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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	One-Dimensional Simulation with the FDTD Method -- More on One-Dimensional Simulation -- Two-Dimensional Simulation -- Three-Dimensional Simulation -- Examples of Electromagnetic Simulation Using FDTD -- Quantum Simulation -- Appendix A: The Z Transform.
Sommario/riassunto	A straightforward, easy-to-read introduction to the finite-difference time-domain (FDTD) methodFinite-difference time-domain (FDTD) is one of the primary computational electrodynamics modeling techniques available. Since it is a time-domain method, FDTD solutions can cover a wide frequency range with a single simulation run and treat nonlinear material properties in a natural way.Written in a tutorial fashion, starting with the simplest programs and guiding the reader up from one-dimensional to the more complex, three-dimensional programs, this book provides a simple, yet comprehensive introduction to the most widely used method for electromagnetic simulation. This fully updated edition presents many new applications, including the FDTD method being used in the design and analysis of highly resonant radio frequency (RF) coils often used for MRI. Each chapter contains a concise explanation of an essential concept and instruction on its

implementation into computer code. Projects that increase in complexity are included, ranging from simulations in free space to propagation in dispersive media. Additionally, the text offers downloadable MATLAB and C programming languages from the book support site.Simple to read and classroom-tested, Electromagnetic Simulation Using the FDTD Method is a useful reference for practicing engineers as well as undergraduate and graduate engineering students.