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Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XII, 449 p. 739 illus., 728 illus. in color.)
Collana	Undergraduate Lecture Notes in Physics, , 2192-4791
Disciplina	537
Soggetti	Òptica Electrodinàmica Optics Electrodynamics Lasers Photonics Microwaves Optical engineering Classical Electrodynamics Optics, Lasers, Photonics, Optical Devices Microwaves, RF and Optical Engineering Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Electrostatics -- Electrodynamics - Electric Current -- Magnetostatics -- Electromagnetic Induction -- Electromagnetics in Real Life Applications -- Electromagnetic Waves -- Electromagnetic Fields in Vacuum -- Electromagnetic Fields in Matter -- Geometrical Optics -- Interference, Diffraction, Scattering -- Optical Instruments -- New Technologies in Optics -- Solutions -- Appendix -- Index. .
Sommario/riassunto	This engaging text offers an accessible and clear treatment of the fundamentals of electromagnetics and optics, a core part of the standard undergraduate physics curriculum. Starting with static electric and magnetic fields, the book works through electromagnetic oscillations and the formation and propagation of electromagnetic

waves, before moving on to geometric and wave optics, optical instrumentation and some discussion of new technologies in optics. The text is written from the experimental physics point of view, giving numerous real life examples and applications of devices. This highly motivating presentation deepens the knowledge in a very accessible way, carefully interweaving theory and practical applications. Students are guided through the material with well-chosen examples and case studies, and helpful chapter summaries are provided together with numerous exercises and detailed solutions, all intended to motivate and develop a well-founded understanding of the subject matter.

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