Julius-Maximilians-
UNIVERSITÄT
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MUΦX
Lehrstuhl X

Seminarankündigung

Deformationsquantisierung

Am 17. 5. 2019 spricht um 14 Uhr c.t.

Seminarraum SE 30

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Morita Theory for Locally Convex Algebras

Algebraic objects are often examined, by considering their categories of representations. So the question arises, whether two algebras have equivalent categories of representations, rather than them being isomorphic. We call two algebraic objects Morita equivalent, if their categories of representations are. To that extend, Morita theory for purely algebraic objects, like rings or algebras, are already well understood. In practice however, one often encounters additional topological properties. In my talk, we will consider the category LCAlg of non-unital locally convex algebras who posess an approximation of unity. As it is well known from the theory of unital rings, one can introduce a notion of Morita equivalence by using the notion of a conveniently defined bicategory. By introducing a well behaved tensor product on LCAlg one gets a monoidal category, from which one can construct a bicategory BiCat, whose objects being algebras, 1-morphisms being bimodules over these algebras and 2-morphisms being morphisms of said bimodules. If the bicategory is chosen correctly, two algebras will be Morita equivalent, if and only if they are equivalent as objects in BiCat. In the case of muliplicative Fréchet-algebras with approximate unity, it will turn out that the projective tensor product is the correct choice.

gez. Stefan Waldmann