1115-11-250 **Xin Zhang*** (xz87@illinois.edu) and **Zeev Rudnick**. *Gap Distribution in Circle Packings.*

Given a configuration of finitely many tangent circles, one can form a packing of infinitely many circles by Möbius inversions. Fixing one circle from such a packing, we study the distribution of tangencies on this circle via the spectral theory of automorphic forms. Specifically, we will use Anton Good's theorem to show that these tangencies are uniformly distributed when naturally ordered by a growing parameter, and the limiting gap distribution exists, which is conformally invariant. This is a joint work with Zeev Rudnick. (Received September 20, 2015)