Integrability in out-of-equilibrium systems

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Out-of-equilibrium systems is a hot topics of Statistical Physics. Although an equilibrium state obviously doesnt exist in such cases, one looks for steady states which characterize the system at large time. For Markovian process the construction of these states is usually done using a so-called matrix product ansatz, based on the DEHP algebra or its generalizations. Surprisingly enough, one can present the matrix product ansatz from the integrability point of view. This can be done on very general grounds, allowing to formulate explicitly the ansatz for different models. We illustrate the technique on a reaction-diffusion model.