

Diffusion of a tagged particle in two dimensional elastic networks

Tuesday, September 5, 2017 11:30 AM (20 minutes)

I will discuss the long time asymptotic behavior of a tagged particle in two dimensional systems, where the particles are stuck with their neighbors. This corresponds to single-file diffusion in one dimension, where the mean squared displacement of a particle grows with the square root of time. In two dimensions it turns out that the mean square displacement grows logarithmically. I will show how one can arrive at these results through an approach called harmonization.

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