Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

MUΦX
Lehrstuhl X

Announcement

Seminar on Deformation Quantization and Geometry

8. 11. 2024 at 14:00 s.t.

Seminarroom SE 31

Michael Heins (JMU Würzburg)

Boundedness in Strict Deformation Quantization

Boundedness of a mapping, say defined between two topological vector spaces, means that images of bounded sets are again bounded. If the domain is bornological and the map is linear or even polynomial, this suffices to guarantee its continuity, and conversely every continuous polynomial mapping is bounded. In this talk, we argue that the notion of boundedness allows for a conceptual functional-analytic interpretation of the observable algebras in recent works within strict deformation quantization on infinite dimensional locally convex spaces. Indeed, making some reasonable assumptions, it turns out that one may understand the involved topologies, which are customarily defined by means of a summability condition on Taylor coefficients, simply as *uniform convergence on bounded sets* of the complexification. Along the way towards our results, we shall encounter the notions of Gâteaux and Fréchet holomorphic mappings, take duals with reckless abandon and come across a higher (sadly not in the sense of categories) notion of reflexivity. There will be barrels. This is a promise and not a threat.

Invited by Stefan Waldmann