Record Nr. UNINA9910964619603321 Autore Franceschetti Giorgio Titolo Electromagnetics: Theory, Techniques, and Engineering Paradigms // by Giorgio Franceschetti New York, NY:,: Springer US:,: Imprint: Springer,, 1997 Pubbl/distr/stampa **ISBN** 1-4899-0257-0 Edizione [1st ed. 1997.] Descrizione fisica 1 online resource (XX, 568 p.) 621.3 Disciplina Soggetti Electrical engineering Magnetism Mathematical physics Electrical and Electronic Engineering Theoretical, Mathematical and Computational Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto 1. Fundamentals -- 2. Elementary Solutions -- 3. Spectral Domains --4. Narrowband Signals and Phasor Fields -- 5. High-Frequency Fields -- 6. The Numerical Domain -- 7. Engineering Topics: Propagation --8. Engineering Topics: Radiation -- 9. Engineering Topics: Scattering --Appendixes -- A. Vector Analysis -- B. Dyadic Analysis -- C. Useful Integrals and Series -- D. Special Functions and Asymptotic Evaluations. During the last twenty years the lifestyle of a large portion of the Sommario/riassunto inhabitants of our planet has changed dramatically. This would never have been possible without the massive use of electronic and photonic technology, telecommuni- cations, and computers. These disciplines are designed to code, transmit, detect, decode, and process signals and related information, and can be broadly addressed as information science and technology. In the sophisticated society in which we live and operate, this science is diffused transversely and plays a major role in almost every human activity. Information science and technology is the basis of a powerful industry that does not suffer the shortcomings

of more traditional human enterprises. Information is a renewable

source and its control and processing rely on software codes, which are a creation of the mind, and on related hardware, incredibly sophisticated but made out of simple, abundant materials. The rate of change and transformation of this industry is the highest mankind has ever experienced, and it requires not only the replacement of technologies but also a continuous updating of expertise to keep up with the rapid transformation. There is no doubt that this calls for a change in university training, to avoid students graduating at an already obsolete level.