



**Einladung**  
**zum**  
**Oberseminar Stochastik**

Am Donnerstag, 13.01.2022, um **17:45 Uhr**, im Seminarraum 1 (Raum 005)  
der Abteilung Mathematik, Weyertal 86-90, 50931 Köln spricht:

**Dr. Sebastian Andres**

**(University of Manchester)**

zum Thema

**First passage percolation with long-range correlations**

In this talk we consider first passage percolation (FPP) with passage times generated by a general class of models with long-range correlations, including discrete Gaussian free fields as a prominent example. We will discuss conditions under which the associated time constant is positive and the FPP distance is comparable to the Euclidean distance. We will also present two applications to random conductance models (RCM) with possibly unbounded and strongly correlated conductances, namely a Gaussian heat kernel upper bound for RCMs with a general class of speed measures, and an exponential decay estimate for the Green function of RCMs with random killing measures. This talk is based on a joined work with Alexis Prévost (Cambridge).

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik