Ship-Based Ice Observation Programs; Chapter 3.13: Automatic Measurement Stations; Chapter 3.14: Data Management Best Practices for Sea Ice Observations; Chapter 3.15: Principal Uses of Remote Sensing in Sea Ice Field Research; Chapter 3.16: The Use of Models in the Design and Interpretation of Field Measurements. Chapter 3.1 7: Integrated Sea Ice Observation ProgramsChapter 3.18: Personal Field Logistics; Chapter 4: Concluding Remarks: Integration of Sea Ice Field Research into Polar System Science; About the Multimedia

		DVD; List of Contributors and Affiliations; Index.
	Sommario/riassunto	"As much as one-tenth of the world s oceans are covered with sea ice, or frozen ocean water, at some point during the annual cycle. Sea ice thus plays an important, often defining, role in the natural environment and the global climate system. This book is a global look at the changes in sea ice and the tools and techniques used to measure and record those changes. The first comprehensive research done on sea-ice field techniques, this volume will be indispensable for the study of northern sea ice and a must-have for scientists in the field of climate change research."--Jacket.
2.	Record Nr.	UNINA9911015970303321
	Autore	Halder Subhojit
	Titolo	Superconducting Qubit Design Using Qiskit Metal : Engineering of Superconducting Quantum Architecture / / by Subhojit Halder, Kinjal A. Chauhan, Muhamad Bagher Barfar, Srinjoy Ganguly, Shalini Devendrababu
	Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2025
	ISBN	979-88-6881-504-1
	Edizione	[1st ed. 2025.]
	Descrizione fisica	1 online resource (354 pages)
	Collana	Professional and Applied Computing Series
	Altri autori (Persone)	A. ChauhanKinjal BarfarMuhamad Bagher GangulySrinjoy DevendrababuShalini
	Disciplina	006.3/843
	Soggetti	Quantum computing Superconductors
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di contenuto	Chapter 1: Introduction: Superconducting Qubits and Their Realizations -- Chapter 2: Theory of Superconducting Qubits -- Chapter 3: Qiskit and Introduction to Qiskit Metal -- Chapter 4: Qiskit Metal and Introduction to Chip Design -- Chapter 5: Lumped Oscillator Model Analysis -- Chapter 6: Energy-Participation Ratio Method for

Quantization and Analysis -- Chapter 7: Modelling the HamiltonianTransmon Qubit Cooper-Pair Box in the Charge Basis -- Chapter 8: Manufacturing: Fabrication and Packaging of Qubits.

Sommario/riassunto

Understand and implement superconducting Qubit Design using Qiskit Metal in the Quantum Computing environment. This book provides practical knowledge and step-by-step guidance on designing, analyzing, and fabricating quantum chips. The book begins with an introduction to the fundamentals of quantum computing, covering essential terms, concepts, and the history of quantum computers. It explores the differences between quantum and classical computers and provides an overview of superconducting qubits. Next, you will learn the theory and practical aspects of superconducting qubits. Detailed mathematical and computational analyses of different qubit types and circuits are provided, along with a comprehensive guide to creating quantum circuits using Qiskit and Qiskit Metal. You will learn to design quantum chips and analyze components such as Josephson junctions and qubit couplers, using advanced methods such as the Lumped Oscillator Model, Quasi-Lumped Oscillator Model, and Energy Participation Ratio Method. Finally, the book covers the fabrication of superconducting qubits, detailing the manufacturing process, requirements, and methods to address fabrication issues. After reading this book, you will be able to advance your understanding and skills in this cutting-edge field, making complex concepts accessible and providing a roadmap for practical application. What You Will Learn Install the Qiskit framework for creating basic quantum computing circuits Create your first superconducting qubit chip from scratch Formulate the back-end mathematical and computational model for the generated superconducting chips Understand the Quasi-LOM (lumped oscillator model) and how it differs from the LOM .