UNIVERSITÄT BIELEFELD

Faculty of Physics

Seminar

Condensed Matter Theory

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Indicators of Quantum Chaos and the Transition from the Few- to Many-Body Systems

Quantum chaos, especially when caused by particle interactions, is closely related with topics of high experimental and theoretical interest, from the thermalization of isolated systems to the difficulties to reach a localized phase and the emergence of quantum scars. In this talk, various indicators of quantum chaos will be compared, including level statistics, structure of eigenstates, matrix elements of observables, out-of-time ordered correlators, and the correlation hole (ramp). These indicators are then employed to identify the minimum number of interacting particles required for the onset of strong chaos in quantum systems with short-range and also with long-range interactions.

Thursday, 14 January 2021, 1600 hrs CET

Zoom Konferenzschaltung— Please contact Jürgen Schnack (jschnack@uni-bielefeld.de) for details regarding access

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