

# Approach to equilibrium in translation-invariant quantum systems

*jeudi 30 mai 2024 09:00 (55 minutes)*

In this talk I will formulate the problem of approach to equilibrium in algebraic quantum statistical mechanics and study some of its structural aspects, focusing on the relation between the zeroth law of thermodynamics (approach to equilibrium) and the second law (increase of entropy). The main result is that approach to equilibrium is necessarily accompanied by a strict increase of the specific (mean) entropy. In the course of our analysis, I will introduce the concept of quantum weak Gibbs state which is of independent interest. This talk is based on joint work with Vojkan Jaksic and Claude-Alain Pillet.

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