

## AN EXPLICIT VARIATIONAL FORMULA FOR THE MONODROMY GROUP

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We study the monodromy groups of linearly polymorphic functions on compact Riemann surfaces of genus  $g \geq 2$  in connection with standard uniformizations of these surfaces by Kleinian groups. We find necessary and sufficient conditions under which a linearly polymorphic function on a compact Riemann surface gives a standard uniformization of this surface. We study the monodromy mapping  $p: \mathbf{T}_g Q \rightarrow \mathcal{M}$ , where  $\mathbf{T}_g Q$  is the vector bundle of holomorphic quadratic abelian differentials over the Teichmüller space of compact Riemann surfaces of genus  $g$  and  $\mathcal{M}$  is the space of monodromy groups for genus  $g$ . We prove that  $p$  possesses the path lifting property over each space of quasiconformal deformations of the Koebe group of signature  $\sigma = (h, s; i_1, \dots, i_m)$  connected with the standard uniformization of a compact Riemann surface of genus  $g = |\sigma|$ . Moreover, we obtain an explicit variational formula for the monodromy group of a second-order linear differential equation and the first variation for a solution to a Schwartz equation on a compact Riemann surface.

*Key words and phrases:* monodromy group for a linearly polymorphic function on a compact Riemann surface, standard uniformization of surfaces by Kleinian groups, monodromy mapping and an explicit variational formula for the monodromy group of a second-order linear differential equation.

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