

Im Oberseminar

Deformationsquantisierung

spricht am **21. 11. 2013 um 10 Uhr c.t.**,

im Seminarraum 00.009 (Physik Ost)

GANDALF LECHNER

über das Thema:

KMS functionals and KMS states for algebras of deformed quantum fields

In certain covariant models of quantum field theory on Moyal Minkowski space, one considers the unital $*$ -algebra A generated by quantum fields deformed by warped convolution, a deformation procedure generalizing Rieffel's deformation of C^* -algebras to deformations of modules, where the deformation parameter varies over a Lorentz orbit. In this talk, the thermal equilibrium states (KMS states) of A are investigated. It is shown that to each temperature, infinitely many different normalized KMS functionals exist, but only a single one is positive. This result can be obtained by analyzing the algebraic structure of A (in particular, certain ideals and subalgebras), whereas direct computations using n -point functions run into problems. Joint work with Jan Schlemmer.

gez. Stefan Waldmann