



Einladung zum Oberseminar Stochastik

Am Mittwoch, 15. Juli 2026 um 15:30 Uhr, im Seminarraum 1 (Raum 005)
der Abteilung Mathematik, Weyertal 86–90, 50931 Köln, spricht:

Prof. Dr. Pim van der Hoorn
(Universität Eindhoven)

zum Thema

Random graphs and geometry: a powerful combination

Abstract:

Random graphs are both interesting mathematical objects to study and a powerful tool to analyze complex networks. The latter requires random graph models that are able to reproduce features present in a variety of complex systems. This imposes a challenges as classical random graph models such as Erdős-Rényi or even Inhomogeneous Random Graphs are not suited for this task. In this talk I will show that a solution can be found by including geometry into the random graph model. Here nodes are assigned positions in some geometric space and a feature. Then edges are created based on the distances between nodes in that space and their feature values. The resulting model is very flexible while allowing for power results. I will highlight several of these, including local convergence, scaling of the clustering function and even large deviations for the number of edges.