

# Brownian Web in the Scaling Limit of Supercritical Oriented Percolation in Dimension 1+1

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2011 September

Abstract: We show that, after suitable centering and diffusive rescaling of space and time, the collection of rightmost infinite open paths in a supercritical oriented percolation configuration in dimension 1+1 converges in distribution to the Brownian web. This proves a conjecture of Wu and Zhang. Loosely speaking, the Brownian web is a collection of coalescing Brownian motions starting from every point in the space-time plane  $R^2$ . Our key observation is that each rightmost infinite open path can be approximated by a percolation exploration cluster, and different exploration clusters evolve independently before they intersect. This is joint work with Anish Sarkar.