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Titolo	Tensor Analysis and Elementary Differential Geometry for Physicists and Engineers // by Hung Nguyen-Schäfer, Jan-Philip Schmidt
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Descrizione fisica	1 online resource (250 p.)
Collana	Mathematical Engineering, , 2192-4732
Disciplina	515.63
Soggetti	Applied mathematics Engineering mathematics Physics Computer mathematics Mechanics Mechanics, Applied Mathematical and Computational Engineering Mathematical Methods in Physics Computational Science and Engineering Solid Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	General Basis and Bra-Ket Notation -- Tensor Analysis -- Elementary Differential Geometry -- Applications of Tensors and Differential Geometry -- Further Reading -- Appendices.
Sommario/riassunto	Tensors and methods of differential geometry are very useful mathematical tools in many fields of modern physics and computational engineering including relativity physics, electrodynamics, computational fluid dynamics (CFD), continuum mechanics, aero and vibroacoustics, and cybernetics. This book comprehensively presents topics, such as bra-ket notation, tensor analysis, and elementary differential geometry of a moving surface. Moreover, authors intentionally abstain from giving mathematically rigorous definitions and derivations that are however dealt with as

precisely as possible. The reader is provided with hands-on calculations and worked-out examples at which he will learn how to handle the bra-ket notation, tensors and differential geometry and to use them in the physical and engineering world. The target audience primarily comprises graduate students in physics and engineering, research scientists, and practicing engineers.
