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Nota di contenuto	Introduction -- Linear Wave functions -- Sobolev inequality with Decay -- Estimates for solutions for linear wave equation -- Estimates for composition Function.
Sommario/riassunto	This book focuses on nonlinear wave equations, which are of considerable significance from both physical and theoretical perspectives. It also presents complete results on the lower bound estimates of lifespan (including the global existence), which are established for classical solutions to the Cauchy problem of nonlinear wave equations with small initial data in all possible space dimensions and with all possible integer powers of nonlinear terms. Further, the book proposes the global iteration method, which offers a unified and straightforward approach for treating these kinds of problems. Purely based on the properties of solut ions to the corresponding linear problems, the method simply applies the contraction mapping principle.