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**Emilio Bujalance** and **Javier Cirre\*** ([jcirre@mat.uned.es](mailto:jcirre@mat.uned.es)). *A family of Riemann surfaces with orientation reversing automorphisms.*

We consider compact Riemann surfaces of even genus  $g$  with an orientation reversing automorphism  $f$  of order  $2g$ . A characterization of these surfaces by means of non-euclidean crystallographic groups is given. Most of these surfaces are asymmetric, that is, they admit no orientation reversing involution, and in fact this happens if and only if  $f$  generates the full group of automorphisms of the surface. We give a defining algebraic equation depending on three real parameters for each such surface (asymmetric or not) and also a formula for the automorphism  $f$ . An important feature is that the group generated by  $f$  is the unique cyclic group of order  $2g$  generated by an orientation reversing automorphism of the surface. The Teichmüller space of these surfaces is a three dimensional submanifold of the Teichmüller space of Riemann surfaces of genus  $g$ . (Received August 26, 2009)