DYNAMICS OF 2-INTERVAL PIECEWISE AFFINE MAPS AND HECKE-MAHLER SERIES

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Abstract. Let $f = f_{\lambda,\delta,\mu}$ be a family of interval maps described by the below graph in terms of the parameters λ, δ, μ. Any map f has a rotation number and its dynamics will be described with the help of two functions of the three parameters whose definitions use Hecke-Mahler series. As a consequence of our approach, we prove that whenever the parameters λ, δ e μ are algebraic numbers the rotation number takes a rational value. This result extends our previous theorem about the case where f is a circle contracted rotation which means that the parameter $\mu = 1$. *(The talk is based on a joint work with Michel Laurent.)*