

# Directed polymers in a two-dimensional random medium with complex weights

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Because of their connection to the one-dimensional Kardar-Parisi-Zhang equation, directed polymers in a space-time planar random medium have been studied in considerable detail. The weight of a given path is defined as the product of local weights along the path. In the standard set-up the local weights are positive i.i.d. random variables. Studying the resolvent of a random Schroedinger operator in two dimension, the problem of complex weights arises naturally. We provide an overview and discuss recent progress.

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