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ISBN	1-4471-7505-0
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Descrizione fisica	1 online resource (XIII, 246 p. 141 illus. in color.)
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Soggetti	Computer graphics - Mathematics
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- History of Vector Analysis -- Linear Equations -- Vector Algebra -- Products of Vectors -- Differentiating Vector-Valued Functions -- Vector Differential Operators -- Tangent and Normal Vectors -- Straight Lines -- The Plane -- Intersections -- Rotating Vectors -- Index.
Sommario/riassunto	This second edition has been completely restructured, resulting in a compelling description of vector analysis from its first appearance as a byproduct of Hamilton’s quaternions to the use of vectors in solving geometric problems. The result provides readers from different backgrounds with a complete introduction to vector analysis. The author shows why vectors are so useful and how it is possible to develop analytical skills in manipulating vector algebra. Using over 150 full-colour illustrations, the author demonstrates in worked examples how this relatively young branch of mathematics has become a powerful and central tool in describing and solving a wide range of geometric problems. These may be in the form of lines, surfaces and volumes, which may touch, collide, intersect, or create shadows upon complex surfaces. The book is divided into eleven chapters covering the history of vector analysis, linear equations, vector algebra, vector products, differentiating vector-valued functions, vector differential operators, tangent and normal vectors, straight lines, planes, intersections and rotating vectors. The new chapters are about the history, differentiating vector-valued functions, differential operators

and tangent and normal vectors. The original chapters have been reworked and illustrated.