Record Nr. UNISA996466724003316 The Mathematical Aspects of Quantum Maps [[electronic resource] /] / Titolo edited by Mirko Esposti, Sandro Graffi Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, . 2003 **ISBN** 3-540-37045-5 Edizione [1st ed. 2003.] Descrizione fisica 1 online resource (XI, 171 p.) Collana Lecture Notes in Physics, , 0075-8450 ; ; 618 Disciplina 530.12 Soggetti Quantum physics Algebra Computer mathematics Mathematical physics **Physics** Statistical physics Dynamical systems **Quantum Physics** Computational Mathematics and Numerical Analysis Theoretical, Mathematical and Computational Physics Mathematical Methods in Physics Complex Systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph to Dynamical Systems -- Number Theoretic Background --Nota di contenuto Mathematical Aspects of Quantum Maps -- Numerical Aspects of Eigenvalue and Eigenfunction Computations for Chaotic Quantum Systems -- From Normal to Anomalous Deterministic Diffusion. Quantum maps are presented with special emphasis on their physical Sommario/riassunto origin. They represent a testing ground for understanding concepts in quantized chaotic systems. The book develops and teaches the modern mathematical methods from analytic and algebraic number theory as applied to quantum maps. It gives a broad and in-depth overview of

the mathematical problems arising in this area. Also treated are the

numerical aspects in quantum chaos such as eigenvalue and eigenfunctions computations for chaotic quantum systems. The book addresses scientists and advanced students in mathematics and mathematical physics.