

Hamiltonicity of random geometric graphs

Jozsef Balogh (joint work with B. Bollobas, M. Krivelevich, T. Muller, M. Walters)

Abstract

We prove that, in the Gilbert model for a random geometric graph, almost every graph becomes Hamiltonian exactly when it first becomes 2-connected. This proves a conjecture of Penrose.

We also show that in the k -nearest neighbour model, there is a constant κ such that almost every κ -connected graph has a Hamilton cycle.