FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA
Fakultät für Mathematik und Informatik

Institut für Mathematik

Seminar zur Stochastik

Donnerstag, 19. Dezember 2019
12 Uhr c. t.
HS 3 Abbeanum

Herr Dr. Nabil Kazi-Tani
(Universite Lyon 1)

“Gambling for resurrection and the heat equation on a triangle.”

Abstract: We consider the problem of controlling the diffusion coefficient of a diffusion with constant negative drift rate such that the probability of hitting a given lower barrier up to some finite time horizon is minimized. We assume that the diffusion rate can be chosen in a progressively measurable way with values in the interval [0, 1]. We prove that the value function is regular, concave in the space variable, and that it solves the associated HJB equation. To do so, we show that the heat equation on a right triangle, with a boundary condition that is discontinuous in the corner, possesses a smooth solution.
This is a joint work with Stefan Ankirchner (University of Jena), Christophette Blanchet-Scalliet (ICJ, Ecole Centrale Lyon) and Chao Zhou (National University of Singapore).

Alle Interessierte sind herzlich eingeladen

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