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Disciplina	003.7
Soggetti	Statistical physics Dynamical systems Mathematics Mechanics Mechanics, Applied Complex Systems Mathematics, general Solid Mechanics Statistical Physics and Dynamical Systems
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Nota di contenuto	The problem of quantum chaos -- Semi-classical quantization of chaotic billiards -- Stochastic scattering theory random-matrix models for fluctuations in microscopic and mesoscopic systems -- Atomic and molecular physics experiments in quantum chaology -- Topics in quantum chaos -- Dynamical localization in open quantum systems.
Sommario/riassunto	Until now the important concept of quantum chaos has remained somewhat ill defined. This volume tackles the ubiquitous borderline between classical andquantum mechanics, studying in particular the semiclassical limit of chaotic systems. The effects of disorder from dynamics and their relation to stochastic systems, quantum coherence effects in mesoscopic systems, and the relevant theoretical approaches are fruitfully combined in this volume. The major paradigms of what is

called quantum chaos, random matrix theory and applications to condensed matter and nuclear physics are presented. Detailed discussions of experimental work with particular emphasis on atomic physics are included. The book is highly recommended for graduate-student seminars.
