

Probability Seminar

The chemical distance in critical percolation

Philippe Sosoe (Harvard)

Tuesday, March 15, 2016
2:30-3:30pm, Wachman Hall (Temple)

The chemical distance is the graph distance inside percolation clusters. In the supercritical phase, this distance is known to be linear with exponential probability, enabling a detailed study of processes like random walks on the infinite cluster. By contrast, at the critical point, the distance is known to be longer than Euclidean by some (unknown) power. I will discuss this and some bounds on distance, as well as a result comparing the chemical distance to the size of the lowest crossing. Joint work with Jack Hanson and Michael Damron.