On the E-polynomials of a family of Character Varieties

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Resumo/Abstract:
We compute the E-polynomials of a family of twisted character varieties by proving they have polynomial count, and applying a result of N. Katz on the counting functions. To compute the number of GF(q)-points of these varieties as a function of q, we used a formula of Frobenius. Our calculations made use of the character tables of Gl(n,q) and Sl(n,q), previously computed by J. A. Green and G. Lehrer, and a result of Hanlon on the Möbius function of a subposet of set-partitions. The Euler Characteristics of these character varieties are calculated with these polynomial.