

# GEOMETRY & PHYSICS SEMINAR

**22 junho | 11:00 | sala 6.2.33**

## **Serre polynomials of Character Varieties of free groups**

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### **Abstract:**

With  $G$  a complex reductive group, let  $X_r(G)$  denote the  $G$ -character varieties of free group  $F_r$ , of rank  $r$ . In this talk we shall present a result showing that the mixed Hodge structures on the cohomology groups of  $X_r(SL_n)$  and  $X_r(PGL_n)$ , and on the compactly supported cohomology groups of the irreducible loci are isomorphic, for any  $n, r \in \mathbb{N}$ . In particular, this implies their Serre (also called E-) polynomials coincide, settling the question raised by Lawton-Muñoz. This is based on joint work with Carlos Florentino and Alfonso Zamora.

**CMAFclO**



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