

Supra-maximal representations on punctured spheres

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Around 20 years ago Benedetto and Goldman found experimentally some compact components in the relative character varieties of spheres punctured at four points for some specific monodromy data in the group $\mathrm{PSL}(2, \mathbb{R})$. We will give a geometric interpretation of those components, the violation of the Milnor-Wood inequality, leading to a generalisation to an arbitrary number of punctures and to other interesting consequences. We will also discuss some results and questions in the context of other target Lie groups.

This is a joint work with Nicolas Tholozan.