

Abstract

Considering a Riemann surface with punctures, we consider the action of the Mapping Class group on the relative character variety of its fundamental group in $SL(2, \mathbb{C})$. We show that for a sphere with at least 7 punctures, any finite orbit of irreducible representations which does not send a peripheral curve to a central element has finite image. We go on and give a classification for the remaining cases, relying on a classification made by Lisovyy and Tykhyi for the four-punctured sphere.

This is joint work with Arnaud Maret (Strasbourg).