

Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

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Thick points of the GFF and CLE nesting fields

“Thick points” of the GFF are points where, roughly speaking, the field is atypically high. They provide insight into the geometric properties of the field, and are the basis for the construction of so-called Liouville (quantum gravity) measures. The set of thick points with thickness level a is a fractal set with Hausdorff dimension $2 - a^2/2$. In this talk I will discuss another fundamental property, namely, that the set is almost surely disconnected for all non-zero a . This is based on joint work with Juhan Aru and Léonie Papon, and uses a remarkable relationship between the GFF and the conformal loop ensemble of parameter 4.