Height function delocalisation on cubic planar graphs

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Delocalisation plays an important role in statistical physics. This talk will discuss the delocalisation transition in the context of height functions, which are integer-valued functions on the square lattice or similar two-dimensional graphs. By drawing a link with a phase coexistence result for site percolation on planar graphs, we prove delocalisation for a broad class of height functions on planar graphs of degree three. The proof also uses a new technique for symmetry breaking. The analysis includes several popular models such as the discrete Gaussian model, the solid-on-solid model, and the uniformly random K-Lipschitz function. Inclusion of the first model also implies the BKT phase transition in the Villain model on the triangular lattice. The talk is based on arXiv:2012.09687.

Tuesday, October 5, 2021 04:45pm - 05:45pm

Heinzel Seminar Room (I21.EG.101), Office Building West

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.

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