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 **22. Mai, um 15:00 Uhr s.t.** spricht

Dr. **Marc Wagner**

Humboldt-Universität zu Berlin

zum Thema

The pseudoparticle approach in SU(2) Yang-Mills theory

Abstract

The pseudoparticle approach is a numerical method to approximate path integrals in SU(2) Yang-Mills theory. The basic idea is to integrate over those field configurations, which can be represented by a linear superposition of a fixed number of localized building blocks (pseudoparticles). With a suitable choice of building blocks many essential features of SU(2) Yang-Mills theory can be reproduced, particularly confinement. By comparing different pseudoparticle ensembles we determine properties of confining gauge field configurations. Our results indicate the importance of long range interactions between pseudoparticles and of non trivial topological properties. We also present first steps regarding the inclusion of dynamical fermions in the pseudoparticle approach.

Ort: Humboldt-Universität zu Berlin, Institut für Physik
Newtonstraße 15, 12489 Berlin-Adlershof, **Raum 1'202**
(Lageplan: `http://linde.physik.hu-berlin.de/images/lageplan_neu.gif`)

Web: `http://www-zeuthen.desy.de/~stschaef/seminar/seminar.html`