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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Jerome A. Goldstein, Rainer Nagel: The Evolution of Operator Semigroups -- Krzysztof Bogdan, Sebastian Sydor: On nonlocal perturbations of integral kernels -- Jan Kisy´nski: Convolution operators as generators of one-parameter semigroups -- Jan Kisy´nski: One-parameter semigroups in the algebra of slowly increasing functions -- Delio Mugnolo: Some remarks on the Krein–von

Neumann extension of different Laplacians -- Mustapha Mokhtar-Kharroubi: On strong convergence to ergodic projection for perturbed substochastic semigroups -- Lassi Paunonen: On Robustness of Strongly Stable Semigroups with Spectrum on iR -- Irena Lasiecka, Roberto Triggiani: Uniform Stabilization with Arbitrary Decay Rates of the Oseen Equation by Finite-Dimensional Tangential Localized Interior and Boundary Controls -- H. Emamirad, G. R. Goldstein, J. A. Goldstein, P. Rogeon: The null volatility limit of the chaotic Black-Scholes equation -- V. I. Gerasimenko, Yu. Yu. Fedchun: On Semigroups of Large Particle Systems and their Scaling Asymptotic Behavior -- Alevtina V. Keller, Alexander L. Shestakov, Georgy A. Sviridyuk, Yurii V. Khudyakov: The Numerical Algorithms for the Measurement of the Deterministic and Stochastic Signals -- Yuri Kozitsky: Dynamics of spatial logistic model: finite systems -- Natalia A. Manakova, Georgy A. Sviridyuk: An Optimal Control of the Solutions of the Initial-Final Problem for Linear Sobolev Type Equations with Strongly Relatively p-Radial Operator -- Irina V. Melnikova, Valentina S. Parfenenkova: Two approaches to infinite dimensional extension of Feynman–Kac theorem -- Ryszard Rudnicki, Marta Tyran-Kami´nska: Piecewise deterministic Markov processes in biological models -- Minzilia A. Sagadeeva, Georgy A. Sviridyuk: The Nonautonomous Linear Oskolkov Model on a Geometrical Graph: the Stability of Solutions and the Optimal Control Problem -- S. A. Stepin: Complex Potentials: Bound States, Quantum Dynamics and Wave Operators -- Andrzej Tomski: The Dynamics of Enzyme Inhibition Controlled by Piece-wise Deterministic Markov Process -- Sophiya A. Zagrebina, Ekaterina A. Soldatova, Georgy A. Sviridyuk: The Stochastic Linear Oskolkov Model of the Oil Transportation by the Pipeline,- Alyona A. Zamyshlyaeva, Georgy A. Sviridyuk: The Linearized Benney – Luke Mathematical Model with Additive White Noise.

Sommario/riassunto

Many results, both from semigroup theory itself and from the applied sciences, are phrased in discipline-specific languages and hence are hardly known to a broader community. This volume contains a selection of lectures presented at a conference that was organised as a forum for all mathematicians using semigroup theory to learn what is happening outside their own field of research. The collection will help to establish a number of new links between various sub-disciplines of semigroup theory, stochastic processes, differential equations and the applied fields. The theory of semigroups of operators is a well-developed branch of functional analysis. Its foundations were laid at the beginning of the 20th century, while the fundamental generation theorem of Hille and Yosida dates back to the forties. The theory was, from the very beginning, designed as a universal language for partial differential equations and stochastic processes, but at the same time it started to live as an independent branch of operator theory. Nowadays, it still has the same distinctive flavour: it develops rapidly by posing new ‘internal’ questions and, in answering them, discovering new methods that can be used in applications. On the other hand, it is influenced by questions from PDEs and stochastic processes as well as from applied sciences such as mathematical biology and optimal control, and thus it continually gathers a new momentum. Researchers and postgraduate students working in operator theory, partial differential equations, probability and stochastic processes, analytical methods in biology and other natural sciences, optimization and optimal control will find this volume useful.