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Super-Brownian motion with a super-Brownian catalyst

A brief survey is given on results about the catalytic super-Brownian motion in R^d, $d \leq 3$, where branching is controlled by the collision local time of an intrinsic Brownian particle with an ordinary super-Brownian motion. The talk is based on the papers listed below.

D. A. Dawson and K. Fleischmann. A continuous super-Brownian motion in a super-Brownian medium. *Journ. Theoret. Probab.* , 10(1):213–276, 1997.

D. A. Dawson and K. Fleischmann. Longtime behavior of a branching process controlled by branching catalysts. *Stoch. Process. Appl.* , 71(2):241–257, 1997.

J. -F. Delmas and K. Fleischmann. Collision local time of catalyst and reactant for a catalytic super-Brownian motion. In preparation, 1998.

A. M. Etheridge and K. Fleischmann. Persistence of a two-dimensional super-Brownian motion in a catalytic medium. *Probab. Theory Relat. Fields*, 110(1):1–12, 1998.

K. Fleischmann and A. Klenke. Smooth density field of catalytic super-Brownian motion. WIAS Berlin, Preprint No. 331; *Ann. Appl. Probab.* (submitted), 1997.