

# Florian Dorsch : First steps in differentiating simplicial manifolds

*lundi 26 juin 2023 15:00 (30 minutes)*

The integration and differentiation processes between higher Lie groupoids and higher Lie algebroids are active areas of research. The differentiation of a higher Lie groupoid should produce its tangent complex, a replacement for the tangent space of a Lie group, equipped with suitable extra structure that describes its higher Lie algebroid structure. In the talk it will be shown how a construction of Severa for the differentiation of higher Lie groupoids may be generalized for simplicial manifolds which lack the extra conditions making them higher Lie groupoids. The idea is that simplicial manifolds still satisfy “local” versions of Kan conditions, which suffices to define a well-defined notion of tangent complex and perform Severa’s construction.