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10036. *Cross-ratio distortion and Douady-Earle extension: An numerical experiment.*

The Douady-Earle extension of a circle homeomorphism is equivariant under precomposition or postcomposition by Möbius transformations preserving the circle. With the help of MAY iterators (due to Milnor) developed by Abikoff and Ye, we study the Douady-Earle extensions  $\Phi$  of the circle homeomorphisms  $f$  that are the restrictions to the unit circle of simple earthquakes with one leaf. We investigate numerically how the complex dilatation  $K(\Phi)$  depends on the weight on the leaf of the earthquake map. This enables us to see a lower bound for  $K(\Phi)$  in terms of the cross-ratio distortion  $\|f\|_{cr}$  of  $f$ . It is shown in the talk given by the other author in this same conference that  $\ln(\Phi)$  has an upper bound having a linear growth on  $\|f\|_{cr}$ . The numerical result in this talk implies that that upper bound of  $\ln K(\Phi)$  is sharp in the sense that  $\ln K(\Phi)$  has at least a linear growth on  $\|f\|_{cr}$  in this particular family of maps. (Received March 30, 2010)