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Prof. Dr. Franz Merkl  
Prof. Dr. Markus Heydenreich

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Technische Univ. München  
Prof. Dr. Silke Rolles  
Prof. Dr. Nina Gantert

## 16. Erlanger-Münchener Tag der Stochastik

Der diesjährige Tag der Stochastik findet statt am

**Freitag, den 09. Juni 2017**

im Hörsaal H 13 im Department Mathematik in der Cauerstraße 11 in Erlangen.

Das wissenschaftliche Programm besteht aus folgenden Vorträgen:

- 14:15-15:15 **Prof. Dr. Vlada Limic** (Département de Mathématiques, Université Paris Sud)  
*The secret of excursions of  $B_s - 1/2s^2 + \dots + ts$  as  $t$  increases*
- 15:30-16:30 **Prof. Dr. Leif Döring** (Mathematical Institute, Universität Mannheim)  
*Skorohod Embedding Problem for Lévy Processes*
- 16:30-17:00 Pause
- 17:00-18:00 **Prof. Dr. Roman Kotecký** (Mathematics Institute, University of Warwick)  
*Emergence of long cycles for random interchange process on hypercubes*

Im Anschluss an das wissenschaftliche Programm ist eine Nachsitzung in einem Erlanger Restaurant geplant.

Wir freuen uns auf Ihren Besuch.

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**Abstracts:**

**Prof. Dr. Vlada Limic:**

After many years the speaker's thoughts return to the near-critical random graphs and the multiplicative coalescent. The secret announced in the title is far from being well-understood. However recent progress on the (near-critical) random graph encoding via the so-called simultaneous breadth-first walks, and the much richer excursion mosaic processes are encouraging. The purpose of the talk is to explain these recent findings, and put them in perspective in terms of the limiting extreme eternal multiplicative coalescent processes.

**Prof. Dr. Leif Döring:**

For a given probability distribution, the classical Skorohod Embedding Problem consists of finding (if possible) a stopping time so that a Brownian motion at the stopping time has a the prescribed distribution. Many solutions have been found and applied in different contexts. We discuss the analogue question for Lévy process and derive necessary/sufficient conditions for the existence of a solution. An explicit construction is derived using time-change theory for Markov processes.

**Prof. Dr. Roman Kotecký:**

Motivated by phase transitions in quantum spin models, we study random permutations of vertices (induced by products of uniform independent random transpositions on edges) in the case of high-dimensional hypercubes. We establish the existence of a transition accompanied by emergence of cycles of diverging lengths. (Joint work with Piotr Miłoś and Daniel Ueltschi.)

