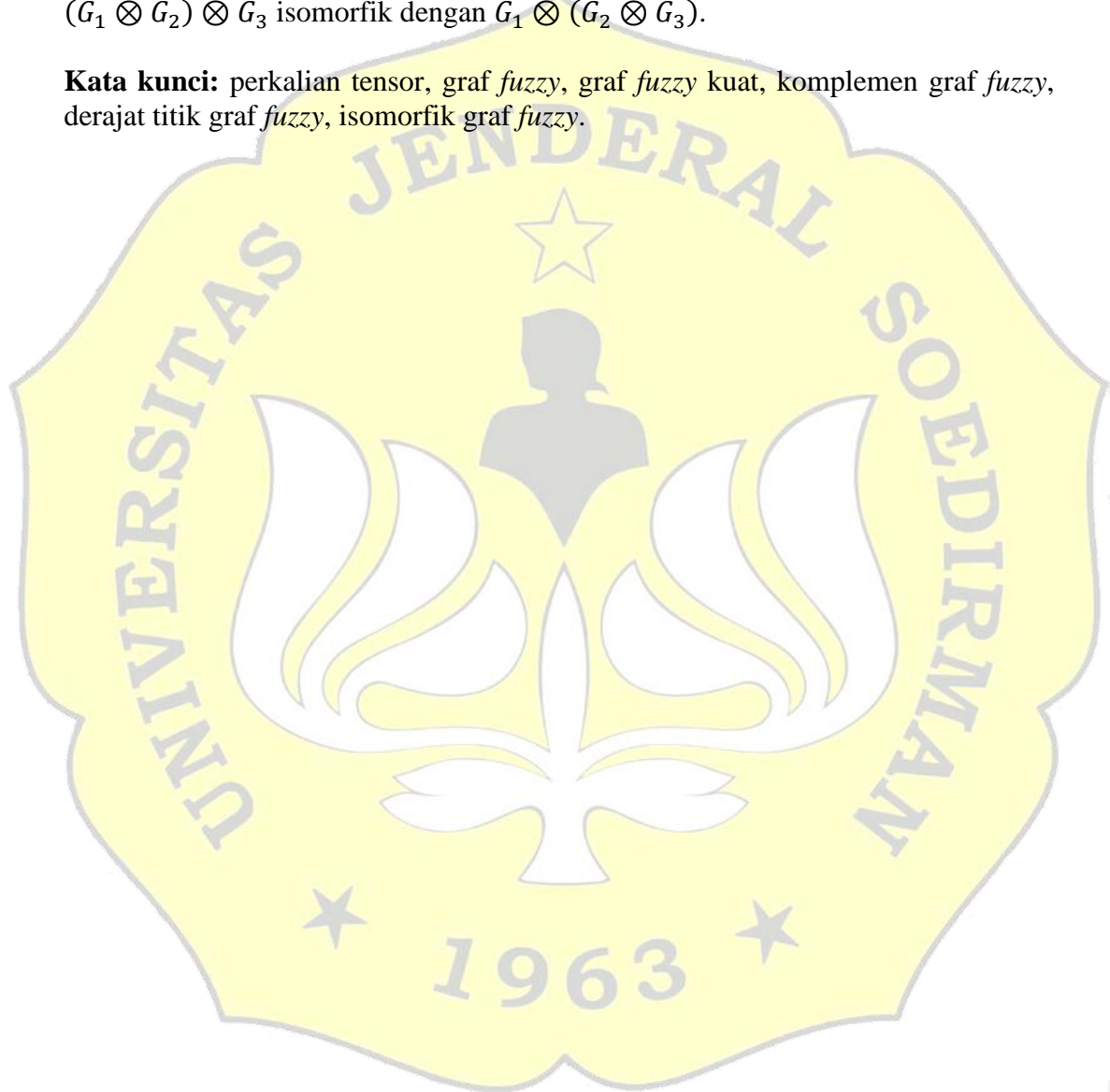


ABSTRAK

Skripsi ini menyelidiki sifat-sifat operasi tensor pada graf *fuzzy*. Operasi tensor dari dua graf *fuzzy* kuat merupakan graf *fuzzy* kuat. Komplemen dari perkalian tensor dua graf *fuzzy* tidak sama dengan perkalian tensor dari masing-masing komplemennya. Jika $\mu_2 \geq \mu_1$ dan banyaknya sisi di graf *fuzzy* G_2 adalah 1 serta banyaknya sisi di graf *fuzzy* G_1 minimal 1, maka derajat titik (u_1, u_2) di graf *fuzzy* hasil perkalian tensor sama dengan derajat titik u_1 di graf *fuzzy* G_1 . Perkalian tensor $(G_1 \otimes G_2) \otimes G_3$ isomorfik dengan $G_1 \otimes (G_2 \otimes G_3)$.

Kata kunci: perkalian tensor, graf *fuzzy*, graf *fuzzy* kuat, komplemen graf *fuzzy*, derajat titik graf *fuzzy*, isomorfik graf *fuzzy*.



ABSTRACT

This thesis investigates the properties of tensor product on fuzzy graphs. The tensor product of two strong fuzzy graphs is a strong fuzzy graphs. Complement of the tensor product of two fuzzy graphs is not the same as the tensor product of each complement. If $\mu_2 \geq \mu_1$ and the sum of edges in the fuzzy graphs G_2 is 1 and the sum of edges in the fuzzy graphs G_1 is at least 1, then degree of vertex (u_1, u_2) in the fuzzy graphs of the tensor product results is the same as the degree of u_1 in the fuzzy graphs G_1 . The tensor product $(G_1 \otimes G_2) \otimes G_3$ isomorphic with $G_1 \otimes (G_2 \otimes G_3)$.

Keywords: *tensor product, fuzzy graph, strong fuzzy graph, complement fuzzy graph, degree of a vertex fuzzy graph, isomorphic fuzzy graph.*

