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Nota di contenuto	Introduction -- Basic Concept of Permeability and Permittivity Tensor -- Permeability and Permittivity Tensor for Quadric Cylinders -- Permeability and Permittivity Tensor for Quadric Surface of Revolutions -- Permeability and Permittivity Tensor for Ogive -- Conclusion -- Appendix 3.1: Spatial metric derivations for right circular cylinder -- Appendix 3.2: Spatial metric derivations for elliptic cylinder -- Appendix 3.3: Spatial metric derivations for hyperbolic cylinder -- Appendix 3.4: Spatial metric derivations for parabolic cylinder -- Appendix 4.1: Spatial metric derivations for sphere -- Appendix 4.2: Spatial metric derivations for cone -- Appendix 4.3: Spatial metric derivations for prolate spheroid -- Appendix 4.4: Spatial metric derivations for oblate spheroid -- Appendix 4.5: Spatial metric derivations for GPOR -- Appendix 5: Spatial metric derivations for ogive.
Sommario/riassunto	This book is focused on derivations of analytical expressions for stealth and cloaking applications. An optimal version of electromagnetic (EM) stealth is the design of invisibility cloak of arbitrary shapes in which the EM waves can be controlled within the cloaking shell by introducing a

prescribed spatial variation in the constitutive parameters. The promising challenge in design of invisibility cloaks lies in the determination of permittivity and permeability tensors for all the layers. This book provides the detailed derivation of analytical expressions of the permittivity and permeability tensors for various quadric surfaces within the eleven Eisenhart co-ordinate systems. These include the cylinders and the surfaces of revolutions. The analytical modeling and spatial metric for each of these surfaces are provided along with their tensors. This mathematical formulation will help the EM designers to analyze and design of various quadratics and their hybrids, which can eventually lead to design of cloaking shells of arbitrary shapes.