

abstract

TOWARDS 2-DIMENSIONAL GEOMETRIC LANGLANDS CORRESPONDENCE

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

It is long expected that to study the representation theory of the double loop group and the corresponding Lie algebra, the third cohomology group should play an important role. The idea is that the third cohomology classes are naturally realized when groups (or Lie algebras) act on categories rather than on vector spaces. In this talk, we will make an attempt to construct certain abelian category on which all the double loop groups (or Lie algebras) act such that their nontrivial third cohomology classes are realized. At the end we obtain the $\{\mathbb{C}\}^*$ -gerbe extensions of double loop groups (contrary to the $\{\mathbb{C}\}^*$ -central extensions of the usual loop groups), as being observed by Arkhipov and Kremnizer.