

998-55-122

Jose Luis Cisneros-Molina* (`j1cm@matcuer.unam.mx`), Instituto de Matematicas, UNAM, Unidad Cuernavaca, Av. Universidad s/n, Col. Lomas de Chamilpa, 62210 Cuernavaca, Morelos, Mexico. *The Bloch invariant and classifying spaces for families of isotropy subgroups.*

Given an orientable complete hyperbolic 3-manifold of finite volume M we construct a canonical class $\alpha(M)$ in $H_3(B(SL_2(\mathbb{C}, \mathfrak{T})))$ with $B(SL_2(\mathbb{C}, \mathfrak{T}))$ the $SL_2(\mathbb{C})$ -orbit space of the classifying space for a certain family of isotropy subgroups. We prove that $\alpha(M)$ coincides with the Bloch invariant $\beta(M)$ of M defined by Neumann and Yang, giving with this a simpler proof that the Bloch invariant is independent of an ideal triangulation of M . We also give a new proof of the fact that the Bloch invariant lies in the Bloch group $B(\mathbb{C})$. (Received February 19, 2004)