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Russell Lodge* (russell.lodge@stonybrook.edu), Institute for Mathematical Sciences, 100 Nicolls Rd, and **Gregory Kelsey**. *An enumeration of quadratic Thurston maps with few postcritical points.*

Bartholdi and Nekrashevych's celebrated solution to the twisted rabbit problem has led to a flourishing interaction between self-similar group theory and holomorphic dynamics. I will characterize some important combinatorial structures for iterated rational maps in terms of group theory, and show how these group-theoretic invariants can be used to enumerate postcritically finite quadratic branched covers with four or fewer postcritical points. There are further implications for the dynamics of W. Thurston's pullback map on Teichmueller space, and I will partially answer a conjecture on the global dynamics of (homotopy classes of) multicurves under pullback by a postcritically finite rational map. (Received February 07, 2017)