

Im Oberseminar

## Deformationsquantisierung

spricht am **26. 6. 2017 um 14 Uhr c.t.**,

im Seminarraum 00.009 (Physik Ost)

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über das Thema:

### Uniqueness of the Representation in Homogeneous Isotropic LQC

We show that the standard representation of homogeneous isotropic loop quantum cosmology (LQC) used in the literature is the GNS-representation associated to the unique state on the reduced quantum holonomy-flux  $*$ -algebra that is invariant under residual diffeomorphisms – *both* when the standard algebra with holonomies along only straight edges is used, as well as when one extends the algebra to include curved edges (a la Fleischhack). In order for the residual diffeomorphisms to have a well-defined action on the quantum algebra, we have let them act on the fiducial cell as well as on the dynamical variables, thereby recovering covariance.

gez. Stefan Waldmann