

In this talk, we will explore sparse covers and compact routing. In a graph  $G$ , we can use a sparse cover to divide the nodes into small connected clusters. We can then solve distributed problems within these clusters to reduce the message overhead. In Compact Routing, we wish to find near shortest paths between all pairs of nodes so every node can compute and communicate in an efficient way. We will first present some recent related work and then provide some idea about how to unite sparse cover and compact routing.