Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Lehrstuhl X

Im Oberseminar

Deformationsquantisierung

spricht am **27 October 2016 um 10 Uhr c.t.,**

im Seminarraum 00.009 (Physik Ost)

Iakovos Androulidakis

über das Thema:

Almost regular Poisson manifolds and their holonomy groupoids

We introduce a big class of Poisson manifolds, the älmost regularönes. Roughly, they are the Poisson manifolds whose symplectic foliation is regular in a dense open subset. All regular Poisson manifolds are included in this class, as well as all the log-symplectic manifolds and certain Heisenberg-Poisson manifolds. We are looking for desingularizations of such structures, which means a Poisson groupoid which defines the symplectic foliation and whose Poisson structure is regular. A natural candidate is the associated holonomy groupoid, which is smooth in this category. We show that, moreover, this groupoid satisfies all our other requirements. In the case of log-symplectic manifolds, a simple minimality argument shows that it coincides with the symplectic groupoid constructed by Gualtieri and Li. And for the Heisenberg-Poisson manifolds under consideration, it is exactly Connes' tangent groupoid. This hints that various blow-up constructions in Poisson geoemtry can be replaced by the systematic construction of the holonomy groupoid of a singular foliation.

gez. Stefan Waldmann