# Dichotomy in a scaling limit under Wiener measure with density

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## Abstract

In general, if the large deviation principle holds for a sequence of probability measures and its rate functional admits a unique minimizer, then the measures asymptotically concentrate in its neighborhood so that the law of large numbers follows. This paper discusses the situation that the rate functional has two distinct minimizers, for a simple model described by the pinned Wiener measures with certain densities involving a scaling. We study their asymptotic behavior and determine to which minimizers they converge based on a more precise investigation than the large deviation's level.

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