Séminaire d'algèbre, géométrie et topologie
Jeudi 11 mai à 14h
Salle I

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Derivator Six Functor Formalisms

Grothendieck, Verdier, and Deligne in the 60's observed that classical duality theorems like Poincaré, or Serre duality for the (co)homology of manifolds and algebraic varieties can be most elegantly expressed, and vastly generalized, by a formalism of the six functors. This makes essential use of derived categories. The latter are, however, not sufficient for the purpose of descent. Descent is essential to define equivariant (co)homology and for equivariant duality theorems, and more generally to extend six-functor-formalisms to stacks, which is very important in applications. The problem with (co)homological descent is that the "glueing data" has a higher-categorical nature.

We will explain how our theory of fibered derivators, based on the idea of derivator due to Grothendieck and Heller (will be explained as well!), solves the problem of (higher-categorical, or (co)homological) descent in a way closely related to the classical theory of cohomological descent (due to Deligne in SGA4). However, it is, in contrast, completely self-dual, making it very suitable for the descent of six-functor-formalisms.