

Announcement

Seminar on Deformation Quantization and Geometry

24. 10. 2025 at 14:00 c.t.

Seminarroom SE 31

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Generalized gauge theories on Lie algebroids

In this presentation we first introduce the formalism of Cartan geometry and present specific applications to describe gravitational theories by building action functionals from Characteristic classes and invariant polynomials.

In the second part we introduce the notion of generalized connections on Lie algebroids. We show they can be used to describe ordinary gauge theories (Ehresmann connections for particle physics and Cartan connections for gravitational theories) with a Higgs sector and the BRST formalism (used as a renormalization tool for the gauge theories) from a single unified mathematical structure corresponding to the Atiyah Lie algebroid of a principal bundle.

Invited by Madeleine Jotz