Dawson, D. A.; **Vaillancourt, J.**; **Wang, H.**

Stochastic partial differential equations for a class of interacting measure-valued diffusions.
(English) Zbl 0973.60077

Ann. Inst. Henri Poincaré, Probab. Stat. 36, No. 2, 167-180 (2000).

There are investigated interacting branching measure-valued diffusions (IBMDs), which are solutions to the well-posed martingale problem. A new class of stochastic partial differential equations (based on two orthogonal $\mathcal{S}'(R)$-valued cylindrical Brownian motions) for the density process associated with such IBMDs (when these densities exist) is introduced.

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MSC:

60H15	Stochastic partial differential equations (aspects of stochastic analysis)
60J60	Diffusion processes
60G57	Random measures

Keywords:

stochastic partial differential equation; measure-valued processes; cylindrical Brownian motion

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