Hopf25

Surjeet Kour
IIT Delhi, India
Parallel sessions, Forum E
Thursday, April 24, 2025
14h30-14h55

Measurings of Hopf algebroids and morphisms in cyclic (co)homology theories

Coalgebra measurings, introduced by Sweedler, provide generalized maps between rings. Coalgebra measurings enlarge and linearize the category of algebras similar to how correspondences enlarge the category of algebraic varieties. We study how coalgebra measurings induce maps between cohomology theories. More specifically, we define coalgebra measurings between Hopf algebroids and show that they induce morphisms on cyclic homology and cyclic cohomology. We also consider comodule measurings between stable anti-Yetter Drinfeld (SAYD) modules over Hopf algebroids. These give an enrichment of the global category of SAYD modules over comodules. These measurings also induce morphisms on cyclic (co)homology of Hopf algebroids with SAYD coefficients, which are compatible with Hopf-Galois maps. Finally, we consider non-symmetric operads with multiplication and modules over them which have both cyclic and Gerstenhaber type structures, known as cyclic unital comp modules. We obtain an enrichment of cyclic unital comp modules over comodules, as well as morphisms on cyclic homology induced by comodule measurings of comp modules over operads with multiplication. This is joint work with A. Banerjee.