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Stochastic evolution equations driven by cylindrical stable noise

In this talk we present an existence result for the mild solution of a stochastic evolution equation driven by a symmetric α -stable cylindrical Lévy process defined on a Hilbert space for $\alpha \in (1,2)$. In contrast to other literature, our work is based on the so-called semigroup approach to SPDEs. Similar to the fact that there are no standard Gaussian distribution in an infinite dimensional Hilbert space, the symmetric α -stable noise only exists in a generalised sense. As a consequence, to derive the existence result, we need to employ some non-standard methods, which we will present and discuss in this talk. Joint work with Tomasz Kosmala.