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# Quench Dynamics in Two-Dimensional Integrable SUSY Models

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We analyse quench processes in two dimensional quantum field theories with infinite number of conservation laws which also include fermionic
charges that close a $N = 1$ supersymmetric algebra. While in general the quench protocol induces a breaking of supersymmetry, we show that there are particular initial states which ensure the persistence of supersymmetry also for the dynamics out of equilibrium following a quantum quench. We discuss the conditions that identify such states and, as application, we present the significant cases of the Tricritical Ising Model and the Sine-Gordon model at its supersymmetric point. We also address the issue of the Generalized Gibbs Ensemble in the presence of fermionic conserved charges.

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