

Seminarankündigung

## Deformationsquantisierung

**Am 25. 10. .2019 spricht um 14 Uhr c.t.**

Seminarraum SE 31

**MARKUS SCHLARB**

### Smooth Generalized Subbundles and Integrability of Smooth Distributions with Singularities I

Smooth not necessarily regular distributions and their integrability play a fundamental role in some areas of differential geometry.

In the first talk smooth generalized subbundles of vector bundles of which smooth distributions are a special case will be introduced. An example is the image of a vector bundle morphism. Regarding the very definition of a generalized subbundle, it might be surprising that in fact every generalized subbundle is of this form. I will show that for an arbitrary smooth generalized subbundle there exists a suitable vector bundle morphism such that its image is the given generalized subbundle.

The second talk will deal with the integrability of smooth not necessarily regular distributions. In the singular case the well-known Frobenius theorem fails in general. However, there are characterizations of smooth integrable distributions generalizing this theorem which are valid in the singular case, too. They are usually known as Stefan-Sussmann theorem. Some of them will be discussed after a brief introduction to the notion of integrable distributions.

gez. Stefan Waldmann