The connectivity between a pair $u, v$ of vertices in a graph $G$ is the maximum number of pairwise internally disjoint $u-v$ paths in $G$. The average connectivity of $G$ is the average connectivity between pairs of vertices of $G$ taken over all pairs. Analogous concepts can be defined for digraphs. We survey known results on this subject and present several open/partially solved problems including: (i) the problem of finding the maximum connectivity of a subgraph in a graph with a given average connectivity; (ii) the problem of finding the maximum average connectivity among all orientations of a given graph $G$; (iii) the maximum average connectivity among all graphs with a given degree sequence.