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Stability and Fluctuations of Generalized Traveling Waves in Random Media.

Some nonlinear reaction-diffusion equations (PDEs) admit stable traveling wave solutions. Even for a heterogeneous medium there may be generalized traveling waves that are stable attractors. If the environment is random, then under suitable assumptions on the statistical behavior of the environment, the moving interface behaves asymptotically like a Brownian Motion with positive drift. (Received February 06, 2009)