

In this talk, we discuss the flexibility of metric entropy and restrictions on topological entropy of geodesic flow on closed surfaces of negative Euler characteristic with smooth non-positively curved Riemannian metrics with fixed total area in a fixed conformal class. These results are closely related to the geometry in the considered class of metrics. In particular, we obtain a collar lemma, a thick-thin decomposition, and precompactness in this class. We also discuss some open questions and the extension of some of the results to metrics of fixed total area in a fixed conformal class with no focal points and with certain integral bounds on the positive part of the Gaussian curvature. This is a joint work with T. Barthelme.