Aktuelle Veranstaltungen

Kolloquium

Thema: **Nobel Prize 2020: (super)massive black holes in our Galaxy**

Datum: 11.10.21

Uhrzeit: 16:15

Ort: cyberspace

Vortragender: Prof. Joris Verbiest

Bielefeld University

Inhalt:

Ansprechpartner: Dekan

Kolloquium Mathematische Physik

Thema: **Random matrices, spin glasses, and machine learning**

Datum: 23.07.21

Uhrzeit: 16:15

Ort: ZOOM/Konferenzschaltung

Vortragender: Jon Keating

Oxford University

Inhalt: I will describe some problems relating to machine learning and their connections to random matrix theory and spin glasses. These connections give a mathematical framework for understanding in qualitative terms the effectiveness of certain algorithms that are important in machine learning, but developing them into precise models remains a major challenge. I will reflect on the different roles played by models in computer science and physics, focussing on those involving random matrices.

Ansprechpartner: G. Akemann

Seminar Hochenergiephysik

Thema: **Machine Learning for Thermodynamic Observables in Lattice Field Theories**

Datum: 06.07.21

Uhrzeit: 14:15

Ort: Online, via ZOOM

Vortragender: Lena Funcke

Perimeter Institute, Ontario, Canada

Inhalt: In this talk, I will discuss how applying machine learning techniques to lattice field theory is a promising route for solving problems where Markov Chain Monte Carlo (MCMC) methods are problematic. More specifically, I will show that deep generative models can be used to estimate thermodynamic observables like the free energy, which contrasts with existing MCMC-based methods that are limited to only estimate free energy differences. I will demonstrate the effectiveness of the proposed method for two-dimensional ϕ^4 theory and compare it to MCMC-based methods in detailed numerical experiments.

Ansprechpartner: G. Endrődi

Seminar Kondensierte Materie

Thema: **Der Groveralgorithmus auf einem universellen Quantencomputer - Nur eine Simulation oder tatsächlich umsetzbar?**

Datum: 20.07.21

Uhrzeit: 10:15

Ort: ZOOM / Konferenzschaltung

Vortragender: Momme Hengstenberg

Universität Bielefeld

Inhalt:

Ansprechpartner: Jürgen Schnack

Seminar Mathematische Physik

Thema: **The Character Expansion in effective Theories for chiral Symmetry Breaking**

Datum: 03.12.20

Uhrzeit: 16:30

Ort: ZOOM / Konferenzschaltung

Vortragender: Noah Aygün

Universität Bielefeld

Inhalt:

Ansprechpartner: Gernot Akemann

Seminar Bielefeld-Melbourne Zufallsmatrizen

Thema: **20211006 - Yacin Ameur**

Datum: 06.10.21

Uhrzeit: 09:00

Ort: ZOOM / Konferenzschaltung

Vortragender: Yacin Ameur

Lund University

Inhalt: TBC

Ansprechpartner: Gernot Akemann