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Nota di contenuto	Introduction -- Vector Algebra -- Vector Calculus -- Coulomb's Law and the Electric Field -- Gauss's Law and the Electric Potential -- Boundary Value Problems: Analytic Methods of Solution -- Boundary Value Problems -- The Steady Electric Current -- The Static Magnetic Field -- Magnetic Materials and Properties -- Faraday's Law and Induction -- Maxwell's Equations -- Electromagnetic Waves and Propagation -- Reection and Transmission of Plane Waves -- Theory of Transmission Lines -- The Smith Chart, Impedance Matching, and Transmission Line Circuits -- Transients on Transmission Lines -- Waveguides and Resonators -- Antennas and Electromagnetic Radiation -- Conclusion.
Sommario/riassunto	This comprehensive two semester textbook, now in its 4th edition, continues to provide students with a thorough theoretical understanding of electromagnetic field relations while also providing numerous practical applications. The topics follow a tested pattern familiar to the previous edition, each with a brief, introductory chapter followed by a chapter with extensive treatment, 10 to 30 applications, examples and exercises, and problems and summaries. There is new emphasis on problems, examples and applications based on energy harvesting and renewable energy; additional information on sensing and actuation, new material on issues in energy, power, electronics, and measurements, and an emphasis on aspects of electromagnetics

relevant to digital electronics and wireless communication. The author adds and revises problems to emphasize the use of tools such as Matlab; new advanced problems for higher level students; a discussion of symbolic and numerical integration; additional examples with each chapter; and new online material including experiments and review questions. The book is an undergraduate textbook at the upper division level, intended for required classes in electromagnetics. It is written in simple terms with all details of derivations included and all steps in solutions listed. It requires little beyond basic calculus and can be used for self-study. Features hundreds of examples and exercises, many new or revised for every topic in the book; Includes over 650 end-of-chapter problems, many of them new or revised, mostly based on applications or simplified applications; Includes a suite of online demonstration software including a computerized Smith Chart.