

Frozen-degree Percolation in the Square Lattice

Roberto Teodoro *joint work with* Vladas Sidoravicius

Instituto de Matemática Pura e Aplicada

Resumo/Abstract:

In this work we study a percolative model in the square lattice. In this model each edge e has assigned to it a random value X_e chosen uniformly in the interval $[0, 1]$ and we limit the maximum degree of the vertices. At instant $t = 0$ all edges are closed. As time increases in the interval $[0, 1]$, at time $t = X_e$ the edge e opens if no vertex incident to it has attained the maximum degree allowed or stays closed otherwise. Our main result is that there is a percolation transition in time when the degrees of the vertices are limited to three.