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Sarah C. Koch* (kochsc@umich.edu). *The Thurston operator: looking for geometry in the algebra.*

Associated to every postcritically finite rational map f is a holomorphic endomorphism $\sigma_f : \mathcal{T} \rightarrow \mathcal{T}$ of a certain Teichmüller space. William Thurston proved that σ_f has a unique fixed point. The derivative of σ_f at the fixed point is called the *Thurston operator* associated to f . We explicitly compute the characteristic polynomial of the Thurston operator in the case where f is a quadratic polynomial with periodic critical point, and we study the coefficients; these coefficients are all algebraic, and in fact, they are rather mysterious rational functions of the postcritical points of f . (Received February 16, 2018)