

# 8th Nordic Workshop on Statistical Physics: Biological, Complex and Non-Equilibrium Systems

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## Percolation on random planar maps

*Friday, March 10, 2017 11:30 AM (45 minutes)*

Random planar quadrangulations (and, more generally, random planar maps) belong to an active field of research in theoretical physics, probability and combinatorics. In recent years there has been an enormous progress on understanding probabilistic aspects of large random planar maps themselves. The next big step is to add matter to them, that is, to study models from statistical physics on large random planar maps. In this talk we consider one such model, more specifically site percolation on uniform quadrangulations of the half-plane. In a recent work with Jakob Björnberg we obtained a sharp estimate on the critical percolation probability. Building on the work of O. Angel, we use the so called peeling process to explore the map and the percolation cluster simultaneously. I will explain the general method, how it allows us to get the bounds for quadrangulations and why it is not the correct approach to the problem.

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