2021 Winter School in Mathematical Physics



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Raphaël Ducatez, "A forward-backward random process for the spectrum of 1D Anderson operator"

Thursday 21 January 2021 10:00 (25 minutes)

Anderson's model in 1 dimension has been studied since the 80's and the location is well understood. Here I propose a new formula for the construction of the eigenvectors which makes the link with the products of independent random matrices. In particular, I show that, with a adapted scaling, eigenvectors behave as the exponential of a Brownian process with a drift, the drift corresponding to the classical localization result. This result is known for the product of independent random matrices but at our knowledge had not been generalized to Anderson's model.

Session Classification: Student talks