1046-51-231 **Sreekrishna Palaparthi*** (`sp49@buffalo.edu`), 244 Mathematics Building, University at Buffalo, Buffalo, NY 14260. *Upper bound for the length of an nth-shortest closed geodesic in a hyperbolic knot complement in S^3.*

The length of a shortest closed geodesic in a finite volume hyperbolic 3-manifold can be arbitrarily large. In contrast, Colin Adams and Alan Reid showed that the length of a shortest closed geodesic in a hyperbolic knot or link complement in S^3 is less than 7.171646... In this talk we will show that the length of an nth-shortest closed geodesic ($n > 1$) in a hyperbolic knot complement in S^3 is also bounded above and we will produce an explicit upper bound for this length, which will be a logarithmic function of n. (Received August 21, 2008)

1