

EL_∞ -algebras, Generalized Geometry, and Tensor Hierarchies

Friday 24 September 2021 16:45 (30 minutes)

In this talk, I review the definition and applications of EL_∞ -algebras given in arXiv:2106.00108. EL_∞ -algebras are generalizations of L_∞ -algebras comprising weak Lie ∞ -algebras, and they have a number of applications within extended geometry. In particular, they clarify the higher symmetry structure of generalized tangent bundles and double/exceptional field theory. They also provide the algebraic origin for data needed in the definition of higher gauge theories such as the tensor hierarchy of gauged supergravity. This Lie ∞ -algebraic perspective now provides a clear path towards finite gauge transformations and a global picture of these higher gauge theories.

Presenter: SAEMANN, Christian