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	Nota di contenuto	PART I: Quantum Probability Methods -- The non–linear and quadratic quantization programs(Accardi et al.) -- A pedagogical note on the computation of relative entropy of two n-mode gaussian states (Parthasarathy) -- Quantum operators of the semicircle distributions (Popa et al.) -- Quantum Probability for Modeling Cognition, Decision Making, and Articial Intelligence(Khrennikov) -- PART II: Quantum Information Methods -- Note on Complexity of Communication

Processes (Watanabe) -- Trace decreasing quantum dynamical maps: Divisibility and entanglement dynamics(Filippov) -- Compound state, its conditionality and quantum mutual information(Matsuoka) -- Block Markov Chains on Trees(Souissi) -- PART III: Quantum Dynamical Systems -- Hilbert von Neumann Modules versus Concrete von Neumann Modules(Skeide) -- Absorption and xed points for semigroups of quantum channels(Girotti) -- Characterization of Gaussian Quantum Markov Semigroups(Poletti) -- A Mean-eld Laser Quantum Master Equation(Fagnola et al.) -- Unique ergodicity and weakly monotone Fock space(Crismale) -- Part IV: Innite Dimensional Analysis -- Solutions of innite dimensional partial dierential equations(Draouil et al.) -- On Some Properties of Solution Sets of Discontinuous Quantum Stochastic Dierential Inclusions(Dikko).- Fractional operators from vanishing Morrey to vanishing Campanato spaces in the variable exponent setting on quasi-metric measure spaces(Rafeiro et al.) -- Part V: Operator Algebras -- Characterization of certain traces on von Neumann algebras(Bikchentaev) -- Actions of -Morphisms on Certain Projections of C-Matrix Algebras(Shaheen) -- Part VI: Stochastic Operators -- Compatible Linear Lypunov Function for Innite Dimensional Volterra Quadratic Stochastic Operators (Embong) -- Bijectivity of a Class of Lotka-Volterra Operators Dened on 2D-Simplex(Hee Pah et al.) -- Dynamics of stochastic Cesaro operators(Khakimov et al.) -- The dynamics of a Volterra cubic operator (Jamilov et al.) -- The dynamics of superposition of non-Volterra quadratic stochasticoperators S2(Jamilov et al.) -- A quadratic worm propagation model(Khudoyberdiev).

| Sommario/riassunto | This proceedings volume gathers selected, peer-reviewed papers presented at the 41st International Conference on Infinite Dimensional Analysis, Quantum Probability and Related Topics (QP41) that was virtually held at the United Arab Emirates University (UAEU) in Al Ain, Abu Dhabi, from March 28th to April 1st, 2021. The works cover recent developments in quantum probability and infinite dimensional analysis, with a special focus on applications to mathematical physics and quantum information theory. Covered topics include white noise theory, quantum field theory, quantum Markov processes, free probability, interacting Fock spaces, and more. By emphasizing the interconnection and interdependence of such research topics and their real-life applications, this reputed conference has set itself as a distinguished forum to communicate and discuss new findings in truly relevant aspects of theoretical and applied mathematics, notably in the field of mathematical physics, as well as an event of choice for the promotion of mathematical applications that address the most relevant problems found in industry. That makes this volume a suitable reading not only for researchers and graduate students with an interest in the field but for practitioners as well. |