

Aktuelle Veranstaltungen

Kolloquium

Thema: tba

Datum: 08.04.19

Uhrzeit: 16:15

Ort: H6

Vortragender: [Prof. Aleksandra Radenovic](#)

EPFL Lausanne

Inhalt:

Ansprechpartner: [T. Huser](#)

Kolloquium Mathematische Physik

Thema: [On symmetry-protected topological states: from free fermions to the Haldane phase](#)

Datum: 01.02.19

Uhrzeit: 16:15

Ort: H6

Vortragender: [Martin Zirnbauer](#)

University of Cologne

Inhalt:

The Nobel-Prize winning Haldane phase of spin-1 antiferromagnetic spin chains is a paradigm for symmetry-protected topological phases. When local charge fluctuations are allowed, there has been a debate: protection by what? My answer is that there exists an adiabatic path to a free-fermion topological phase of class AIII, protected by a particle-hole symmetry. To set the stage, I will review Dyson's Threefold Way and recall the Tenfold Way of disordered fermions.

Ansprechpartner: [G. Akemann](#)

Seminar Hochenergiephysik

Thema: tba

Datum: 02.04.19

Uhrzeit: 14:15

Ort: D6-135

Vortragender: Masakiyo Kitazawa

Osaka University

Inhalt:

Ansprechpartner: [O. Kaczmarek](#)

Seminar Kondensierte Materie

Thema: [Coupled Superconducting Qubits](#)

Datum: 25.01.19

Uhrzeit: 14:15

Ort: D2-240

Vortragender: Timo Gahlmann

Universität Bielefeld

Inhalt:

Ansprechpartner: [Thomas Dahm](#)

Seminar Mathematische Physik

Thema: [Rate of Convergence to the Circular Law](#)

Datum: 17.01.19

Uhrzeit: 17:15

Ort: D5-153

Vortragender: Jonas Jalowy

Bielefeld University

Inhalt: > 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.

Ansprechpartner: [Gernot Akemann](#)

Seminar AG Zufallsmatrizen

Thema: [On Kac polynomials and truncations of random orthogonal matrices](#)

Datum: 30.01.19

Uhrzeit: 16:00

Ort: V3-201

Vortragender: Mihail Poplavskiy

King's College London

Inhalt:

Zeros of random polynomials give a rise to a point process which does look similar to the ones arising in RMT but has no integrable structure. We discuss a long standing problem of finding persistence probability asymptotic behaviour for the family of Kac polynomials of even large degree. We first use imprecise connection to the model of truncations of random orthogonal matrices and calculate persistence probability by using integrability of corresponding RMT model. We then present recent progress in solving another integrable model, namely Gaussian Stationary Process with sech correlations, which was shown in 2002 [Dembo, Poonen, Shao, Zeitouni] to give a precise approximation for Kac polynomials. The talk is based on joint works with M. Gebert (QMUL/UC Davis), G. Schehr (LPTMS).

Ansprechpartner: [Gernot Akemann](#)