



Institut für Mathematik

Seminar zur Stochastik

Mittwoch, 18. Mai 2022

12 Uhr s. t.

[ONLINE über BBB](#)

Herr Prof. Dr. Bin Pei

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“Averaging principle for fast-slow system driven by mixed fractional Brownian rough path”

Abstract: This paper is devoted to studying the averaging principle for a fast-slow system of rough differential equations driven by mixed fractional Brownian rough path. The fast component is driven by Brownian motion, while the slow component is driven by fractional Brownian motion with Hurst index H ($\frac{1}{3} < H \leq \frac{1}{2}$). Combining the fractional calculus approach to rough path theory and Khasminskii's classical time discretization method, we prove that the slow component strongly converges to the solution of the corresponding averaged equation in the L1-sense. The averaging principle for a fast-slow system in the framework of rough path theory seems new.

(This is a joint work with Y. Inahama and Y. Xu)

Alle Interessierte sind herzlich eingeladen.

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