1108-57-158   **Priyam Patel*** (`patel376@purdue.edu`). *Lifting immersed geodesics to embedded ones in finite covers.*

It is a well known result of Peter Scott that the fundamental groups of surfaces are subgroup separable. This algebraic property of surface groups also has important topological implications. One such implication is that every immersed (self-intersecting), closed geodesic on a surface lifts to an embedded one in a finite cover of the surface. A natural question that arises is: given a closed geodesic, what is the minimal degree of the covers in which the geodesic lifts to be embedded? In this talk we will discuss results answering the above question for hyperbolic surfaces, as well as several related questions regarding the relationship between geodesic length and geometric self-intersection number. (Received January 09, 2015)