

1038-60-321

**Christophe Garban, Gábor Pete\*** (gabor@microsoft.com) and **Oded Schramm**. *The scaling limits of dynamical and near-critical percolation, and the Minimal Spanning Tree*. Preliminary report.

Let each site of the triangular lattice, with small mesh  $\eta$ , have an independent Poisson clock with a certain rate  $r(\eta) = \eta^{3/4+o(1)}$  switching between open and closed. Then, at any given moment, the configuration is just critical percolation; in particular, the probability of a left-right open crossing in the unit square is close to  $1/2$ . Furthermore, because of the scaling, the expected number of switches in unit time between having a crossing or not is of unit order.

We prove that the limit (as  $\eta \rightarrow 0$ ) of the above process exists as a Markov process, and it is conformally covariant: if we change the domain with a conformal map  $\phi(z)$ , then time has to be scaled locally by  $|\phi'(z)|^{3/4}$ . The same proof yields a similar result for near-critical percolation, and it also shows that the scaling limit of (a version of) the Minimal Spanning Tree exists, it is invariant under translations, rotations and scaling, but not under general conformal maps. (Received February 12, 2008)