

# **SEMINAR : Andrey Lazarev : Global Koszul duality (joint with M. Booth).**

*vendredi 16 juin 2023 15:30 (1 heure)*

Koszul duality is a phenomenon observed in diverse subfields of algebra and homotopy theory. It underpins, implicitly or explicitly, rational homotopy theory and deformation theory. One important aspect of it, which is the subject of the present talk, can be formulated as an equivalence between infinity categories of dg algebras and coalgebras. The current state of knowledge (due mainly to Positselski and Keller-Lefevre) can be understood as a local theory. I will describe how to construct a global theory, in what sense it generalizes the local one and why this generalization is desirable. As an application, I will explain how to construct global moduli spaces in various moduli problems admitting a ‘noncommutative structure’. Among examples of such problems are moduli of flat connections in vector bundles, objects in dg categories, holomorphic structures in complex analytic bundles, and others.