On a Mathematical Theory of Repeated Quantum Measurements

Vojkan Jakšić (McGill)

Abstract: The statistics of the (finite alphabet) outcomes of repeated quantum measurements is studied by methods of thermodynamic formalism. Viewed as one-dimensional spin systems with long range interactions, repeated quantum measurements exhibit very rich (and sometimes very singular) thermodynamic behaviour. We will describe a general thermodynamic formalism of these systems and illustrate its unexpected features on a number of examples.

This talk is based on joint works with T. Benoist, N. Cuneo, Y. Pautrat, and C-A. Pillet.