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Elena Fuchs* (efuchs@math.ucdavis.edu). *Local to global principles in integral circle packings.*

One of the most spectacular results on arithmetic of Apollonian circle packings is the "almost" local to global principle for curvatures in any given integral Apollonian packing as described by Bourgain-Kontorovich in 2014. The methods in their work, inspired originally by an observation of Sarnak's in his letter to Lagarias on Apollonian circle packings, apply to a much larger class of circle packings. In this talk, we clarify what "almost" local to global means, and describe what the larger class is, as well as what aspects of the packings in this class seem necessary in order to conclude an "almost" local to global result using the analytic tools from work of Bourgain-Kontorovich. This is joint work with Stange and Zhang. (Received September 13, 2016)