

Announcement

Seminar on Deformation Quantization and Geometry

7. 2. 2025 at 14:00 s.t.

Seminarroom SE 31

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Shifted symplectic structures on Lie n -groupoids

Symplectic manifolds are important structures in physics, but the category of smooth manifolds does not contain all colimits, which means that in particular not all quotients can be resolved. Because of this, we have to consider higher constructions like Lie groupoids and eventually Lie n -groupoids. Thus, it is natural to ask whether we can define symplectic structures on these higher objects as well. While some concepts of symplectic Lie groupoids already existed, Chenchang Zhu and Miquel Cueva recently formulated a general theory of m -shifted symplectic Lie n -groupoids for all n and showed that there is a nice notion of Morita equivalence respecting these structures in [arXiv:2112.01417](https://arxiv.org/abs/2112.01417). In this talk, I will explain part of my master thesis for which I am working with these shifted symplectic structures.

Invited by Madeleine Jotz