Matching preclusion and conditional matching preclusion problems for the folded Petersen cube

E. Cheng* and R. Connolly, Oakland University

The matching preclusion number of an even graph is the minimum number of edges whose deletion results in a graph that has no perfect matchings. For many interconnection networks, the optimal sets are precisely those induced by a single vertex. Recently, the conditional matching preclusion number of an even graph was introduced to look for obstruction sets beyond those induced by a single vertex. It is defined to be the minimum number of edges whose deletion results in a graph with no isolated vertices and no perfect matchings. In this talk, we conside this problem for the folded Petersen cube $FPQ(n, k)$.