

Twisted conjugacy in braid groups over orientable surfaces

Oscar Ocampo

Universidade Federal da Bahia

Let G be a group, and let $\varphi \in \text{Aut}(G)$. The φ -twisted conjugacy class of an element $x \in G$ is defined as $[x]_\varphi = \{gx\varphi(g)^{-1} \mid g \in G\}$. The number of such classes, denoted $R(\varphi)$, is called the Reidemeister number of φ . If $|R(\varphi)| = \infty$ for every $\varphi \in \text{Aut}(G)$, then G is said to have the property R_∞ . Let $\Sigma_{g,p}$ be an orientable surface of genus g and of finite type without boundary (i.e. an orientable closed surface with a finite number p of points removed). In this talk we are interested in the R_∞ -property for the surface pure braid groups $P_n(\Sigma_{g,p})$ as well as for the full surface braid groups $B_n(\Sigma_{g,p})$. We show that, with few exceptions, these groups have the R_∞ -property. The author was partially supported by National Council for Scientific and Technological Development - CNPq through a *Bolsa de Produtividade em Pesquisa* 305422/2022 - 7. This is a joint work with Karel Dekimpe and Daciberg Lima Gonçalves.

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