



Contribution ID: 1449
Contribution type: **Poster (Student, Not in Competition)** / **Affiche (Étudiant(e), pas dans la compétition)**

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Floquet many-body localization transition in the thermodynamic limit

Tuesday, 14 June 2016 19:58 (2 minutes)

Generic ergodic quantum many-body systems under periodic driving, in the long-time limit, are described by an infinite temperature canonical ensemble. In the presence of disorder, heating can be prevented in a certain regime (e.g. high frequency), and many-body localized (MBL) systems are stable under periodic driving. The precise value of the transition has relied on exact diagonalization and finite size scaling studies of different quantities such as level statistics and entanglement entropy. Here we show that the numerical linked cluster expansion applied to the entanglement entropy of eigenstates is significantly more precise in determining the transition and conforming to the static case we find that the exact diagonalization methods overestimate the MBL regime.

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Session Classification: DCMMP Poster Session with beer / Session d'affiches, avec bière DPMCM

Track Classification: Condensed Matter and Materials Physics / Physique de la matière condensée et matériaux (DCMMP-DPMCM)