

1023-60-937

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In finite dimension, the solution of an Ito equation is a diffusion process and its connection to a parabolic PDE, known as the Kolmogorov equation is well known. It seems natural to explore such a relationship for a stochastic partial differential equation of Ito type. Formally the associated Kolmogorov equation is infinite-dimensional. In the absence of the Lebesgue measure, to develop an  $L^2$ -theory, it is not obvious how to choose a reference measure for a given problem. We will consider a class of semilinear Ito equations for which the linearized equation has an invariant measure. It will be shown that such an invariant measure is a good choice as the reference measure. Based on this choice, we can construct the  $L^2$ -Sobolev spaces to study the existence, uniqueness and regularity properties of solutions to the infinite-dimensional Kolmogorov equations. A generalization of this approach to other linear and semilinear parabolic equations in infinite dimension will also be discussed. (Received September 23, 2006)