

Loop homotopy Lie algebras, which appear in closed string field theory, are a generalization of homotopy Lie algebras. For a loop homotopy Lie algebra, we transfer its structure on its homology and prove that the transferred structure is again a loop homotopy algebra. Moreover, we show that the homological perturbation lemma can be regarded as a path integral, integrating out the degrees of freedom which are not in the homology. The transferred action then can be interpreted as an effective action in the Batalin-Vilkovisky formalism. A review of necessary results from Batalin-Vilkovisky formalism and homotopy algebras is included as well.