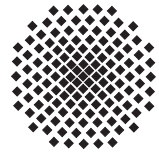


Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme
Fachbereich Physik, Universität Stuttgart

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Dienstag, 24. April 2018

17.15 Uhr

Hörsaal 2 D5

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

Dynamics on the edge: charge fractionalization and anyonic exclusion

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Abstract

Equilibration of isolated quantum systems has attracted much attention recently. Due to their integrability, one-dimensional systems often equilibrate towards a non-thermal steady state. In coupled quantum Hall edge states, the approach towards such a non-equilibrium steady state can be understood in terms of charge fractionalization, i.e. the decomposition of injected charges into eigenmodes propagating at different velocities. The method of non-equilibrium bosonization allows to describe such equilibration, distinguishing the regimes of quasi-particle creation and local equilibration. Generalizing to anyons on fractional quantum Hall edges, steady state current fluctuations can be related to the probability of anyons excluding each other spatially.