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Note generali	Description based upon print version of record.
Nota di contenuto	Introduction -- Scalar Conservation Laws -- Diffusion -- The Laplace Equation -- Reaction-diffusion models -- Waves and vibrations -- Elements of Functional Analysis -- Variational formulation of elliptic problems -- Weak formulation of evolution problems -- Solutions -- Fourier Series -- Notes on ordinary differential equations -- Finite difference approximation of time dependent problems -- Identities and Formulas.
Sommario/riassunto	This book is designed as an advanced undergraduate or a first-year graduate course for students from various disciplines like applied mathematics, physics, engineering. It has evolved while teaching courses on partial differential equations during the last decade at the Politecnico of Milan. The main purpose of these courses was twofold: on the one hand, to train the students to appreciate the interplay between theory and modelling in problems arising in the applied sciences and on the other hand to give them a solid background for numerical methods, such as finite differences and finite elements.