Upcoming Events

Colloquium

Topic: Der neue Bielefelder GPU-Cluster
Date: 20.05.19
Time: 16:00
Place: H6
Guest: Gert Aarts, Swagato Mukherjee and Kevin Tierney

Abstract:

Contact person: F. Karsch

Colloquium Mathematical Physics

Topic: tba
Date: 05.07.19
Time: 16:15
Place: V4-119
Guest: Elena Pulvirenti (Univ. Bonn) & Dirk Hundertmark (KIT)
Abstract:

Contact person: M. Baake

Seminar High Energy Physics

Topic: Lattice thermodynamics from fluctuation theorems

Date: 14.05.19

Time: 14:15

Place: D6-135

Guest: Marco Panero

Univ of Turin and INFN, Turin

I present a lattice calculation of the equation of state in SU(3) Yang-Mills theory by a simulation algorithm based on Jarzynski's equality. The latter is an exact statistical-mechanics theorem, that relates the free-energy difference between two equilibrium ensembles of a statistical system to the exponential average of the work done on the system, when it is driven out of equilibrium. After comparing the results with other recent lattice studies of Yang-Mills thermodynamics, some possible generalizations are discussed.

Contact person: Ch. Schmidt

Seminar Condensed Matter

Topic: Einführung in Python

Date: 16.05.19

Time: 14:15

Place: D5-153
Guest: Jonas Heinze

Universität Bielefeld

Abstract:

Contact person: Jürgen Schnack

Seminar Mathematical Physics

Topic: Rate of Convergence to the Circular Law

Date: 17.01.19

Time: 17:15

Place: D5-153

Guest: Jonas Jalowy

Bielefeld University

> It is well known that the (complex) empirical spectral distribution of a non-Hermitian random matrix with i.i.d. entries will converge to the uniform distribution on the complex disc as the size of the matrix tends to infinity. In this talk, we investigate the rate of convergence to the Circular Law in terms of a uniform, 2-dimensional Kolmogorov-like distance. The optimal rate of convergence is determined by the Ginibre ensemble and is given by $n^{-1/2}$. I will present a smoothing inequality for complex measures that quantitatively relates the Kolmogorov-like distance to the concentration of logarithmic potentials.

Combining it with results from local circular laws, it is applied to prove nearly optimal rate of convergence to the circular law with overwhelming probability. Furthermore I will relate the result to other distances, present an analogue for the empirical root measure of Weyl random polynomials with independent coefficients and discuss a possible generalization for products of independent matrices. The talk is based on joint work with Friedrich Götze.

Contact person: Gernot Akemann

Seminar AG Zufallsmatrizen
Topic: tba

Date: 23.05.19

Time: 16:15

Place: V3-201

Guest: Nick Simm

University of Sussex

Abstract:

Contact person: Gernot Akemann