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*Recent advances for SPDEs with Lévy noise*

In this talk, we introduce a new class of processes that can be used as noise for stochastic partial differential equations (SPDEs). This noise is called the “Lévy colored noise”, and is constructed from a Lévy white noise using the convolution with a suitable spatial kernel. We assume that the Lévy measure of the noise has finite variance. The stochastic integral with respect to this noise is constructed similarly to the integral with respect to the spatially-homogeneous Gaussian case considered in Dalang (1999). Using Rosenthal’s inequality, we provide an upper bound for the  $p$ -th moment of the stochastic integral with respect to this noise. Then, we analyze the existence of moments for linear and non-linear SPDE with this noise, considering as examples the stochastic heat and wave equations. This talk is based on joint work with Juan Jiménez.