Abstract

In 2104, the notion of f-simplicial complexes and f-graphs were first presented in [12]. By definition, a graph G is said to be an f-graph if and only if the facet complex of $I(G)$ and the non face complex of $I(G)$ have the same f-vectors. The focus of this thesis will be on independence complexes constructed from independent sets of f-graphs. In this thesis, we give the characterization of independent sets of f-graphs and we discuss the connectedness of independent complex of f-graph. Additionally, we demonstrate that the independent complex of f-graph G is f-simplicial copmlex if and only if G is a path graph on 4 vertices or cyclic graph on 5 vertices.