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12. Probability and Statistics

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Applications of support theorems to invariance measure theory
Support theorems for some stochastic evolution equations, proved on the base of Wong-Zakai type theorems, find different applications to invariant measure theory. Among them are the so-called Nagumo type theorems proving that the trajectories of solutions to stochastic functional differential equations and stochastic semilinear differential equations in Hilbert spaces remain in a fixed set between an initial and final moments. Another application is to the problem of existence and uniqueness of invariant measures for some nonlinear stochastic partial differential equations and stochastic Navier-Stokes equations. Finally, for the latter equations, connections are presented between the attractors or fractals for a certain invariant measure and the support of a measure which is the probability distribution.