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Titolo	Introduction to Advanced Electrodynamics / / by Kaushik Bhattacharya, Soumik Mukhopadhyay
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ISBN	9789811678028 9811678022
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (371 pages)
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Classificazione	EM 350
Disciplina	537.6
Soggetti	Electrodynamics Gravitation Plasma (Ionized gases) Classical Electrodynamics Classical and Quantum Gravity Plasma Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Basic Laws of Electrodynamics -- Boundary Value Problems in Electrostatics -- Electrodynamics of Material Media -- Initiation to Electromagnetic Radiation -- Long Wavelength Scattering -- Special Relativity and Fourier Transform Theory for Electrodynamics -- Covariant Form of Maxwell’s Equations in the Absence of Bound Charges and Bound Currents -- Gauge Invariance of Electrodynamics -- Action Principle in Electrodynamics -- Electromagnetic Field Produced by an Arbitrarily Moving Point Charge -- Radiation Reaction in Brief -- Cherenkov Radiation.
Sommario/riassunto	This book summarizes the basics of electricity and magnetism prior to covariant formulation of Maxwell's equations. The book works out the basics of special relativity and then applies the covariant formalism to understand radiation, both in vacuum and in material medium. The emphasis is on cleaner mathematical formalism based on experimental facts. The book contains many problems/exercises which will help the students to understand the basics of the subject. The difference between the present book with existing books of this level lies in the

presentation of the topics and the subjects chosen. Instead of resenting a lot of material related to electromagnetism, it presents some very important but selected problems of advanced electromagnetism to students who are learning it for the first time. This book is aimed at graduate/advanced graduate students who have done at least one basic level course in electricity and magnetism.