
YORCK SOMMERHAUSER, Memorial University
Hopf Algebras, Cohomology, and Mapping Class Groups

It follows from the general principles of topological field theory that mapping class groups of surfaces act on certain spaces of homomorphisms between certain representations of factorizable ribbon Hopf algebras. These homomorphism spaces, the so-called spaces of conformal blocks, or briefly block spaces, can be viewed as cohomology groups of degree zero. In the talk, we explain how this construction can be extended to cohomology groups of higher degree. The talk is based on joint work with S. Lentner, S. N. Mierach, and C. Schweigert.