HIGH CONDUCTIVITY LIMITS FOR REACTION-DIFFUSION EQUATIONS

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Abstract: A reaction-diffusion equation on $[0, 1]^d$ with the heat conductivity $\kappa > 0$, a polynomial drift term, and an additive random perturbation is considered. It is shown that if κ tends to infinity, then the corresponding solutions of the equation converge to a process satisfying an ordinary Itô equation.

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