

Im Oberseminar

## Deformationsquantisierung

spricht am **22.06.2018 um 14 Uhr c.t.**,

im Seminarraum 00.009 (Physik Ost)

**ANDREAS KRAFT**

über das Thema:

### BRST reduction of quantum algebras with $*$ -involution

In this talk I want to continue the search for involutions on reduced quantum BRST algebras in the context of deformation quantization started in my last talk. Here we saw that the BRST approach in the setting of the classical Marsden-Weinstein reduction leads to an induced star product  $*_{\text{red}}$  on the reduced manifold. Moreover, we found a suitable  $*$ -involution on the BRST algebra that in the case of cotangent bundles of compact Lie groups led to the complex conjugation as involution for  $*_{\text{red}}$ .

Now I want to consider general manifolds with strongly Hamiltonian actions of compact Lie groups and compatible Hermitian star products and show that we obtain an analogue result. In particular, if the action is in addition free on the regular constraint surface, i.e. if the reduced manifold exists as a smooth manifold, we get again the complex conjugation as an induced  $*$ -involution for the reduced star product.

gez. Stefan Waldmann