Relaxation in Integrable Field Theories

Thursday, 21 December 2023 15:15 (30 minutes)

Out of equilibrium dynamics of integrable systems have been intensively studied in the past 20 years. However, a full characterisation of time evolution of an integrable field theory after a quantum quench is still missing. We investigate processes occurring during relaxation towards a steady state and describe them in terms of analytical properties of matrix elements of operators in the post-quench theory. All these results are fully general for integrable models and are checked against the predictions obtained from Ising field theory, transverse-field Ising lattice model, Sinh-Gordon and Sine-Gordon field theory.

Primary author: DI SALVO, Emanuele (Utrecht University)

Co-author: Dr SCHURICHT, Dirk (Utrecht University)

Presenter: DI SALVO, Emanuele (Utrecht University)

Session Classification: Out-of-equilibrium simulations, Quantum Computing and Statistical Mechanics