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Radhika Gupta, Kasia Jankiewicz and **Thomas Ng*** (thomas.ng@temple.edu). *Quantifying the strong Tits alternative for groups acting on nonpositively curved spaces*. Preliminary report.

Groups that satisfy the strong Tits alternative contain subgroups that are either virtually abelian or have exponential growth. Exponential growth of groups can be controlled by efficiently constructing free semigroups. I will discuss how nonpositive curvature can be leveraged to give new bounds on exponential growth. Specifically, I will describe joint work with Radhika Gupta and Kasia Jankiewicz where we use these ideas to show uniform exponential growth of many groups acting on CAT(0) cube complexes. (Received January 28, 2020)