Gemeinsame Veranstaltung von
Humboldt-Universität zu Berlin, Institut für Physik
(Theorie der Elementarteilchen / Computerorientierte Theoretische Physik)
DESY, Zeuthen

SEMINAR
Feldtheorie auf dem Gitter und Phänomenologie der Elementarteilchen

Am Montag, dem **23. Mai 2011, um 16:00 Uhr s.t.** spricht

Jacques Bloch

University of Regensburg

zum Thema

QCD, random matrix theory and the sign problem

Abstract

At nonzero quark chemical potential lattice QCD simulations are hampered by the sign problem, which arises when the fermion determinant becomes complex. As the spectral properties of the Dirac operator can be computed using random matrix theory (RMT), the latter can be used to gather information about the sign problem. In this talk we will describe the correspondence between QCD and RMT, discuss RMT results about the average phase of the fermion determinant, which measures the severity of the sign problem, and present a novel solution to this problem in dynamical simulations of random matrices.

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(Lageplan: `http://linde.physik.hu-berlin.de/images/lageplan_neu.gif`)

Web: `http://latticeseminar.desy.de/`