
YULY BILLIG, Carleton University

Representation of Lie algebras of vector fields on loop manifolds

Let \hat{X} be the cartesian product of an algebraic manifold X with a circle S^1 . We construct a sheaf of vertex algebras on X and the sheafs of chiral tensor modules, generalizing the construction of the chiral de Rham complex, introduced by Malikov-Schechtman-Vaintrob. We show that chiral tensor modules admit the action of the sheaf of Lie algebras of vector fields on \hat{X} .