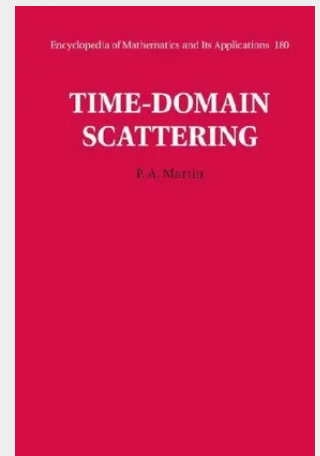


Time-Domain Scattering

The wave equation, a classical partial differential equation, has been studied and applied since the eighteenth century. Solving it in the presence of an obstacle, the scatterer, can be achieved using a variety of techniques and has a multitude of applications. This book explains clearly the fundamental ideas of time-domain scattering, including in-depth discussions of separation of variables and integral equations. The author covers both theoretical and computational aspects, and describes applications coming from acoustics (sound waves), elastodynamics (waves in solids), electromagnetics (Maxwell's equations) and hydrodynamics (water waves). The detailed bibliography of papers and books from the last 100 years cement the position of this work as an essential reference on the topic for applied mathematicians, physicists and engineers.

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