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**François Ledrappier** and **Seonhee Lim\*** ([slim@math.cornell.edu](mailto:slim@math.cornell.edu)), Department of Mathematics, 310 Malott Hall, Ithaca, NY 14853-4201. *Volume entropy rigidity for buildings*. Preliminary report.

Volume entropy of a Riemannian manifold is the exponential growth rate of the volumes of balls. Entropy rigidity for rank-1 Riemannian manifolds is known: a theorem of Besson-Courtois-Gallot says that the locally symmetric metrics attain minimal volume entropy among all Riemannian metrics. In this talk, we are interested in entropy rigidity for buildings, especially hyperbolic ones. We will give several characterizations of the volume entropy, analogous to the ones for trees, that will help us to find some lower bound on volume entropy. This is a jointwork with François Ledrappier. (Received January 19, 2008)