1. Record Nr. UNINA9911009145003321

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Titolo	Physics and Modern Life : A Panoramic Overview of the Fundamental Science and Its Human Impact / / by Michael Anderson
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-77825-1
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (622 pages)
Disciplina	530
Soggetti	Physics Atoms Molecules Optics Quantum theory Gravitation Mathematical physics Classical and Continuum Physics Atomic, Molecular and Chemical Physics Optics and Photonics Quantum Physics Gravitational Physics Theoretical, Mathematical and Computational Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1.Forces and Motion -- Chapter 2.Gravitational Forces -- Chapter 3.Work and Energy -- Chapter 4.Atoms and Hidden Energy -- Chapter 5.Human Use of Chemical Fuel -- Chapter 6.Electricity -- Chapter 7.Magnetism -- Chapter 8.Electromagnetism -- Chapter 9. Computers -- Chapter 10.Radioactivity -- Chapter 11.Nuclear Fission and Fusion -- Chapter 12.Waves -- Chapter 13.Light and Vision -- Chapter 14.The Electromagnetic Nature of Light -- Chapter 15. Telecommunication with Light -- Chapter 16.The Relativity of Time and Space -- Chapter 17.Gravity as Spacetime Curvature -- Chapter 18.The Quantum Revolution -- Chapter 19.Further Feats (and Frustrations) of

Quantum Mechanics -- Chapter 20.Quantum-Mechanical Fields.

Sommario/riassunto

This book introduces physics concepts and principles at a conversant but non-technical level. It also explores technology, with particular focus on two overarching themes that largely define modern life: our intensified use of energy and digital information. These themes take up several entire chapters (“Human Use of Chemical Fuel,” “Computers,” and “Light and Telecommunications”) and substantial parts of several others (e.g., sections on satellites and GPS, telegraph and telephone networks, generators and transformers, nuclear power, and solid-state technologies). The themes of energy and information highlight the pertinence of physics and facilitate a big-picture understanding of how life today differs from that of two hundred or two thousand years ago. The book grew out of lecture notes for a one-semester college physics course for non-science majors, so it could be useful to instructors and students of similar courses. The abundance of material offers some freedom in the design of such a course. However, the author hopes that the combination of conceptual depth and informal tone will appeal to a more diverse audience united by a genuine curiosity regarding science and technology. That audience might include pursuers of continuing education as well as physics majors looking for a lighter conceptual supplement to give context to their more technical coursework.