



## Sudan University of Science and Technology College of Graduate Studies

## PLC BASED FIRE-FIGHTING PUMPS CONTROL

التحكم في طلمبات أنظمة الحريق بإستخدام المتحكمات المنطقية التحكم القابلة للبرمجة

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of M.Sc. in Mechatronics Engineering

**Submitted by:** 

LOAI MOHAMED ALGAILI BABIKER

**Supervised by:** 

Dr. ALAA ELDEEN AWOUDA

**August / 2017**