universität wien
Fakultät für Mathematik

EINLADUNG

zum

HABILITATIONSVORTRAG

DI Dr. Christa Cuchiero
(Fakultät für Mathematik)

“INFINITE DIMENSIONAL AFFINE AND POLYNOMIAL PROCESSES”

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Abstract: Motivated from high and infinite dimensional problems in mathematical finance, we consider an approach relying on tractable infinite dimensional processes instead of often highly stylized low dimensional factor models. We have two concrete applications in mind: first, modeling high or even potentially infinite dimensional financial markets in a tractable and robust way, and second analyzing stochastic Volterra processes, which recently gained popularity through rough volatility models and ambit processes.
Both questions naturally lead to infinite dimensional affine and polynomial processes taking values in certain spaces of functions or measures. On the one hand, inspired from market weights modeling, we consider the space of probability measures on a locally compact Polish space, where we can characterize polynomial diffusions, of which the well-known Fleming-Viot process is a specific example. On the other hand, we analyze infinite dimensional Markovian lifts of affine rough volatility models of general jump diffusion type taking values in certain cones of Banach spaces.

Mittwoch, 21. März 2018,
14:45 Uhr – 15:45 Uhr,

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