

# Quench dynamics in two-dimensional integrable SUSY models

Milosz Panfil

Warsaw University  
Pasteura, Warsaw  
Poland

We analyse quench processes in two-dimensional quantum field theories with an infinite number of conservation laws which also include fermionic charges that close a supersymmetric algebra. While in general the quench protocol induces a breaking of supersymmetry, we show that there are particular initial states which also ensure the persistence of supersymmetry for the dynamics out of equilibrium. We discuss the conditions that identify such states and, as application, we present the significant cases of the Tricritical Ising model and the SineGordon model at its supersymmetric point. We also address the issue of the generalised Gibbs ensemble in the presence of fermionic conserved charges.