



Quantum Efficiency Seminar und Colloquium

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Localization properties of wavefunctions in complex systems

According to the old quantum theory it is known how integrable systems can be quantized, which is much more difficult for chaotic systems as they are not integrable. The talk deals basically with the description of different kinds of quantum billiards using semiclassical approximations. This includes the determination of eigenvalues and eigenstates, as well as the behaviour towards the evolution in time. As an example of a system exhibiting both quasiperiodic and chaotic motion, the lemon billiard will be treated, and as an example of a completely chaotic system the stadium billiard is to be discussed. One will get an idea about how far these semiclassical methods can take us, how accurate its results are and what the remaining problems are about.

Date: Tuesday, July 24th, 2012 14:15 pm
Location: Lecture Hall 1, Hermann-Herder-Str. 3, Freiburg

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