

## Contents

L. Accardi - Some trends and problems in quantum probability.	1
R. Alicki - Scattering theory for quantum dynamical semigroups.	20
C. Barnett , R.F. Streater, I. F. Wilde. Quantum stochastic processes.	32
O. Bratteli - On dynamical semigroups and compact group actions.	46
G. Casati - Irreversibility and chaos in quantum systems.	62
C. Cecchini - Noncommutative integration and conditioning.	76
Ph. Combe, R. Rodriguez, M. Sirugue, M. Sirugue-Collin - Stochastic representation of thermal functionals.	86
C. D'Antoni - Statistical independence of local algebras.	93
D. de Falco - On the problem of nonconfigurational observables in stochastic mechanics.	103
R. Dümcke - Markovian limits of multi-time correlation functions for open quantum systems.	113
A. Frigerio, V. Gorini - On stationary Markov dilations of quantum dynamical semigroups.	119
N. Gisin - A model of irreversible deterministic quantum dynamics.	126
F. Guerra - Probability and quantum mechanics. The conceptual foundations of stochastic mechanics.	134
D. Gutkowski, M.V. Valdes Franco - Kolmogorovian statistical invariants for the Aspect - Rapisarda experiment.	146
A.S. Holevo - Covariant measurements and imprimitivity systems.	153
R.L. Hudson, K. R. Parthasarathy - Construction of quantum diffusions.	173
A. Klein - The analytic continuation of a Osterwalder-Schrader positive representation of the euclidean group to a representation of the Poincaré group. Appendix: A connection between quantum systems and stochastic processes.	199
P. Kruszynski - Extensions of Gleason theorem.	210
B. Küpperer - Examples of Markov dilations over the $2 \times 2$ matrices.	228
J. T. Lewis, H. Maassen - Hamiltonian models of classical and quantum stochastic processes.	245
G. Lindblad - Quantum entropy and irreversibility.	277
D. Petz - Quantum ergodic theorems.	289
G.M. Prosperi - The quantum measurement process and the observation of continuous trajectories.	301
G.A. Raggio - Generalized transition probabilities and applications.	327
N. Riedel - Some remarks on quantum logics and ordered vector spaces.	336
T.A. Sarimsahov - Ergodic properties of Markov operators acting on the space of matrices. ( <i>Ергодические свойства марковских операторов, действующих в пространстве матриц</i> ) . . . . . to appear elsewhere	
W. Schröder - A hierarchy of mixing properties for non-commutative K-systems.	340
M. Spera - Type and normality properties of some infrared representations.	352

M.D. Srinivas - Quantum Theory of Continuous Measurements. . . . .	356
P. Vanheuverzwijn - On the implementability of certain positive maps. . . . .	365
A. Verbeure - Energy versus entropy balance arguments in classical lattice systems . . . . .	377
W.von Waldenfels - Ito solution of the linear quantum stochastic differential equation describing light emission and absorption . . . . .	384