Conformal Bootstrap in percolation and related models

Abstract : The aim of this presentation is to explain recent results in the conformal bootstrap approach for computing four points correlation functions for the Potts models and in particular in the limit of the percolation.

I will first make a general presentation of the conformal bootstrap with the many recent results for the 3d Ising model. Next I will concentrate on the more specific example of the Potts models in 2d for which one can predict the form of some correlation functions. This is done by comparing bootstrap techniques with Monte Carlo simulations to give support to the predictions.

Reference:

A conformal bootstrap approach to critical percolation in
two dimensions,
Marco Picco, Sylvain Ribault, Raoul Santachiara
http://arxiv.org/abs/1607.07224