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Yunping Jiang* (yunping.jiang@qc.cuny.edu), Department of Mathematics, Queens College of CUNY, 65-30 Kissena Blvd, Flushing, NY 11367. *Iterations on Teichmuller Spaces and the Characterization of Holomorphic Maps.*

This talk is based on my survey article "A FRAMEWORK TOWARDS UNDERSTANDING THE CHARACTERIZATION OF HOLOMORPHIC MAPS" for Milnor's 80th birthday proceedings. In this talk, I will give a review of the work done by me with my collaborators, Cui, Zhang, Chen, Cheng, and Keen, on the characterization of geometrically finite rational maps and post-critically and post-singularly finite entire and meromorphic functions by using the iteration method on Teichmuller spaces. Then I will outline a framework for characterizing holomorphic maps. Whereas Thurston's methods are based on estimates of hyperbolic distortion in hyperbolic geometry, the framework suggested here is based on controlling conformal distortion in spherical geometry. The new framework enables one to relax two of Thurston's assumptions, first, that the iterated map has finite degree and, second, that its post-critical set is finite. Thus, it makes possible to characterize certain rational maps for which the post-critical set is not finite as well as certain classes of entire and meromorphic coverings for which the iterated map has infinite degree. (Received September 04, 2012)