Universality and conformal invariance in critical percolation models

In this talk, I will describe our investigations of the universal behaviour of two critical percolation models: site percolation on the triangular lattice and bond percolation on the square lattice. Both are Yang-Baxter integrable models that can in principle be solved exactly. In the scaling limit, they are conformally invariant and described by non-unitary representations of the Virasoro algebra. I will describe our calculation of the models’ partition functions on the cylinder and torus. This is joint work with A. Klümper and P.A. Pearce.