

# Aktuelle Veranstaltungen

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## Kolloquium

**Thema:** tba

**Datum:** 14.10.19

**Uhrzeit:** 16:15

**Ort:** H6

**Vortragender:** [Prof. Dr. Christine Silberhorn](#)

Universität Paderborn

**Inhalt:**

**Ansprechpartner:** [W. Pfeiffer](#)

## Kolloquium Mathematische Physik

**Thema:** tba

**Datum:** 18.10.19

**Uhrzeit:** 16:15

**Ort:** V3-201

**Vortragender:** [Michal P. Heller](#)

Max-Planck-Institut für Gravitationsphysik, Potsdam

**Inhalt:**

**Ansprechpartner:** [S. Schlichting](#)

## Seminar Hochenergiephysik

**Thema:** [Quark Mass Definition and Extraction from \(2+1+1\)-Flavor Lattice QCD](#)

**Datum:** 24.10.19

**Uhrzeit:** 14:15

**Ort:** D6-135

**Vortragender:** [Urs Heller](#)

American Physical Society

**Inhalt:** I summarize a new heavy quark mass definition, the minimal renormalon subtracted (MRS) mass by the TUM QCD collaboration. It is based on the relation between the heavy quark mass and heavy-light meson masses in heavy quark effective theory. The Fermilab Lattice, MILC, and TUM QCD collaborations then used this new method to extract heavy quark masses using (2+1+1)-flavor HISQ ensembles of the MILC collaboration including ensembles with physical light quarks. I end with showing results on heavy-light pseudoscalar meson decay constants obtained in a similar analysis.

**Ansprechpartner:** [O. Kaczmarek](#)

## Seminar Kondensierte Materie

**Thema:** [Next-neighbor particle-particle interaction of fermions in quasi-one-dimensional flat-band lattices](#)

**Datum:** 22.07.19

**Uhrzeit:** 14:15

**Ort:** D5-153

**Vortragender:** Simon Tilleke

Bielefeld University

**Inhalt:**

**Ansprechpartner:** [Thomas Dahm](#)

## Seminar Mathematische Physik

**Thema:** [Critical behaviour and characteristic polynomials of non-Hermitian random matrices](#)

**Datum:** 23.05.19

**Uhrzeit:** 16:15

**Ort:** D5-153

**Vortragender:** [Nicholas Simm](#)

University of Sussex

**Inhalt:** I will discuss some recent developments regarding the normal matrix model. In particular my interest will be in certain critical models where the limiting support of the eigenvalues can radically change its topology by slightly adjusting an external parameter. I will discuss how aspects of the model can be explicitly mapped to the study of expectations of characteristic polynomials of non-Hermitian random matrices (e.g. Ginibre or truncated unitary). Many of these averages are related to Painlevé transcendents, and by exploiting this, a precise and non-trivial asymptotic expansion of partition functions can be calculated in the critical models. This is joint work with Alfredo Deaño (University of Kent).

**Ansprechpartner:** [Gernot Akemann](#)

## Seminar AG Zufallsmatrizen

**Eigenvalue Spacings of Random Matrices compared to Locations of Buzzard Nests**

**Thema:**

**Datum:** 04.07.19

**Uhrzeit:** 14:15

**Ort:** D5-153

**Vortragender:** Rebecca Werdehausen

Bielefeld University

**Inhalt:**

The territorial behavior of buzzards suggests a repulsion between the nests that may match with the repulsion between complex eigenvalues of non-hermitian random matrices. The Ginibre ensemble and the nearest neighbor spacings of the two-dimensional eigenvalues will be introduced and compared to the Poissonian Process in the plane. Then we will calculate the spacings between buzzard nests and the Kolmogorov distance to both theoretical curves. For this aim, the unfolding of the data set is indispensable, so that areas of high human settlement do not influence the spacing statistics. Two different unfolding methods in 2D will be tested and applied.

**Ansprechpartner:** [Gernot Akemann](#)