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Edizione	[Second edition.]
Descrizione fisica	1 online resource (494 pages)
Collana	De Gruyter Textbook
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Soggetti	Smart materials Smart structures
Lingua di pubblicazione	Inglese
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Nota di contenuto	Intro -- Preface -- Contents -- 1 Introduction to Intelligent Materials and Structures -- 2 Laminated Composite Materials -- 3 Piezoelectricity -- 4 Shape Memory Alloys -- 5 Electrorheological and Magnetorheological Fluids -- 6 Magnetostrictive and Electrostrictive Materials -- 7 Applications of Intelligent Materials in Structures -- 8 Energy Harvesting Using Intelligent Materials -- 9 Introduction to Fiber Optic -- 10 Miscellaneous Topics -- Index.
Sommario/riassunto	This new edition of our 2016 book provides insight into designing intelligent materials and structures for special application in engineering. Literature is updated throughout and a new chapter on optics fibers has been added. The book discusses simulation and experimental determination of physical material properties, such as piezoelectric effects, shape memory, electro-rheology, and distributed control for vibrations minimization.