

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 **28. April**, um **15:30 Uhr s.t.** spricht

Prof. Dr. Christof Gattringer

Karl-Franzens-Universität Graz

zum Thema

A new overlap approach to Weyl fermions on the lattice

Abstract

We study $SU(2)$ gauge theory with two massless flavors on the lattice in a quadratic representation. A particular RG transformation suggested by Hasenfratz and von Allmen gives rise to two equations of the Ginsparg-Wilson type, one for vector- and one for axial transformations. We show that both equations may be solved simultaneously using a generalization of the overlap construction. The resulting theory may be projected to Weyl fermions with the correct anomaly structure using projectors that are independent of the gauge field (Hasenfratz and von Allmen). We discuss spectral and locality properties of the overlap operator.

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

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