



Physical Sciences Seminar

Spin transport in a discrete-time Heisenberg model

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Host: Maksym Serbyn

I will present an integrable Trotterization of the Heisenberg spin chain. Specifically, I will focus on the spin transport properties of the model where one can observe diffusion, superdiffusion and ballistic transport, similar to what is seen in the continuous time case. I will initially present numerical results for the model with a focus on the anomalous superdiffusive regime. After that, I will switch focus to the ballistic regime where we have been able to obtain some analytical results. Curiously, in this model ballistic transport also occurs in the easy-axis regime. I will that this can be proven and derive a lower bound for the spin Drude weight, which shows fractal behaviour and is expected to be saturated.

Monday, December 16, 2019 11:00am - 12:00pm

Heinzel Seminar Room / Office Bldg West (I21.EG.101)



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