

Transport in XY spin chains via Jacobi matrices

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Transport properties of spin chains are usually expressed in terms of Lieb-Robinson bounds. While general ballistic upper bounds are known in great generality, for the XY spin chain, finer statements can be derived from transport properties of an associated Jacobi matrix. In this talk, I will describe joint works with Damanik and Yessen, and with Damanik, Lemm, and Yessen, in which we prove presence of ballistic transport for periodic XY spin chains and anomalous transport in the Fibonacci XY spin chain.

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