Universität zu Köln Department Mathematik / Informatik Abteilung Mathematik



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## Einladung zum Oberseminar Stochastik

Am Mittwoch, 16.11.2022, um **17:30 Uhr**, im Seminarraum 1 (Raum 005) der Abteilung Mathematik, Weyertal 86-90, 50931 Köln spricht:

## Neeladri Maitra

(TU Eindhoven)

zum Thema

## Scaling of the clustering function in spatial inhomogeneous random graphs

Abstract: In this talk, we consider an infinite model of spatial inhomogeneous random graph that interpolates between popular spatial random graphs like the Hyperbolic Random Graph, Geometric Inhomogeneous Random Graph and the Age-dependent random connection model. We study the clustering function of a typical vertex in this model - in particular, how it scales, as the degree of the typical vertex grows to infinity. It is known from earlier work that the Hyberbolic Random Graph exhibits a phase transition of this scaling in terms of the model parameters - but it was unclear what drives this phase transition. In this talk, we will get some explanation of this phase transition. Moreover, we will see a further phase transition to a regime where the clustering function is a constant, while decaying like the square of log at the boundary of this phase transition. Joint work with Remco van der Hofstad and Pim van der Hoorn.

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik