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Nota di contenuto	Wilson Lamb: Applying functional analytic techniques to evolution equations -- Adam Bobrowski: Boundary conditions in evolutionary equations in biology.-Ernesto Estrada: Introduction to Complex Networks: Structure and Dynamics.-Jacek Banasiak: Kinetic models in natural sciences -- Philippe Laurençot: Weak compactness techniques and coagulation equations -- Ryszard Rudnicki: Stochastic operators and semigroups and their applications in physics and biology -- Mustapha Mokhtar-Kharroubi: Spectral theory for neutron transport.-Anna Marciniak-Czochra: Reaction-diffusion-ODE models of pattern

	formation -- Mapundi Kondwani Banda: Nonlinear Hyperbolic Systems of Conservation Laws and Related Applications.
Sommario/riassunto	With the unifying theme of abstract evolutionary equations, both linear and nonlinear, in a complex environment, the book presents a multidisciplinary blend of topics, spanning the fields of theoretical and applied functional analysis, partial differential equations, probability theory and numerical analysis applied to various models coming from theoretical physics, biology, engineering and complexity theory. The unique features of the book are: the first simultaneous presentation of two complementary approaches to fragmentation and coagulation problems, by weak compactness methods and by using semigroup techniques, comprehensive exposition of probabilistic methods of analysis of long term dynamics of dynamical systems, semigroup analysis of biological problems and cutting edge pattern formation theory. The book will appeal to postgraduate students and researchers specializing in applications of mathematics to problems arising in natural sciences and engineering.