Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

MUΦX
Lehrstuhl

Im Oberseminar

Deformationsquantisierung

spricht am **27.10.2017 um 14 Uhr c.t.,**

im Seminarraum 00.009 (Physik Ost)

MATTHIAS SCHÖTZ

über das Thema:

The geometry of classical field theories

Before trying to quantize field theories, it seems reasonable to get a good understanding of the classical formulation of such theories. Like for classical mechanics, the classical field theories should be treated with the help of (differential-)geometry, which allows to understand which structures arise naturally (like Poisson brackets) and how to perform phase space reduction. Unlike for classical mechanics, however, the theory of geometric field theories is still far from being complete.

In this talk I will first present the basics of the Lagrangian and covariant Hamiltonian formalism for field theories, where the tangent and cotangent space of a manifold are replaced by the jet and cojet bundle of a fibre bundle. Then I am going to comment on some resent developments concerning Poisson brackets and on some seemingly open problems that might be of interest for future research.

gez. Stefan Waldmann