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Nota di contenuto	Physical Background to the K-Theory Classification of D-Branes: Introduction and References -- Physical Background to the K-Theory Classification of D-Branes: Introduction and References -- Bundles over a Space and Modules over an Algebra -- Generalities on Bundles and Categories -- Vector Bundles -- Relation Between Vector Bundles, Projective Modules, and Idempotents -- K-Theory of Vector Bundles, of Modules, and of Idempotents -- Principal Bundles and Sections of Fibre Bundles: Reduction of the Structure and the Gauge Group I -- Homotopy Classification of Bundles and Cohomology: Classifying Spaces -- Homotopy Classes of Maps and the Homotopy Groups -- The Milnor Construction: Homotopy Classification of Principal Bundles -- Fibrations and Bundles: Gauge Group II -- Cohomology Classes as Homotopy Classes: CW-Complexes -- Basic Characteristic Classes -- Characteristic Classes of Manifolds -- Spin Structures -- Versions of K-Theory and Bott Periodicity -- G-Spaces, G-Bundles, and G-Vector Bundles -- Equivariant K-Theory Functor KG : Periodicity, Thom Isomorphism, Localization, and Completion -- Bott Periodicity Maps and Clifford Algebras -- Gram–Schmidt Process, Iwasawa Decomposition, and Reduction of Structure in Principal Bundles -- Topological Algebras: G-Equivariance and KK-Theory -- Algebra Bundles: Twisted K-Theory -- Isomorphism Classification of Operator

	Algebra Bundles -- Brauer Group of Matrix Algebra Bundles and K-Groups -- Analytic Definition of Twisted K-Theory -- The Atiyah–Hirzebruch Spectral Sequence in K-Theory -- Twisted Equivariant K-Theory and the Verlinde Algebra -- Gerbes and the Three Dimensional Integral Cohomology Classes -- Bundle Gerbes -- Category Objects and Groupoid Gerbes -- Stacks and Gerbes -- Erratum.
Sommario/riassunto	Based on several recent courses given to mathematical physics students, this volume is an introduction to bundle theory with the aim to provide newcomers to the field with solid foundations in topological K-theory. A fundamental theme, emphasized in the book, centers around the gluing of local bundle data related to bundles into a global object. One renewed motivation for studying this subject, which has developed for almost 50 years in many directions, comes from quantum field theory, especially string theory, where topological invariants play an important role.