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Nota di contenuto	Shadowing Near an Invariant Set: Basic Definitions. Shadowing Near a Hyperbolic Set for a Diffeomorphism. Shadowing for Mappings of Banach Spaces. Limit Shadowing. Shadowing for Flows -- Topologically Stable, Structurally Stable, and Generic Systems: Shadowing and Topological Stability. Shadowing in Structurally Stable Systems. Shadowing in Two-Dimensional Diffeomorphisms. C0-Genericity of Shadowing for Homeomorphisms -- Systems with Special Structure: One-Dimensional Systems. Linear and Linearly Induced Systems. Lattice Systems. Global Attractors for Evolution Systems -- Numerical Applications of Shadowing: Finite Shadowing. Periodic Shadowing for Flows. Approximation of Spectral Characteristics. Approximation of the Morse Spectrum. Discretizations of PDEs -- References -- Index.
Sommario/riassunto	This book is an introduction to the theory of shadowing of approximate trajectories in dynamical systems by exact ones. This is the first book completely devoted to the theory of shadowing. It shows the importance of shadowing theory for both the qualitative theory of dynamical systems and the theory of numerical methods. Shadowing Methods allow us to estimate differences between exact and approximate solutions on infinite time intervals and to understand the

influence of error terms. The book is intended for specialists in dynamical systems, for researchers and graduate students in the theory of numerical methods.