# Probabilistic models of statistical mechanics

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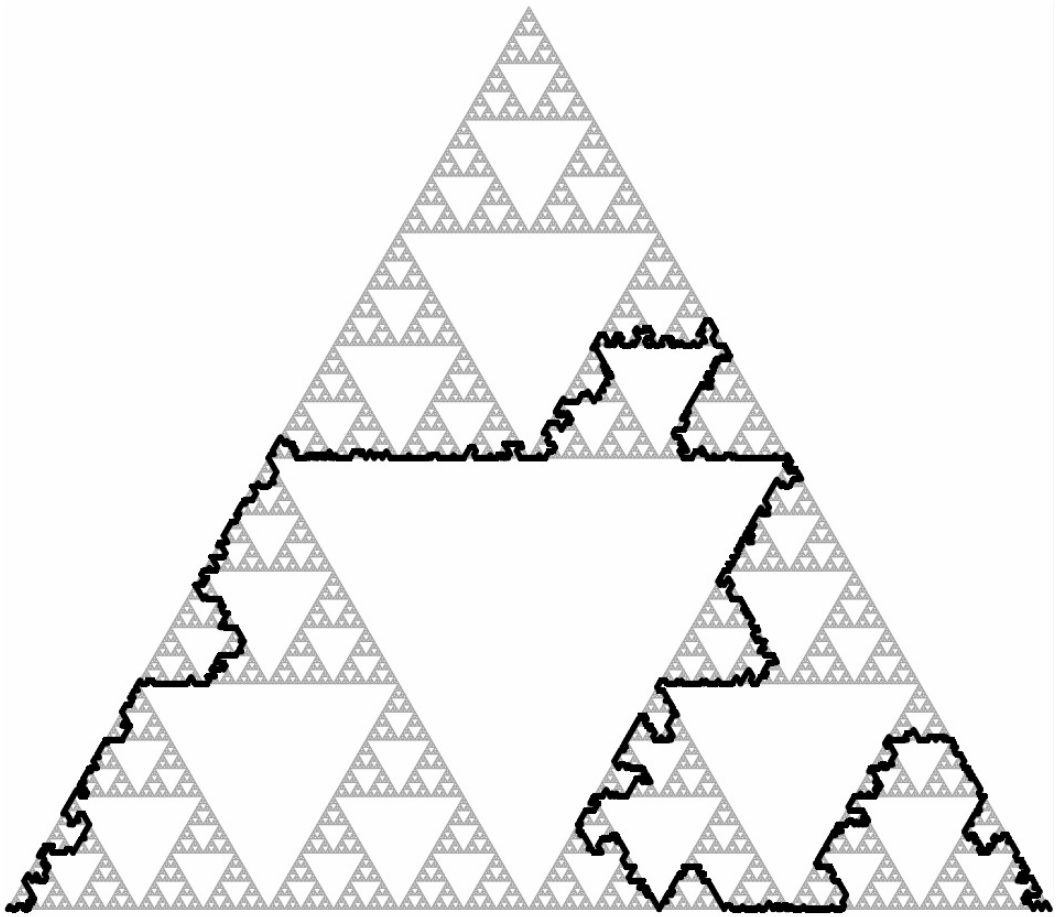

Loop-erased random walk on the Sierpinski graph

I am studying discrete probabilistic models, such as Random Walk, Percolation, and so on. Especially I define such models on fractal-like graphs, and investigate the deferences of the properties between ordinary 2- or 3-dimensional lattice and fractals. Most of fractal sets has non-integer valued dimensions (Hausdorff dimension or isoperimetric dimension, for example), so I want to clarify the correspondence of the properties of stochastic processes on fractals.
I am also interested in the analysis of mathematical games (the Memory Game, Bulls and Cows, ...). I wish to know the best moves of such probabilistic games rigorously by analyzing the winning rate thoroughly.

Keywords : discrete probabilistic models, fractal sets, mathematical games