



Institut für Mathematik

Seminar zur Stochastik

Dienstag, 15. Januar 2019
12 Uhr c. t.
SR 307, Carl-Zeiss-Str. 3

Herr Dr. Sebastian Riedel
(Technische Universität Berlin)

“A dynamical theory for stochastic delay differential equations”

Abstract: Stochastic delay differential equations (SDDE) are prominent examples of stochastic differential equations on infinite-dimensional spaces which, in general, do not generate a stochastic flow. Consequently, a dynamical theory to study these equations seemed to be impossible for a long time. In this talk, we show how to solve this problem. We prove that SDDE induce continuous Random Dynamical Systems on a field of Banach spaces. The Banach spaces are the spaces of controlled paths known in Rough paths theory. Following recent works by Gonzalez-Tokman, Quas and Blumenthal, we can then prove a version of Oseledets' Multiplicative Ergodic Theorem which yields the existence of Lyapunov exponents. This paves the way to a thorough study of the dynamical properties of singular stochastic delay equations. Joint work with Mazyar Ghani Varzaneh (TU Berlin)

Alle Interessierte sind herzlich eingeladen!

Kontakt:
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