



Mathematisches Kolloquium

Am Freitag, dem 02. Februar 2018 spricht um 14 Uhr c. t. im Hörsaal IV
der Fachrichtung Mathematik (Gebäude E24)

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über das Thema:

Analytic Construction of Markov Processes

Abstract: Many physical phenomena possess the 'loss of memory' property, i.e. when the process observed after a moment of time t remembers only its position at this time, but does not remember its 'past'. In the probability theory such processes are called 'Markov processes', named after A. Markov. It is very important to investigate the analytical properties of Markov processes, both from the theoretical and the applied point of view. On the other hand, the first arising problem is how to *construct* a Markov process starting from some analytic characteristic, for example, when we have some *a priori* information about the drift of the process, the presence of a part with continuous trajectories, and the intensity of jumps. Such an analytic *a priori* information allows to write an integro-differential equation, whose solution (when exists) provides the probability distribution of the process. Investigating the properties of this distribution, one can get the information on the behaviour of the process.

In the talk we will discuss the analytical approach to this problem, introduce possible ways of solving, and provide examples.

The talk relies on the joint on-going work with Alexei Kulik, Krzysztof Bogdan and Pawel Sztonyk.

Der Gast wird von Dr. Yana Kinderknecht betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 103)

Die Dozenten der Mathematik