

Symmetries as Generators of the Extended Mapping Class Group

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The extended mapping class group M_g^\pm of an orientable surface (possibly with punctures) is generated by symmetries. To prove this, we decompose a twist generator of M_g^\pm as a product of two symmetries. In the case of a closed orientable surface, using Wajnryb generators, we show that in fact M_g^\pm is generated by four symmetries. As an application we give the new proof of the perfectness of M_g^\pm .

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