

Discrete complex analysis and 2D Ising model

Stanislav Smirnov

Abstract

Most 2D lattice models (percolation, Ising, self-avoiding polymers) are conjectured to have conformally invariant scaling limits at critical temperatures. Proving these conjectures requires finding "discrete conformal invariants" associated to the models. Using the Ising model as an example we will discuss difficulties arising in working with discrete holomorphic structures.