Weak Solutions of a Stochastic Landau-Lifshitz-Gilbert Equation Driven by Pure Jump Noise

Zdzisaw Brzeniak, Univ. of York

In this work we study a stochastic three-dimensional Landau-Lifschitz-Gilbert equation perturbed by pure jump noise in the Marcus canonical form. We show existence of weak martingale solutions taking values in a two-dimensional sphere $\mathbf{S}^3$ and discuss certain regularity results. The construction of the solution is based on the classical Faedo-Galerkin approximation, the compactness method and the Jakubowski version of the Skorokhod Theorem for nonmetric spaces. This is a joint work with Utpal Manna (Trivandrum).