

The second law of thermodynamics from symmetry and unitarity

Introduce:

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Interviene:

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Abstract

I will show how the notion of entropy production emerges from basic properties of quantum field theory. For this purpose I will introduce a general non-equilibrium effective field theory of slow degrees of freedom of a quantum many-body system. The key ingredients are unitarity of the microscopic theory, and a Z_2 symmetry, which is associated to the presence of local equilibrium. As an example, I will show how the entropy current emerges from our recent effective field theory formulation of hydrodynamics.

Seminario

Giovedì 13 luglio 2017

Sala Riunioni, ore 11.30

Via dei Musei 41 - Brescia

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