Julius-Maximilians-
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MUΦX
Lehrstuhl X

Announcement

Seminar on Deformation Quantization and Geometry

31. 5. 2024 at 14:00 s.t.

Zoom,
https://uni-wuerzburg.zoom-x.de/j/64883722830?pwd=ma2rTCppaaLLCKXf4AmNSAM2RtZIkQ.1

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Higher Form Brackets for even Nambu-Poisson Algebras

Let k be a field of characteristic zero and $A = k[x1, ..., xn]/IwithI = (f1, ..., fk)$ be an affine algebra. We study Nambu-Poisson brackets on A of arity $m \geq 2$, focusing on the case when m is even. We construct an L_∞-algebroid on the cotangent complex $\mathbb{L}_{A|k}$, generalizing previous work on the case when A is a Poisson algebra. This structure is referred to as the higher form brackets. The main tool is a P_∞-structure on a resolvent R of A. These P_∞- and L_∞-structures are merely $\mathbb{Z}_2$-graded for $m \neq 2$. We discuss several examples and propose a method to obtain new ones that we call the outer tensor product. We compare our higher form brackets with the form bracket of Vaisman. We introduce the notion of a Lie-Rinehart m-algebra, the form bracket of a Nambu-Poisson bracket of even arity being an example. We find a flat Nambu connection on the conormal module.

Invited by Madeleine Jotz