

1125-57-1471 **Jenya Sapir*** (jsapir2@illinois.edu), 1409 W Green St, Urbana, IL 61801. *Geodesics on surfaces.*

We will give an overview of various problems about geodesics on a hyperbolic surface S . We will first discuss various bounds on the number of closed geodesics on S given upper bounds on length and self-intersection number. We will then discuss some application of these counting results. For example, they can be used to show that complete geodesics with "too few" self-intersections per unit length lie in a very small part of S . This extends a result of Birman and Series for complete geodesics with finitely many self-intersections. There will be lots of pictures. (Received September 17, 2016)