

Title: Mapping class groups and representation varieties

Abstract: The representation variety is the set of group homomorphisms from the fundamental group of a surface to a given group, which we assume to be finite. The mapping class group of the surface with base point acts naturally on the fundamental group, and as a consequence also on the representation variety. In the talk, we explain how this mapping class group action relates to the one that a general construction due to V. Lyubashenko associates with the Drinfel'd double of the given group. Via this relation, we can compute the so-called derived block spaces in this special case via group cohomology. The talk is based on joint work with S. Lentner, S. N. Mierach, and C. Schweigert.