COLLOQUIUM

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Microscopic Models for Anomalous Diffusion with Reactions

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10:20 a.m. - 11:10 a.m.
Refreshments: 10:00 a.m.

Abstract

We discuss models for anomalous diffusion given by rescaled stochastic process limits of continuous time random walks (CTRW's); these are motions which consist of random jumps in space, followed by random waiting times. We characterize such limit processes and derive governing equations for their probability densities in the space- and time-homogeneous setting. We then consider multiple particles of different species which interact via chemical reactions, and look for governing equations for the species' concentrations in the infinitely many particle limit.

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