

NATURAL PARAMETRIZATION FOR THE SCALING LIMIT OF LOOP-ERASED RANDOM WALK IN THREE DIMENSIONS

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We will consider loop-erased random walk (LERW) and its scaling limit in three dimensions. Gady Kozma (2007) shows that as the lattice spacing becomes finer, LERW in three dimensions converges weakly to a random compact set with respect to the Hausdorff distance. We will show that 3D LERW parametrized by renormalized length converges in the lattice size scaling limit to Kozma's scaling limit parametrized by some suitable measure on it with respect to the uniform norm. This is based on joint works with Xinyi Li (University of Chicago).