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Second order elliptic partial differential equations driven by Lévy white noise. (English)

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In this paper, the authors deal with linear stochastic partial differential equations with variable coefficients driven by Lévy white noise whose solutions are defined as a generalized random process. First, an existence theorem for integral transforms of Lévy white noise is derived and the existence of generalized and mild solutions of second order elliptic partial differential equations are proved. Further, the authors discuss the generalized electric Schrödinger operator for different potential functions.

Reviewer: Udhayakumar Ramalingam (Vellore)

MSC:

60H15 Stochastic partial differential equations (aspects of stochastic analysis)
60H40 White noise theory
35J15 Second-order elliptic equations
35J10 Schrödinger operator, Schrödinger equation

Keywords:

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