

FIM Nachdiplomvorlesung

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Limit shape phenomenon in integrable models in statistical mechanics

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Mondays, 10:15 - 12:00

HG G 43, ETH Zürich, Rämistrasse 101

Abstract

The limit shape phenomenon for large lattice domains is the formation of the most probable state, such that all states that macroscopically differ from it are exponentially improbable. This is a rather general phenomenon of similar nature to the central limit theorems and to the large deviation principle in probability theory.

Integrable models in statistical mechanics in many cases admit rather explicit solutions. This not a definition of integrability, but one of the important consequences. This allows us to describe many features of the limit shape phenomenon quite explicitly and to prove some important facts about them.

The course will consist roughly of three parts: one is on limit shapes, the other is on integrability and the third one is about limit shapes in integrable models. The course is aimed at both mathematics and physics students

www.fim.math.ethz.ch/activities/nachdiplom-lectures

