Algebra Seminar

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Wednesday, October 5, 2016
HH-3017, 1:00p.m.

On the Hochschild Cocomplex of a Factorizable Hopf Algebra II

Abstract:
As discussed in the first talk, the modular group acts on the center of a finite-dimensional factorizable Hopf algebra, which is the zeroth Hochschild cohomology of this algebra. The question we would like to answer is whether it is possible to extend this action to an action on the entire Hochschild cocomplex.

After briefly recalling the action of the modular group on the center of a finite-dimensional factorizable Hopf algebra and the definition of the Hochschild complex and cocomplex, we will generalize the Drinfeld map, the Radford map, and the antipode to isomorphisms of cocomplexes. We will then explain how these maps might be used to introduce an action of the modular group on the Hochschild cocomplex, although the defining relations remain to be established.