

Finite speed of propagation and waiting times for the stochastic porous medium equation – a unifying approach

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The talk is based on a joint work with Julian Fischer (Zürich)

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We formulate a criterion on initial data which guarantees that solutions to stochastic porous medium equations with linear multiplicative noise exhibit a waiting time phenomenon almost surely. Up to a logarithmic factor, it coincides with the optimal criterion known from the deterministic setting. A novel iteration technique and stochastic counterparts of weighted integral estimates used in the deterministic setting – these are the key ingredients of our approach, which may be modified to prove basic results on finite speed of propagation, too.