Title:

Local times of Brownian motion indexed by the Brownian tree.

Abstract:

Brownian motion indexed by the Brownian tree appears in the asymptotics for a variety of discrete models including combinatorics (labelled trees), statistical physics, or interacting particle systems. We prove that the pair consisting of the local time of Brownian motion indexed by the Brownian tree and its derivative satisfies a stochastic differential equation whose drift term involves the Airy function. This complements an earlier work giving the Markov property of the same pair of processes. This talk is based in part on a joint work with Ed Perkins (UBC Vancouver).