On the Strong Density Conjecture for Apollonian Circle Packings

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The Strong Density Conjecture states that for a given primitive integral Apollonian circle packing, every sufficiently large admissible (passing local obstructions) integer is the curvature of some circle in the packing. In joint work with Jean Bourgain, we prove that a set of density one satisfies the conjecture, with a power savings on the exceptional set.