Stability of Some Anticipating Semilinear Stochastic Differential Equations of Skorohod Type

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Abstract: We study different types of stability of the solution of a semi-linear anticipating stochastic differential equation driven by a Brownian motion, with a random variable as initial condition. The involved stochastic integral is the Skorohod one. Being the initial condition random, we need to redefine the stability concepts. The new stability criteria depend on the derivative of the initial condition in the Malliavin calculus sense. The talk is based on the paper [1].

References

[1] J. A. León, D. Márquez-Carreras and J. Vives (2023). Stability of Some Anticipating Semilinear Stochastic Differential Equations of Skorohod Type. Accepted in Journal of Dynamics and Differential Equations.