1. Record Nr. UNINA9910139807003321

Titolo	Irreversible Quantum Dynamics / / edited by Fabio Benatti, Roberto Floreanini
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2003
ISBN	3-540-44874-8
Edizione	[1st ed. 2003.]
Descrizione fisica	1 online resource (X, 373 p.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 622
Disciplina	530.12
Soggetti	Quantum theory Physics Quantum computers Spintronics Quantum Physics Mathematical Methods in Physics Quantum Information Technology, Spintronics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Theoretical Aspects of Quantum Irreversible Dynamics -- Quantum Theory of Irreversibility: Open Systems and Continuum Mechanics -- Selected Aspects of Markovian and Non-Markovian Quantum Master Equations -- Aspects of Open Quantum Dynamics -- Concepts and Methods in the Theory of Open Quantum Systems -- Open Quantum Systems and Applications -- Decoherence-Free Subspaces and Subsystems -- Controlled Quantum Open Systems -- Three Different Manifestations of the Quantum Zeno Effect -- Progressive Decoherence and Total Environmental Disentanglement -- Dynamics of Dissipative Quantum Systems: From Path Integrals to Master Equations -- Quantum Entropies in a Classical Context -- Foundational Aspects of Irreversible Quantum Dynamics -- Irreversibility and the Foundations of Quantum Mechanics -- An Attempt at Relativistic Spontaneous Localization -- The Quantum Jump Approach and Quantum Trajectories -- Asymmetric Time Evolution and Resonances -- Irreversibility, Resonances and Rigged Hilbert Spaces -- Markovian Master Equations

	and Resonances in Quantum Open Systems -- A New Topology for an Axiom of Quantum Mechanics -- The Importance of Boundary Conditions in Quantum Mechanics -- Time Asymmetric Quantum Mechanics and Relativistic Resonances -- Irreversibility in the Framework of Hermitian and Non-Hermitian Treatments of Resonance States.
Sommario/riassunto	This set of tutorial reviews is dedicated to all aspects of irreversibility and time asymmetry in quantum mechanics. The main themes addressed are: - theoretical aspects of quantum irreversible dynamics - open quantum systems and applications - foundational aspects of irreversible quantum dynamics - asymmetric time evolution and resonances This volume will benefit graduate students and researchers looking for a readable account of the current status of the field. It is also suited for lecturers looking for advanced material for their courses and seminars.