

1048-60-160

Zenghu Li and **Jie Xiong***, Department of Mathematics, University of Tennessee, Knoxville, TN 37996-1300, and **Mei Zhang**. *Ergodic theory for a superprocess over a stochastic flow*.

We study the longtime limiting behavior of the occupation time of the superprocess over a stochastic flow introduced by Skoulakis and Adler (2001). The ergodic theorems for dimensions $d = 2$ and $d \geq 3$ are established. The proofs depend heavily on a characterization of the conditional log-Laplace equation of the occupation time process. (Received February 05, 2009)