FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA Fakultät für Mathematik und Informatik

Institut für Mathematik

Seminar zur Stochastik

Donnerstag, 14. November 2019
12 Uhr c. t.
HS 3 Abbeanum

Herr Prof. Dr. Markus Riedle
(Kings College London, UK)

"Modelling Lévy space-time white noises"

Abstract: It is well known that the cylindrical Brownian motion and the Gaussian space-time white noise correspond to each other. In this talk we consider the analogue relation between cylindrical Lévy processes and Lévy space-time white noises. In contrast to the Gaussian case, it turns out that this correspondence only holds for specific kinds of cylindrical Lévy processes. We determine the subclass of cylindrical Lévy processes for which the correspondence holds, and describe the elements of this subclass uniquely by their characteristic function. We exploit the established relation by embedding cylindrical Lévy processes in the space of general and tempered distributions. These results enable us to determine a certain Besov spaces, in which the paths of a cylindrical Lévy process lies, which may be seen as a first result explaining the regular (or irregular) behaviour of the jumps of a cylindrical Lévy process.

Alle Interessierte sind herzlich eingeladen

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