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Russell Lodge* (russell.lodge@stonybrook.edu). *Boundary values of Thurston's pullback map.*

Since its inception by mathematicians such as Fatou and Julia, complex dynamics has sought to understand rational maps as dynamical systems on the Riemann sphere, together with their parameter spaces. Postcritically-finite maps (those rational maps where each critical point has finite forward orbit) play a central role in the structure of parameter space, and much effort has gone towards giving a combinatorial classification of such maps. To this end, a groundbreaking theorem of W. Thurston characterizes those postcritically-finite topological self-covers of the sphere that are equivalent to rational maps. The characterization is given in terms of the preimages of multicurves under the cover, but since little is known about such preimages, Thurston's theorem is notoriously difficult to apply. I will show how the global dynamics of multicurves can be well understood in terms of group theory and the Weil-Petersson extension of Thurston's pullback map on Teichmueller space. (Received September 26, 2017)