

Dynamics of mapping class group actions on character variety

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The mapping class group of a surface acts naturally on the moduli space of representations of the fundamental group into a Lie group (the character variety). In this talk, we will discuss the dynamical decomposition of this action into domains of discontinuity and domains where the action is ergodic, when the target group is either $SL(2, \mathbb{C})$ or one of its two real-form $SU(2)$ and $SL(2, \mathbb{R})$. In the four-holed sphere case, we construct a domain of discontinuity on the character variety, using methods introduced by Bowditch and later developed by Tan-Wong-Zhang. This is joint work with Sara Maloni and Ser Peow Tan.