Meeting: 1006, Lubbock, Texas, SS 15A, Special Session on Discrete Groups, Homogeneous Spaces, Rigidity

1006-37-147 **Seonhee Lim*** (seonhee.lim@yale.edu), PO Box 208283, Department of Mathematics, Yale University, New Haven, CT 06520-8283. *Minimal volume entropy on trees.* Preliminary report.

Let X be a finite graph. Let us consider a graph (X, ℓ) with length metric induced from the lengths of edges of X. The volume entropy of (X, ℓ) is the volume entropy of its universal cover which is a metric tree. When we vary the lengths of edges (with suitable normalization $\sum_{e \in EX} \ell_e = 1$), it seems natural to guess that the volume entropy should be minimal when the metric graph is as "symmetric" as possible. We show that when X is a regular graph, the minimal volume entropy is attained (only) when all the edges have equal length $\frac{1}{|EX|}$. Similar question can be asked for 2 dimensional (hyperbolic) buildings. (Received February 12, 2005)