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 Dienstag, dem **6 Februar, um 15:30 Uhr s.t.** spricht

Prof. **Michael Thies**

University of Erlangen-Nürnberg

zum Thema

Recent progress on Gross-Neveu models at finite temperature and chemical potential

Abstract

Gross-Neveu models are fermionic quantum field theories with various 4-fermion-interactions in 1+1 dimensions. They share important properties with QCD while being tractable. During the last few years, it has become clear that the phase diagram of these models in the large N limit is richer than previously thought. This is due to the presence of a solitonic crystal phase which can be exposed by essentially analytical means. As a byproduct, one finds a surprising correspondence between baryons in Gross-Neveu models and (bi-)polarons in quasi-one-dimensional condensed matter systems, notably conducting polymers. We give a brief account of these developments, supplementing the results of the recent review paper `hep-th/0601049` by current work in progress on the chiral Gross-Neveu model.

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

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