

Announcement

## Seminar on Deformation Quantization and Geometry

**9. 5. 2025 at 14:00 s.t.**

Seminarroom SE 31

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### Deformation Quantization and Phase Space Reduction: A Commutation Result

In a paper from 2005, Kowalzig, Neumaier and Pflaum present a reduction scheme for star products on cotangent bundles: Given a manifold  $Q$  equipped with a free and proper action of a Lie group  $G$ , and a star product  $\star$  on  $T^*Q$  which is invariant under the cotangent lift of the action on  $Q$ , they construct a star product on the cotangent bundle of  $Q/G$  out of  $\star$  using horizontal lifts. In the case of  $\kappa$ -ordered star products on  $T^*Q$ , the question arises under which conditions the reduced star product is again a  $\kappa$ -ordered one, i.e. reduction and quantization commute. In this talk, we will give an answer to that question for standard ordered star products.

Invited by Stefan Waldmann