Abstract

It is a corollary of a celebrated theorem of Scott that every closed curve on a hyperbolic surface $X$ has a simple lift in a finite cover. In order to discuss a quantitative version of this statement, let the \textit{degree} of a curve be the minimal degree of such a cover. We show: If $X$ has no punctures, then the maximum degree among curves of length at most $L$ is coarsely equal to (with constants depending only on the topology of $X$) the quotient of $L$ by the length of the systole of $X$. Time permitting, we will discuss related questions and work in progress about length functions of non-simple closed curves.