

Title:

Percolation inequalities: theorems and conjectures

Abstract:

If you enhance a spatial process in some systematic fashion, under what conditions does its critical point change strictly? A general approach to this question was described by Aizenman/Grimmett (AG) in 1991, and it has found numerous applications since. After summarising the AG method, we will discuss applications to entanglement and matching in percolation, and will mention a number of open problems of a fundamental nature.