

Im Oberseminar

## Deformationsquantisierung

spricht am **20. 11. 2015 um 14 Uhr c.t.**,

im Seminarraum 00.009 (Physik Ost)

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über das Thema:

### Differential cohomology with compact support

Starting from a relative version of Cheeger-Simons differential characters, we introduce differential cohomology with compact support by a natural limiting prescription. It turns out that the resulting notion of compactly supported differential cohomology fits into a 3-by-3 diagram of short exact sequences similar to the one for ordinary differential cohomology, however all objects are replaced by their compactly supported analogues; in particular, we interpret compactly supported differential cohomology as a refinement of compactly supported integral cohomology by differential forms with compact support. We show that differential cohomology with compact support is naturally isomorphic to the (smooth) Pontryagin dual of ordinary differential cohomology. As an application, the Cauchy problem relevant to (higher) Abelian duality is solved for arbitrary and spacelike compact configurations.

gez. Stefan Waldmann