

## ABSTRACT

This mini thesis describes antipodal fuzzy graph  $A(G):(\sigma_{A(G)}, \mu_{A(G)})$  from fuzzy graph  $G:(\sigma, \mu)$ , that is fuzzy graph in which its vertexes' degree of membership equals with vertexes' degree of membership of the fuzzy graph  $G:(\sigma, \mu)$ . Two vertexes' are said near (neighborhood) in antipodal fuzzy graph  $A(G):(\sigma_{A(G)}, \mu_{A(G)})$  if the  $\mu$  - distance between the two vertexes' equals with diameter of the fuzzy graph  $G:(\sigma, \mu)$ . When fuzzy graph  $G:(\sigma, \mu)$  completely or strongly given, the characteristics of the antipodal fuzzy graph will be studied. The isomorphism concept of antipodal fuzzy graph will be also studied in this mini thesis research.

Keywords: Fuzzy relation, antipodal,  $\mu$  - distance regular fuzzy graph, connected strong fuzzy graph.