Im Oberseminar

Deformationsquantisierung

spricht am **2. Februar 2018 um 14 Uhr c.t.,**

im Seminarraum 00.009 (Physik Ost)

Maximilian Hanusch

über das Thema:

The regularity problem for Milnor's infinite dimensional Lie groups

he right logarithmic derivative and its inverse – the generalized integral – play a central role in Lie theory. For instance, existence of the exponential map – indispensable for structure theory of Lie groups – is equivalent to integrability of each constant curve. Similarly, existence of holonomies – essential for gauge field theories – is based on integrability of pairings of connections with derivatives of curves in the base manifold. The most important questions to be clarified in the infinite dimensional context are (1.) under which circumstances is a given Lie algebra-valued curve integrable, and (2.) presumed that each (Lie algebra-valued) C^k-curve is integrable, under which circumstances is the evolution map smooth w.r.t. the C^k-topology. Both issues turn out to be primarily of topological nature as closely related to the continuity properties of the Lie group multiplication as well as to the completeness properties of the Lie group and its modeling space.

gez. Stefan Waldmann