

On the Monotonicity of an Infinite Percolation Cluster of Trees

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Abstract: We explore the monotonicity of the infinite cluster of the Bernoulli bond percolation in two different perspectives: speed of the simple random walk and the anchored expansion constant. We show that the speed of the simple random walk on the infinite cluster of the Bernoulli bond percolation of Galton-Watson trees is increasing in the retaining probability. We also verify the monotone relation between the anchored expansion constant and the retaining probability for regular trees.