

1167-53-128

Lina Chen and **Guofang Wei*** (wei@math.ucsb.edu), Math Department, UC Santa Barbara, Santa Barbara, CA 93106-0001. *Relative volume comparison for integral Ricci curvature and some applications.*

We give several Bishop-Gromov relative volume comparisons with integral Ricci curvature which improve the results in Petersen-Wei. Using one of these volume comparisons, we derive an estimate for the volume entropy in terms of integral Ricci curvature which substantially improves an earlier estimate of Aubry and give an application on the algebraic entropy of its fundamental group. We also obtain an almost minimal volume rigidity for integral Ricci curvature. (Received March 03, 2021)