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On some stochastic singular integro-partial differential equations and the parabolic transform

Abstract

Some stochastic singular integro-partial differential equations are studied without any restrictions on the characteristic forms of the partial differential operators. Linear and nonlinear cases are studied. Using the parabolic transform, existence and stability results are obtained. The Cauchy problem of fractional stochastic partial differential equations can be considered as a special case from the obtained results. Key words: Singular integral equations, Stochastic partial differential equations, Existence and stability of solutions, Fractional stochastic partial differential equations.

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