Universität Hamburg
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CLUSTER OF EXCELLENCE
QUANTUM UNIVERSE

Speaker: Alex Karrila (Åbo Akademi)

Title: UST branches and c=-2 degenerate conformal blocks

Abstract:

We study the link between CFT and the probabilities of certain topological connectivity events in the Uniform spanning tree. The scaling limit of these probabilities can be found explicitly, and shown to satisfy various properties of CFT correlation functions of degenerate fields, in particular a fusion property and the Benoit & Saint-Aubin PDEs of arbitrarily high order. This provides one of the first explicit connection between a lattice model and such higher-order PDEs. Based on an ongoing work with Augustin Lafay, Eveliina Peltola and Julien Roussillon.