

1067-20-1912

**Leah R. Childers\*** (leah.chiliders@gmail.com), Mathematics Department, Pittsburg State University, 1701 S Broadway, Pittsburg, KS 66762. *On Automorphisms of the Hyperelliptic Torelli Group.*

The mapping class group is the group of orientation preserving homeomorphisms of a surface up to isotopy. A subgroup of the mapping class group of primary importance is the *Torelli group*,  $\mathcal{I}(S_g)$ , the kernel of the well-known symplectic representation of the mapping class group. We will discuss the structure of the *symmetric (or hyperelliptic) Torelli group*. More specifically, we will investigate the group generated by Dehn twists about symmetric separating curves denoted  $\mathcal{H}(S_g)$ . Elements of  $\mathcal{H}(S_g)$  act naturally on the symmetric separating curve complex,  $C_{\mathcal{H}}(S)$ . We will discuss that when  $g \geq 5$ ,  $\text{Aut}(C_{\mathcal{H}}(S_g)) \cong \text{SMod}^{\pm}(S_g)/\langle\iota\rangle$ , where  $\text{SMod}(S_g)$  is the symmetric mapping class group and  $\iota$  is a fixed hyperelliptic involution. Lastly we will give an algebraic characterization of Dehn twists about symmetric separating curves which will allow us to conclude that  $\text{Aut}(\mathcal{H}(S_g)) \cong \text{SMod}^{\pm}(S_g)/\langle\iota\rangle$ . (Received September 22, 2010)