



Sudan University of Science and
Technology



College of Graduate Studies

MECHATRONICS ENGINEERING COURSE

A Thesis submitted to the college of Engineering in partial
fulfillment of the requirement for the degree of M.SC. In
MECHATRONICS

Optimized Design of a V- beam Micro Electrothermal
Actuator by Using Particle Swarm optimization

تصميم امثل لمشغل شكل V ميكرو كهرو حرارى

باستخدام طريقة سرب الجسيمات

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Chapter One

Introduction

Chapter Two

Micro-electromechanical systems &
particle swarm optimization overview

Chapter Three

V-shaped beam design and simulations

Chapter Four

Results and discussion

Chapter Five

Conclusion and Recommendations