

ACKNOWLEDGEMENT

I profoundly express my sincere and heartfelt gratitude and thanks to my beloved supervisor **Dr.M.B.K.Moorthy**, Professor and Head, Department of Mathematics, Institute of Road and Transport Technology, Erode, India for supervising the entire work with utmost commitment and providing valuable suggestions to complete this work in a successful manner.

I am deeply indebted to the **Director, Institute of Road Transport**, Chennai and **Dr.K.Mayilsamy**, Principal, Institute of Road and Transport Technology, Erode for providing all facilities, necessary suggestions to carry out this work in a successful manner. My sincere thanks to the members of doctoral committee **Dr.C.Duraisamy**, Professor of Mathematics, Kongu Engineering College, Perundurai and **Dr.R.Ganesan**, Professor of Physics, Government College of Technology, Coimbatore for providing valuable suggestions. I deeply express my profound thanks to **Dr.P.Geetha**, Associate Professor, Bannari Amman Institute of Technology, Sathyamangalam for providing necessary help at all stages of my research work.

I place on record my sincere thanks to **Prof.K.Krishnan**, Head, and all faculty members of Department of Physics, Institute of Road and Transport Technology, for providing necessary support during the course of research. I thank Lord Almighty for giving me the knowledge and strength to carry out this research work. I thank my wife and son for their cooperation, for their never fading love, prayers, care and encouragement. I dedicate this thesis to my beloved parents.

DAKSHINAMOORTHY M

