

Séminaire d'algèbre, topologie et géométrie
Jeudi 24 octobre à 14h
Salle I

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Deformation theory with cohomology constraints

First, we will give an introduction to the deformation theory of a flat vector bundle over a smooth manifold, developed by Deligne, Goldman-Millson. The general principle is that the deformation theory is governed by a differential graded Lie algebra.

Then we will discuss deformation problems with cohomology constraints, that is (fixing $i, k \in \mathbb{N}$) we consider the deformations such that the i -th cohomology of the de Rham complex of the deformed flat bundle has dimension at least k . The new principle is that such deformation theory is governed by a differential graded Lie algebra and a module over it.

This is joint work with Nero Budur.