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Steady state behaviour in an interacting bipartite Gaussian system

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Abstract content
   (Max 300 words)

An initially entangled two-particle system is coupled to two environments, one for each particle. The two particles are allowed to interact with each other and we study the evolution of the entanglement between them. The reservoirs are assumed to be at different temperatures, which creates a non-equilibrium situation. We study the approach to equilibrium by deriving an expression for the steady state of the system. We find that the steady state does not exist for all values of the system parameters. We present results in the case where the steady state exists. When the steady state does not exist, we provide a simple and intuitive explanation of the behaviour and present the asymptotical dynamics.

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Primary author: Dr GHESQUIERE, Anne (National Institute for Theoretical Physics)

Co-authors: Prof. PETRUCCIONE, Francesco (National Institute for Theoretical Physics, Quantum Research Group UKZN); Dr SINAYSKIY, Ilya (National Institute for Theoretical Physics)

Presenter: Dr GHESQUIERE, Anne (National Institute for Theoretical Physics)

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