

On the Duality between Coalescing Brownian Particles and the Heat Equation Driven by Fisher-Wright Noise

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Abstract

This paper concerns the Markov process duality between the one-dimensional heat equation driven by Fisher-Wright white noise and slowly coalescing Brownian particles. A representation is found for the law of the solution $x \rightarrow U(t,x)$ to the stochastic PDE, at a fixed time, in terms of a labelled system of such particles.

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