

DESIGN AND IMPLEMENTATION OF FUZZY AUTO-BALANCE CONTROL FOR BIPEDAL ROBOT

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

DESIGN AND IMPLEMENTATION OF FUZZY AUTO-BALANCE CONTROL FOR BIPEDAL ROBOT

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The purpose of this thesis project is to develop a prototype of Fuzzy Logic Controller as auto-balance system in the bipedal robot. To achieve the goal, there are few things to be considered. The most suitable parameter for the fuzzy logic controller must be determined first. Analysis and refinement in three aspects related to the development of the balance control system in the bipedal robot will also be discussed. The fuzzy logic design will be simulated using MATLAB before the applied to the bipedal robot system.

Keywords: *Fuzzy Logic, Bipedal Robot, Auto-Balance*

DEDICATION

I dedicate this thesis to the Lord GOD Almighty, my parents, my advisor and myself.



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I give thank to the Lord GOD Almighty for His grace and mercy through this thesis work.

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