

Im Oberseminar

## Deformationsquantisierung

spricht am **15.12.2016 um 10 Uhr c.t.**,

im Seminarraum 00.009 (Physik Ost)

**NIEK DE KLEIJN**

über das Thema:

### An equivariant algebraic index theorem

The algebraic index theorem (Fedosov, Nest-Tsygan 1995) is an algebraic counterpart to the well-known and celebrated Atiyah-Singer index theorem. Starting from the basic observation that the pseudo-differential operators on a manifold  $X$  form a deformation quantization of the cotangent bundle of  $X$  one generalizes the “algebraic part” of the A-S index theorem to a theorem for any formal deformation quantization of any symplectic manifold. In this talk we will formulate and discuss an equivariant version of the algebraic index theorem where one considers also the action of a discrete group on the deformation quantization. More specifically we show how one can compute a canonical trace on the crossed product of the deformation quantization algebra with the discrete group in terms of characteristic classes on the homotopy orbit space.

gez. Stefan Waldmann