Announcement

Seminar on Deformation Quantization and Geometry

December 1st 2023 at 14:00 s.t.

Seminarroom SE 30

Annika Tarnowsky

Models for differentiable stack cohomology as a generalisation of equivariant cohomology

Equivariant cohomology is a cohomology theory for manifolds (or generally topological spaces) with a group action. For actions of compact Lie groups, the cohomology can be computed by the well-known Weil and Cartan models, which are given in terms of the action of the Lie algebra. Equivalently, they can be expressed in terms of the action Lie algebroid and its trivial connection. This is related to the interpretation of equivariant cohomology as the cohomology of the differentiable stack presented by the action groupoid. Generalising the Weil and Cartan models to compute the stack cohomology is a long standing open problem. I will review the problem and give an overview over the strategies and known results as well as a short insight into more recent progress on the topic.

Invited by Madeleine Jotz