1.	Record Nr.	UNISA996466685303316
	Titolo	Mathematical physics of quantum mechanics : selected and refereed lectures from QMath9 / / Joachim Asch, Alain Joye
	Pubbl/distr/stampa	Berlin, Germany ; ; New York, New York : , : Springer, , [2006] ©2006
	ISBN	1-280-62706-9 9786610627066 3-540-34273-7
	Edizione	[1st ed. 2006.]
	Descrizione fisica	1 online resource (490 p.)
	Collana	Lecture Notes in Physics, , 0075-8450 ; ; 690
	Disciplina	530.120151
	Soggetti	Mathematical physics Quantum theory
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographic references and index.
	Nota di contenuto	Quantum Dynamics and Spectral Theory -- Solving the Ten Martini Problem -- Swimming Lessons for Microbots -- Landau-Zener Formulae from Adiabatic Transition Histories -- Scattering Theory of Dynamic Electrical Transport -- The Landauer-Büttiker Formula and Resonant Quantum Transport -- Point Interaction Polygons: An Isoperimetric Problem -- Limit Cycles in Quantum Mechanics -- Cantor Spectrum for Quasi-Periodic Schrödinger Operators -- Quantum Field Theory and Statistical Mechanics -- Adiabatic Theorems and Reversible Isothermal Processes -- Quantum Massless Field in 1+1 Dimensions -- Stability of Multi-Phase Equilibria -- Ordering of Energy Levels in Heisenberg Models and Applications -- Interacting Fermions in 2 Dimensions -- On the Essential Spectrum of the Translation Invariant Nelson Model -- Quantum Kinetics and Bose-Einstein Condensation -- Bose-Einstein Condensation as a Quantum Phase Transition in an Optical Lattice -- Long Time Behaviour to the Schrödinger–Poisson–X? Systems -- Towards the Quantum Brownian Motion -- Bose-Einstein Condensation and Superradiance -- Derivation of the Gross-Pitaevskii Hierarchy -- Towards a Microscopic Derivation of the Phonon Boltzmann Equation -- Disordered Systems and Random Operators --

On the Quantization of Hall Currents in Presence of Disorder -- Equality of the Bulk and Edge Hall Conductances in 2D -- Generic Subsets in Spaces of Measures and Singular Continuous Spectrum -- Low Density Expansion for Lyapunov Exponents -- Poisson Statistics for the Largest Eigenvalues in Random Matrix Ensembles -- Semiclassical Analysis and Quantum Chaos -- Recent Results on Quantum Map Eigenstates -- Level Repulsion and Spectral Type for One-Dimensional Adiabatic Quasi-Periodic Schrödinger Operators -- Low Lying Eigenvalues of Witten Laplacians and Metastability (After Hel.er-Klein-Nier and Helffer-Nier) -- The Mathematical Formalism of a Particle in a Magnetic Field -- Fractal Weyl Law for Open Chaotic Maps -- Spectral Shift Function for Magnetic Schrödinger Operators -- Counting String/M Vacua.

Sommario/riassunto	At the QMath9 meeting, young scientists learn about the state of the art in the mathematical physics of quantum systems. Based on that event, this book offers a selection of outstanding articles written in pedagogical style comprising six sections which cover new techniques and recent results on spectral theory, statistical mechanics, Bose-Einstein condensation, random operators, magnetic Schrödinger operators and much more. For postgraduate students, Mathematical Physics of Quantum Systems serves as a useful introduction to the research literature. For more expert researchers, this book will be a concise and modern source of reference.