Seminar on Deformation Quantization

14. 7. 2023 at 2pm CEST

Seminarroom SE 30

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A new approach to Rieffel Deformation of C*-algebras via coactions of groups

In this talk we revisit the procedure of deforming coactions of locally compact groups on C^*-algebras via Borel 2-cocycles on the underlying group G. This has been done before in an ad hoc way by Bhowmick, Neshveyev, and Sangha for reduced (or normal) coactions of groups, that is, coactions that belong to the reduced group C^*-algebra of G. Our new approach gives a systematic way to deform not only reduced, but also maximal and other exotic forms of G-coactions. The main idea is to use exotic versions of Landstad duality for coactions of G. This works for any crossed-product functor for G that respects Morita equivalences. Our approach yields a new realization of the deformed C^*-algebras and many of the previous results carry over to this more general setting, including invariance of K-theory for deformations via homotopic 2-cocycles.

This is based on joint work with Siegfried Echterhoff.

Invited by Stefan Waldmann