
12. Erlanger-Münchner Tag der Stochastik

Veranstalter: Noam Berger (München), Nina Gantert (München), Andreas Greven (Erlangen), Gerhard Keller (Erlangen), Franz Merkl (München), Silke Rolles (München), Vitali Wachtel (München).

Der Tag der Stochastik findet am **Freitag, den 12. Juli 2013 um 14:00 Uhr** im Hörsaal H13 im Department Mathematik, Friedrich-Alexander-Universität Erlangen-Nürnberg, Cauerstr. 11, 91058 Erlangen statt.

Das Department ist vom Erlanger Hauptbahnhof mit der Buslinie 293 zu erreichen. Zielhaltestelle: Technische Fakultät.

Programm:

- 14:15-15:15 Uhr: Wolfgang König (Berlin): *Upper tails of self-intersection local times: survey of proof techniques*

Abstrakt: The asymptotics of the probability that the self-intersection local time of a random walk on the d -dimensional lattice exceeds its expectation by a large amount is a fascinating subject because of its relation to some models from Statistical Mechanics, to large-deviation theory and variational analysis and because of the variety of the effects that can be observed. However, the proof of the upper bound is notoriously difficult and requires various sophisticated techniques. We survey some heuristics and some recently elaborated techniques and results.

- 15:30-16:30 Uhr: Jean-René Chazottes (Palaiseau): *On concentration inequalities for dynamical systems*

Abstrakt: After a broad introduction, I will talk about stochastic processes generated by dynamical systems. Depending on the speed of decay of correlations, one gets exponential or polynomial concentration inequalities for a large class of observables.

- 16:30-17:00 Uhr: Kaffee und Tee.

- 17:00-18:00 Uhr: R. Grübel (Hannover): *Combinatorial Markov chains*

Abstrakt: Markov chains are an important tool in the analysis of random discrete structures. Such structures arise, for example, as output of algorithms for sorting and searching if the input is random.

In the lecture we will explain compactifications of the state space of transient Markov chains, we present the ‘boundary theory approach’ to the analysis of functionals of such chains, and we demonstrate the use of algorithms in connection with the derivation and enhancement of state space compactifications for binary search trees.

Nachsitzung in einem Erlangen Restaurant (in Bahnhofsnähe), ab 18:30 Uhr.