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Sommario/riassunto	This book explains mathematical theories of a collection of stochastic partial differential equations and their dynamical behaviors. Based on probability and stochastic process, the authors discuss stochastic integrals, Ito formula and Ornstein-Uhlenbeck processes, and introduce theoretical framework for random attractors. With rigorous mathematical deduction, the book is an essential reference to mathematicians and physicists in nonlinear science. Contents: PreliminariesThe stochastic integral and Itô formulaOU processes and SDEsRandom attractorsApplicationsBibliographyIndex