PARIS LODRON UNIVERSITÄT SALZBURG

SALZBURG MATHEMATICS COLLOQUIUM
Summer 2022

Daniel Hug (Karlsruhe)

„Skeleta and shapes related to random tessellations“

June 2, 2022

Abstract:
Random tessellations in Euclidean space are a classical topic and highly relevant for many applications. Poisson hyperplane tessellations present a particular model for which mean values and variances for functionals of interest have been studied successfully and a central limit theory has been developed. In recent years, similar results have been obtained in spherical space.
The purpose of this presentation is to discuss some new dimension dependent phenomena which arise for Poisson hyperplane tessellations in hyperbolic space. In particular, we consider the k-volume of the k-skeleton induced by such a tessellation within a geodesic ball of radius r and ask whether it satisfies a central limit theorem. We also address a non-Euclidean version of Kendall's problem asking for the shape of cells in random tessellations having large size.

Thursday, **15:00-15:45**
Hörsaal 414, 1. Stock

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