1154-11-1780 **Elena Fuchs**, **Katherine E Stange*** (kstange@math.colorado.edu) and **Xin Zhang**.

Local-global principles in circle packings.

We generalize work of Bourgain-Kontorovich and Zhang, proving an almost local-to-global property for the curvatures of certain circle packings, to a large class of Kleinian groups. Specifically, we associate in a natural way an infinite family of integral packings of circles to any Kleinian group $A \leq \mathrm{PSL}_2(K)$ satisfying certain conditions, where K is an imaginary quadratic field, and show that the curvatures of the circles in any such packing satisfy an almost local-to-global principle. A key ingredient in the proof of this is that A possesses a spectral gap property, which we prove for any infinite-covolume, geometrically finite, Zariski dense Kleinian group in $\mathrm{PSL}_2(\mathcal{O}_K)$ containing a Zariski dense subgroup of $\mathrm{PSL}_2(\mathbb{Z})$. (Received September 16, 2019)