1151-20-249 **Radhika Gupta**, **Kasia Jankiewicz** and **Thomas Ng*** (`thomas.ng@temple.edu`). *Uniform exponential growth and cube complexes.*

A finitely generated group is said to have uniform exponential growth if the number of elements that can be expressed as words of bounded length grow at least as fast as a fixed exponential function for any generating set. Bounds on exponential growth can be seen as a measure of negatively curvature for groups and is of broad interest, particularly for fundamental groups of negatively curved Riemannian manifolds. For instance, it is used to bound the entropy of the geodesic flow, to study generic or probabilistic properties of elements, and to understand the subgroup structure of the group. In 1981, Gromov asked whether every group with exponential growth also has uniform exponential growth. In this talk I will discuss joint work with Radhika Gupta and Kasia Jankiewicz that answers this question in the affirmative for groups acting on cube complexes with the isolated flats property, a version of relative hyperbolicity. Our work builds off of work of past work of Kar and Sageev and produces uniformly short elements that generate free semigroups giving new bounds on the exponential growth of hyperbolic 3-manifold groups depending only on the dimension on the cube complex. (Received August 19, 2019)