

بسم الله الرحمن الرحيم

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

***Kinematic Modeling and Analysis
Of an Industrial Handling Robotic
Manipulator***

نمدحة و تحليل كينماتيكي لمناول روبوت صناعي

**A thesis submitted to the college of Graduate Studies, Sudan
University of Science & Technology in Partial fulfillment of the
Requirements for the Degree of Ms.c in Mechanical engineering
(Production)**

By:

Ali Hassan Ali Ibrahim

Supervised by:

Dr.Abd Alfattah Bilal

October -2009