BOULDER PROBABILITY SEMINAR

SCALING EXPONENTS FOR A ONE-DIMENSIONAL DIRECTED POLYMER

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We study a 1+1-dimensional directed polymer in a random environment on the integer lattice with log-gamma distributed weights and both endpoints of the polymer path fixed. We show that under appropriate boundary conditions the fluctuation exponents for the free energy and the polymer path take the values conjectured in the theoretical physics literature. Without the boundary we get the conjectured upped bounds on the exponents.