

An analogue of Girsanov theorem for Arratia flow with drift

Abstract: A system of coalescing particles, each individual behaving like a diffusion process, is constructed. This system is called Arratia flow with drift. Its distribution is proved to be absolutely continuous with respect to the distribution of classical Arratia flow, i.e. the system of coalescing Brownian motions. The corresponding density has much in common with the density in Girsanov theorem for Brownian motion.