Speaker:  Ai Guan (Lancaster)

Title:  Gauge equivalence for complete L-infinity algebras

Abstract:

Maurer-Cartan elements in differential graded Lie algebras, and more generally L-infinity algebras, appear in many areas of mathematics, such as homotopical algebra, differential geometry and deformation theory. In this talk we will show how gauge equivalence of Maurer-Cartan elements can be characterized as a left homotopy in a model category sense. We will then discuss some of the consequences of this characterization: an entirely homotopical proof to Schlessinger-Stasheff’s theorem, a short formula for gauge equivalence, and a strong homotopy generalisation of T. Voronov’s non-abelian Poincare lemma.