

Imayoshi, Yoichi; Ito, Manabu; Yamamoto, Hiroshi

On the Nielsen-Thurston-Bers type of some self-maps of Riemann surfaces with two specified points. (English) [Zbl 1026.30037](#)

Osaka J. Math. 40, No. 3, 659-685 (2003).

Let S be a hyperbolic Riemann surfaces R of analytically finite type with two specific points $p_1, p_2 \in S$, and set $\dot{S} := S \setminus \{p_1, p_2\}$. Let $Isot(S, 2)$ be the group of orientation preserving homeomorphisms of S onto itself isotopic to id_S and fixing the p_j factored by the normal subgroup of homeomorphisms of S isotopic to the identity of \dot{S} . Elements $[\omega] \in Isot(S, 2)$ induce canonically elements $\langle \omega|_S \rangle$ of the Teichmüller modular group $Mod(\dot{S})$. *L. Bers* [Acta Math. 141, 73-98 (1978; [Zbl 0389.30018](#))] classified elements of $Mod(\dot{S})$ as elliptic, parabolic and elliptic using the Teichmüller distance on the Teichmüller space $T(\dot{S})$. In this paper the corresponding classification of elements $[\omega]$ of $Isot(S, 2)$ is described using the strings of the induced pure braids $[b_\omega]$. The results are motivated by a theorem of *I. Kra* for surfaces with one specific point [Acta Math. 146, 231-270 (1981; [Zbl 0477.32024](#))].

Reviewer: [S.Timmann](#) (Hannover)

MSC:

[30F10](#) Compact Riemann surfaces and uniformization

Cited in **2** Documents