



## THREE NP-COMPLETE PROBLEMS IN SEIDEL'S SWITCHING

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Seidel's switching is a graph operation which makes a given vertex adjacent to precisely those vertices to which it was non-adjacent before, while keeping the rest of the graph unchanged. Two graphs are called switching-equivalent if one can be made isomorphic to the other by a sequence of switches.

In this talk, we show the NP-completeness of the problem SWITCH- $cn$ -CLIQUE for each  $c \in (0, 1)$ : determine if a graph  $G$  is switching-equivalent to a graph containing a clique of size at least  $cn$ , where  $n$  is the number of vertices of  $G$ . We also prove the NP-completeness of the problems SWITCH-MAX-EDGES and SWITCH-MIN-EDGES which decide if a given graph is switching-equivalent to a graph having at least or at most a given number of edges, respectively.