Upcoming Events

Colloquium

Topic: Used Nuclear Fuel - Past, Present, and Future

Date: 29.01.18

Time: 16:15

Place: H6

Guest: Dr. Maik Stuke

Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH

After a short introduction and overview of the company GRS I will focus on the past, present, and future of nuclear fuel used in German nuclear reactors. A summary of the origin and composition of different types of used nuclear fuel will be followed by an overview of the current situation and future plans of storage. This includes an overview of the foreseen steps until a final repository. I summarize my talk by discussing some open scientific questions.

Contact person: D. Schwarz

Colloquium Mathematical Physics

Topic: Mesoscopic eigenvalue correlations of random matrices

Date: 01.12.17

Time: 16:00

Place: V2-210/216
Abstract: Ever since the pioneering works of Wigner, Gaudin, Dyson, and Mehta, the correlations of eigenvalues of large random matrices on short scales have been a central topic in random matrix theory. On the microscopic spectral scale, comparable with the typical eigenvalue spacing, these correlations are now well understood for Wigner matrices thanks to the recent solution of the Wigner-Gaudin-Dyson-Mehta universality conjecture. In this talk I focus on eigenvalue density-density correlations between eigenvalues whose separation is much larger than the microscopic spectral scale; here the correlations are much weaker than on the microscopic scale. I discuss to what extent the Wigner-Gaudin-Dyson-Mehta universality remains valid on such larger scales, for Wigner matrices and random band matrices.
Seminar Condensed Matter

**Topic:** tba

**Date:** 01.02.18

**Time:** 14:15

**Place:** D5-153

**Guest:** Andreas Meyer

Universität Bielefeld

**Abstract:**

**Contact person:** Peter Reimann

Seminar Mathematical Physics

**Eigenvector-related correlation functions and their connection with generalized chiral random matrix ensembles with a source**

**Topic:** Eigenvector-related correlation functions and their connection with generalized chiral random matrix ensembles with a source

**Date:** 11.01.18

**Time:** 16:00

**Place:** D5-153

**Guest:** Jacek Grela

LPTMS Université Paris-Sud

We will introduce eigenvector-related correlation functions, discuss briefly their significance in dynamical Ginibre ensemble [1,2] and present asymptotic results in the large matrix size limit. Motivated by recent work [3] on joint eigenvector-eigenvalue correlation function valid for finite matrix size N in the complex and real Ginibre Ensembles, we study integrable structure of a certain generalized chiral Gaussian Unitary Ensemble with a source [4]. This model can be also...
We will introduce eigenvector-related correlation functions, discuss briefly their significance in dynamical Ginibre ensemble [1,2] and present asymptotic results in the large matrix size limit.


Contact person: Gernot Akemann

Seminar AG Zufallsmatrizen

Exploring the boundaries of universality for Gaussian perturbations of Hermitian matrices

Topic:

Date: 24.01.18

Time: 14:15

Place: V3-201

Guest: Thorsten Neuschel

University Catholique de Louvain

We explore the boundaries of sine kernel universality for the eigen-values of Gaussian perturbations of large deterministic Hermitian matrices. Equivalently, we study for deterministic initial data the time after which Dyson's Brownian motion exhibits sine kernel correlations. We explicitly describe this time span in terms of the limiting density and rigidity of the initial points. This is joint work with Tom Claeys and Martin Venker.

Contact person: Gernot Akemann