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   Titolo   Exterior Calculus

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   Soggetti   Calculus

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                        Chapter 2 -- Chapter 3 -- Chapter 4 -- Chapter 5 -- Chapter 6 --
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   Sommario/riassunto   Exterior calculus is a branch of mathematics which involves differential
                        geometry. In Exterior calculus the concept of differentiations is
                        generalized to antisymmetric exterior derivatives and the notions of
                        ordinary integration to differentiable manifolds of arbitrary dimensions.
                        It therefore generalizes the fundamental theorem of calculus to Stokes'
                        theorem. This textbook covers the fundamental requirements of
                        exterior calculus in curricula for college students in mathematics and
                        engineering programs. Chapters start from Heaviside-Gibbs algebra,
                        and progress to different concepts in Grassman algebra. The final
                        section of the book covers applications of exterior calculus with
                        solutions. Readers will find a concise and clear study of vector calculus
                        and differential geometry, along with several examples and exercises.
                        The solutions to the exercises are also included at the end of the book.
                        This is an ideal book for students with a basic background in
                        mathematics who wish to learn about exterior calculus as part of their
                        college curriculum and equip themselves with the knowledge to apply
                        relevant theoretical concepts in practical situations.