

Some subcritical properties in continuum percolation

Marie Thérét

Université Paris Nanterre

Abstract:

We consider the Boolean model S : at each point of a homogeneous Poisson point process on the d -dimensional Euclidean space, we center a ball of random radius, and we denote by S the union of the balls. We consider the connected component of the origin in S , and look at some of its properties: is it bounded? what is the integrability of its volume, of its diameter, or of the number of balls of S it contains? We will try to understand how these properties are connected, in particular when the radii of the balls are not bounded. This is a joint work with Jean-Baptiste Gour (Institut Denis Poisson, Tours, France).