

Topological restrictions on Anosov representations

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The theory of Anosov representations was introduced by Francois Labourie in his study of Hitchin representations. They have emerged as the natural analogue, for higher rank Lie groups, of Fuchsian representations, or more generally convex compact representations into rank one Lie groups. We will give a gentle introduction to Anosov representations, followed by a discussion of topological restrictions on the groups which admit Anosov representations into $SL(d, \mathbb{R})$. For example, we will see characterizations of groups admitting Anosov representations into $SL(3, \mathbb{R})$ and $SL(4, \mathbb{R})$ and restrictions on the cohomological dimension for all values of d . (This is joint work with Kostas Tsouvalas.)