

Seminarankündigung

Deformationsquantisierung

Am 16. 10. 2020 spricht um 14 Uhr c.t.

<https://bbb.durates.net/b/ste-2va-uez>

DAVID ROBERTS

Mapping stacks of differentiable stacks

The construction of an infinite-dimensional Fréchet manifold of smooth maps out of a compact manifold is well-studied, where the target can be any (fin.dim) smooth manifold. But what if the target is an orbifold? Or more generally a differentiable stack – a stack presented by a Lie groupoid? The 'space', or rather stack, of such maps is the space of fields of a Sigma-model taking values in an orbifold or differentiable stack.

By embedding into the more general diffeological stacks, the mapping stack can be seen, without too much effort, to also be diffeological. But in joint work with Raymond Vozzo, and using a recent technical result from work with Alexander Schmeding, we have shown the mapping stack is presented by a Fréchet Lie groupoid, hence is an infinite-dimensional differentiable stack. We also find, as a side result, that the stack of loops in a (fin.dim.) $U(1)$ -bundle gerbe on a manifold M is an infinite-dimensional $LU(1)$ -bundle gerbe on LM .

gez. Stefan Waldmann