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SEMINÁRIO DE GEOMETRIA

Dia 10 Janeiro (sexta-feira), às 13h30, sala 6.2.33

Bad Representations and Homotopy of Character Varieties

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Abstract:

This talk will be a summary of the results in the paper: https://arxiv.org/abs/1908.02915. We will focus on examples, definitions, and computations. Let G be a connected, reductive, complex affine algebraic group, and let X(r,G) denote the moduli space of G-valued representations of a rank r free group. The first main theorem characterizes the singularities in X(r,G), resolving conjectures of Florentino-Lawton. In particular, the codimension of the orbifold singular locus is computed using facts about Borel-de Siebenthal groups. The second main theorem uses this codimension bound to calculate higher homotopy groups of the smooth locus of X(r,G), proving conjectures of Florentino-Lawton-Ramras. This work is in collaboration with Clément Guérin and Daniel Ramras.