



Quantum Efficiency Seminar und Colloquium

FEDERICO LEVI
FRIAS
Albert-Ludwigs-Universität Freiburg

A hierarchy of entanglement

ABSTRACT: We introduce tools to characterize coherence properties in many-body quantum systems. These tools also permit the characterisation of the coherent spread of an excitation in a molecular network, owing to the fact that k -body entanglement between the sites is equivalent to coherence of the excitation over k sites. More specifically, our tools detect many-body entanglement and, in particular, identify the number of constituents participating to the entanglement in a given, possibly mixed, state. In more technical terms our tool constitute a hierarchy of sufficient criteria for k -body entanglement within an N -body system.

Date: Tuesday, January 17th, 2012 14:15 pm
Location: Lecture Hall 1, Hermann-Herder-Str. 3, Freiburg

Contact: Andreas Buchleitner, Institute of Physics, Quantum Optics and Statistics
T +49 761 203 5821 F +49 761 203 5967 E buchleitner_office@physik.uni-freiburg.de
www.physik.uni-freiburg.de