Effective circle count for Apollonian circle packings, via spectral methods

Hee Oh
Brown University

We will describe a recent effective counting result for Apollonian circle packings. The main ingredient of this result is an effective equidistribution of closed horospheres in an infinite volume hyperbolic 3 manifold whose fundamental group has critical exponent bigger than one. We will explain how the spectral theory of Lax and Phillips can be used for such equidistribution results. This talk is based on a joint work with Min Lee, which is built upon a previous joint work with Alex Kontorovich.