

Seminarankündigung

Deformationsquantisierung

Am 21.06.2019 spricht um 14 Uhr c.t.

Seminarraum SE 30

MARVIN DIPPELL

Vector Bundles and their Sections: An Introduction to Fibred Categories

The well-known Serre-Swan theorem reveals a deep connection between vector bundles over smooth manifolds and finitely generated projective modules, and thus between geometry and algebra. At first glance this theorem only holds for vector bundle morphisms over the identity, since one can not simply pull back vector fields. But one can pull back one-forms! So instead of taking sections of vector bundles directly we are led to take sections of the dual bundle. The conceptual problem is now that taking dual bundles seems not to be functorial. A framework in which this issue can be tackled and, even better, solved is that of fibred categories. I will give an introduction to fibred categories, cleavages and fibrewise duals based on examples from differential geometry. If time permits connections to other topics from differential geometry like Lie algebroids and covariant derivatives will be sketched.

gez. Stefan Waldmann