VIRTUAL DESIGN OF MULTI-AXIS POSITIONING FOR ROBOTIC APPLICATION

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Report submitted in partial fulfillment of the requirements for award of the degree of Bachelor of Mechanical Engineering

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SUPERVISOR'S DECLARATION

We hereby declare that we have checked this project and in our opinion this project is satisfactory in terms of scope and quality for the award of the degree of Bachelor of Mechanical Engineering.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for award of other degree.

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For my beloved parent, sisters and brother, thanks a lot for your tolerance, love and encouragement...

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"Life is meaningless without you all ... "

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LIST OF SYMBOLS

L	Langrangian term
Т	Total kinetic energy
ρ	Mass density
$\dot{u}, \dot{v}, \dot{w}$	Velocity component
u, v, w	Displacement component
Р	Total number of DOFs
a	Nodal velocity

LIST OF ABBREVIATIONS

- DOF Degree-of-freedom
- FE Finite element
- LCD Light Crystal Display
- CAD Computer Aided Design
- MES Mechanical Event Simulation
- FEM Finite Element Method