1.	Record Nr.	UNINA9910819476003321
	Titolo	Quantum probability communications / / Stephane Attal, J.Martin Lindsay
	Pubbl/distr/stampa	Singapore ; ; London, : World Scientific, 2003
	ISBN	1-281-92814-3 9786611928148 981-277-542-0
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (294 p.)
	Collana	QP-PQ ; ; 12
	Altri autori (Persone)	LindsayJ. Martin AttalS (Stephane)
	Disciplina	530.12
	Soggetti	Probabilities Quantum theory Stochastic processes Markov processes
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	CONTENTS; CONTENTS OF QPC XI; PREFACE for QPC Volumes XI & XII; INTEGRAL-SUM KERNEL OPERATORS; 0. INTRODUCTION; 1. FINITE POWER SETS; 1.1. Some products on F().; 1.2. Product functions.; 1.3. Guichardet Space.; 2. INTEGRAL-SUM CONVOLUTIONS; 2.1. Duality Transforms.; 2.2. Formal Derivation.; 2.3. Basic Estimate.; 3. QUANTUM WIENER INTEGRALS; 4. INTEGRAL-SUM KERNEL OPERATORS; 4.1. Basic Estimate.; 4.2. Uniqueness of the kernel.; 4.3. Reconstruction of kernel from operator.; 4.4. Algebras of integral-sum kernel operators.; 4.5. Four argument integral-sum kernels.; 4.6. Matrix-valued kernels. CONCLUSIONBIBLIOGRAPHICAL NOTES; REFERENCES; QUANTUM PROBABILITY APPLIED TO THE DAMPED HARMONIC OSCILLATOR; 1. THE FRAMEWORK OF QUANTUM PROBABILITY; 2. SOME QUANTUM MECHANICS; 3. CONDITIONAL EXPECTATIONS AND OPERATIONS; 4. SECOND QUANTISATION; 5. UNITARY DILATIONS OF SPIRALING MOTION; 6. THE DAMPED HARMONIC OSCILLATOR; REFERENCES; QUANTUM PROBABILITY AND STRONG QUANTUM MARKOV PROCESSES; 0. INTRODUCTION; 1. Quantum Probability; 1. A COMPARATIVE

	DESCRIPTION OF CLASSICAL AND QUANTUM PROBABILITY; 2. THE ROLE OF TENSOR PRODUCTS OF HILBERT SPACES; 3. SOME BASIC OPERATORS ON FOCK SPACES 4. FROM URN MODEL TO CANONICAL COMMUTATION RELATIONSII. Quantum Markov Processes; 5. STOCHASTIC OPERATORS ON C*- ALGEBRAS; 6. STINESPRING'S THEOREM; 7. EXTREME POINTS OF THE CONVEX SET OF STOCHASTIC OPERATORS; 8. STINESPRING'S THEOREM IN TWO STEPS; 9. CONSTRUCTION OF A QUANTUM MARKOV PROCESS; 10. THE CENTRAL PART OF MINIMAL DILATION; 11. ONE PARAMETER SEMIGROUPS OF STOCHASTIC MAPS ON A C*-ALGEBRA; III. Strong Markov Processes; 12. NONCOMMUTATIVE STOP TIMES; 13. MARKOV PROCESS AT SIMPLE STOP TIMES; 14. MINIMAL MARKOV FLOW AT SIMPLE STOP TIMES 15. STRONG MARKOV PROPERTY OF THE MINIMAL FLOW FOR A GENERAL STOP TIMES 15. STRONG MARKOV PROPERTY OF THE MINIMAL FLOW FOR A GENERAL STOP TIMES; 14. MINIMAL SEMIGROUPS - INSPIRED BY SCATTERING THEORY; 0. INTRODUCTION; 1. COMPARISON OF THE LARGE TIME BEHAVIOUR OF TWO SEMIGROUPS; 2. THE CLASSIFICATION OF STATES; 3. ERGODIC PROPERTIES OF QUANTUM DYNAMICAL SEMIGROUPS; 4. CONVERGENCE TOWARDS THE EQUILIBRIUM; ACKNOWLEDGEMENT; REFERENCES; A SURVEY OF OPERATOR ALGEBRAS; 0. COMPLEX BANACH ALGEBRAS 1. C*-ALGEBRAS1.1. Definition and first spectral properties.; 1.2. Adding a unit; 1.3. First examples: abelian C*-algebras; 1.4. Continuous functional calculus in C*-algebras; 1.5. More examples: B (H) and its sub-C*-algebras; 1.6. Order Structure, states, and t h e GNS construction; 1.6.1. Positive elements and order in A.; 1.6.2. Dual order structure and states; 1.6.3. GNS construction; 2. VON NEUMANN ALGEBRAS, 2.1. Some topologies on B(H); 2.1.1. Three natural topologies; 2.1.2. The ideal L1(H); 2.2. von Neuman algebras; 2.2.1. von Neumann bicommutant theorem. 2.2.2. Definition of von Neumann algebras.
Sommario/riassunto	Lecture notes from a Summer School on Quantum Probability held at the University of Grenoble are collected in these two volumes of the QP-PQ series. The articles have been refereed and extensively revised for publication. It is hoped that both current and future students of quantum probability will be engaged, informed and inspired by the contents of these two volumes. An extensive bibliography containing the references from all the lectures is included in Volume 12.