

Alex Takeda : Pre-Calabi-Yau structures on the categorical formal neighborhood of infinity and the string coproduct

Pre-Calabi-Yau structures are noncommutative versions of Poisson structures, which exist on many dg/A-infinity categories of interest in mirror symmetry. In this talk, I will explain a relation between these structures and Efimov's notion of the "categorical formal punctured neighborhood of infinity", which generalizes the category of perfect complexes near the divisor at infinity in a compactification of an algebraic variety and is related, on the other side of mirror symmetry, to Rabinowitz Fukaya categories. In joint work with Manuel Rivera and Zhengfang Wang, we use both of these structures to produce certain operations on Hochschild complexes, which we propose as algebraic versions of the loop product and coproducts in string topology. After explaining this formalism, I will present some examples where these operations can be calculated to agree with the corresponding geometric definitions, sometimes even giving expressions over the integers.

Classification de Session: Seminar