

DISCRETE COMPLEX ANALYSIS AND PROBABILITY

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Many 2D lattice models of statistical physics (percolation, Ising model of ferromagnetism, self-avoiding polymers) are conjectured to have conformally invariant scaling limits at critical temperatures, which was used by physicists in deriving many of their properties.

Proving these conjectures requires finding “discrete conformal invariants” associated to the models.

We will discuss what is a “discrete complex analysis” and how it appears in probabilistic structures.