FB Mathematik	FB Physik, Mathematik und Informatik Institut für Mathematik	FB Informatik und Mathematik Institut für Mathematik Schwerpunkt Stochastik
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Rhein-Main-Kolloquium Stochastik

TU Darmstadt, Goethe-Universität Frankfurt und Gutenberg-Universität Mainz

Freitag, 15. November 2019

15:15 Uhr: Amandine Véber (Paris): Resource sharing with logarithmic weights

Abstract: In this talk, we'll focus on a class of resource allocation algorithms for communication networks: if a node of this network has L requests to transmit and is idle, it tries to access the channel at a rate proportional to log(1+L). We'll study a simple stochastic model for such an algorithm in the case of a star network, in which J nodes can transmit simultaneously but interfere with a central node 0 in such a way that node 0 cannot transmit when one of the other nodes does. In contrast with the case where the probability of accessing the channel is proportional to L, as the total number of pending requests tends to infinity several timescales interact in a fine way to determine the asymptotic behaviour of the system. In particular, the numbers of pending requests at every node can evolve on very different timescales and have very different orders of magnitude. Joint work with Philippe Robert (INRIA Paris).

16:15 – 16:45 Uhr: Kaffee und Tee

16:45 Uhr: Sarah Penington (Bath): Branching Brownian motion with selection and a free boundary problem

Abstract: Consider a system of N particles moving according to Brownian motions and branching at rate one. Each time a particle branches, the particle in the system furthest from the origin is killed. It turns out that we can use results about a related partial differential equation known as a free boundary problem to control the long term behaviour of this particle system for large N. This is joint work with Julien Berestycki, Eric Brunet and James Nolen.

Im Anschluss gemeinsame Nachsitzung.
Wegbeschreibung und Abstracts siehe die Homepage des Rhein-Main-Kolloquiums:
https://www.stochastik.mathematik.uni-mainz.de/rhein-main-kolloquium-stochastik/

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Interessenten sind herzlich eingeladen.   gez. Matthias Birkner