1126-05-92 **Chun-Hung Liu*** (chliu@math.princeton.edu). *Packing and covering immersions in 4-edge-connected graphs.*

A graph G immerses another graph H if H can be obtained from a subgraph of G by repeatedly splitting off edges and deleting isolated vertices. Given a graph H, does there exist a function f such that for every positive integer k, every graph G either contains k edge-disjoint subgraphs where each immerses H, or contains a set of $f(k)$ edges intersecting all subgraphs that immerse H? Various necessary conditions for graphs H with the property mentioned above are known, and the characterization for such graphs H is expected to be complicated. However, we will prove that such a characterization is extremely simple if we require the host graph G having high edge-connectivity. Formally, we prove that for every graph H, there exists a function f such that for every positive integer k, every 4-edge-connected graph G either contains k edge-disjoint subgraphs where each immerses H, or contains a set of $f(k)$ edges intersecting all subgraphs that immerse H. The theorem is best possible in the sense that the 4-edge-connectivity cannot be replaced by the 3-edge-connectivity. (Received January 06, 2017)