

1137-30-63

**Antonio F. Costa** and **Milagros Izquierdo\*** ([milagros.izquierdo@liu.se](mailto:milagros.izquierdo@liu.se)), Department of Mathematics, Linköping University, 58183 Linköping, Sweden. *One-dimensional families of Riemann surfaces of genus  $g$  with  $4g + 4$  automorphisms.*

In their classical, independent articles Accola and Maclachlan showed that the maximal number of automorphisms of a Riemann surface in all genera  $g \geq 2$  is  $8g+8$ . For genera  $g \equiv 0, 1, 2 \pmod{4}$  there is a unique surface with this many automorphisms: the Accola-Maclachlan surface. For genera  $g \equiv 3 \pmod{4}$  there is one more surface known as Kulkarni surface.

Here we show that the maximal number  $ag+b$  of automorphisms of equisymmetric and complex-uniparametric families of Riemann surfaces appearing in all genera is  $4g + 4$ . For each integer  $g \geq 2$  we find an equisymmetric complex-uniparametric family  $\mathcal{A}_g$  of Riemann surfaces of genus  $g$  having automorphism group of order  $4g + 4$ . For  $g \equiv 3 \pmod{4}$  we present another uniparametric family  $\mathcal{K}_g$  with automorphism group of order  $4g + 4$ . The family  $\mathcal{A}_g$  contains the Accola–Maclachlan surface and the family  $\mathcal{K}_g$  contains the Kulkarni surface. (Received January 24, 2018)