



Einladung zum Seminarvortrag

20. Oktober 2010

von

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Inspecting partially stationary models in stochastic geometry: Palm calculus and mass-transport principle

Palm calculus is a classical tool in the theory of point processes and in stochastic geometry. It can be used to extract so-called 'typical objects' (like typical particles, segments, or fibres) from stochastic models whose distribution possesses some invariance property with respect to some operating group, e.g., with respect to a translation group. In the classical theory, the underlying group operation is mostly transitive, and whenever it is not (as for instance in isotropic models) it seems that typical objects have not yet been considered in literature.

This is exactly what we will do in this talk, first by developing Palm calculus for possibly non-transitive group operations and then by using it in order to define the notion of typical objects. Furthermore, a new form of the recently fashionable mass-transport principle (MTP) will allow us in these non-transitive settings to relate, e.g., the distribution of a suitably defined zero-cell of random tessellations to the distribution of the typical volume-weighted cell. This MTP is intimately related to an extension of Neveu's famous exchange formula. We will also investigate tessellations on compact manifolds and on the infinite cylinder. Finally, we give explicit formulae for the typical cell of totally non-stationary and partially stationary Poisson-Delauney tessellations.

Termin: Mittwoch, 10. November 2010, 14:15 Uhr

Ort: Universität Ulm, Helmholtzstr. 18, Raum 220

Der Vortrag findet im Rahmen unseres Forschungsseminars statt. Interessenten sind herzlich eingeladen.

gez. V. Schmidt