



Fakultät für Mathematik und Informatik

Institut für Mathematik

Kolloquium zur Stochastik

Dienstag, 25. April 2017

14 Uhr c. t.

SR 108 August-Bebel-Str. 4,

Herr Prof. Dr. Alexander Gushchin

(Lomonossow University Moskau, Russia)

„The joint law of terminal values of a nonnegative submartingale and its compensator“

Abstract: Let X , $X_0=0$, be a nonnegative submartingale of class (D) with the Doob-Meyer decomposition $X=M+A$, where M is a uniformly integrable martingale and A is an integrable predictable increasing process (the compensator of X). We provide a characterization of possible joint laws of the terminal values (X_∞, A_∞) . It turns out that we obtain the same set of possible joint laws if we assume, in addition, that X is an increasing process, or the square of a martingale. A special attention is given to extreme points (in a sense) of this set of two-dimensional laws and to a description of processes corresponding to these extreme laws. We also provide a link between our results and Rogers' characterization of possible joint laws of a martingale and its maximum.

Alle Interessenten sind herzlich eingeladen!

Kontakt:

*Ilya Pavlyukevich /Professur für Stochastik mit Anwendungen in den Naturwissenschaften /
Institut für Mathematik / Ernst-Abbe-Platz 2 / 07743 Jena*