ACKNOWLEDGEMENTS

I wish to express my deep sense of gratitude to my research director Dr. T.V. Pradeep Kumar, Assistant Professor, Department of Basic Sciences and Humanities, Acharya Nagarjuna University College of Engineering, Nagarjuna Nagar, Guntur, for his kind supervision and valuable guidance throughout my research work.

Some people come and go but some create history like Prof. D.R.K. Reddy, Retired Professor, Department of Applied Mathematics, Andhra University, Visakhapatnam, created history by inculcating interest among several minds of various parts of India in Einstein theory of Relativity. I am proud of being one among them and salute his expertise and human touch in motivating and directing my research in this area. He is my teacher, guide and Philosopher.

I am grateful to Dr. R.L. Naidu and Mr. B. Satyanarayana of GMRIT, Rajam, who have inspired me and introduced me to this field of research.

I wish to express my warm and sincere thanks to Prof. A.V. Dattatreya Rao, Principal, Prof. K. Panduranga Rao, Prof. M. S. N. Murthy, Prof. B. Satyanarayana, Dr. B. Satyanarayana, Dr. V. Amarendra babu and Dr. K. Siva Prasad and other Research
scholars, Department of Mathematics, Science College, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur for providing necessary facilities to carry out this research work successfully.

I wish to express my warm and sincere thanks to Dr. K. Someswara Rao, Chairman, Prof. V.V. Nageswara Rao, Director, and Sri L.L. Naidu, Secretary, Aditya Institute of Technology and Management, Tekkali, who have always inspired me to pursue my research work.

I wish to express my warm and sincere thanks to Prof. K.B. Madhu Sahu, Principal, Prof. P. Venkoji, HOD, BS&H Department, AITAM College, Tekkali. I extended my thanks to my colleagues and friends A. Lakshmana Rao, B. Srinivasa Rao, H. Ram Mohan Rao, G. Pavan Kumar, M.V. Sastri, B. Siva Kumar, Dr. G. Vasanthi, Dr. S. Nageswara Rao, K. Lakshmi, B. Neela Rao, P. Surya Narayana, B. Laxman Rao, S. V. Maruthi, K. Prakash, K. Hari Govind, P. Madhusudhan, B. Krishna, P. Giri Babu, V. Srinu, L. Mohan, G. Balakrishna, and other staff members of the Department of BS&H, AITAM College, Tekkali for their encouragement during the research work.

Words fail as I try to express my deep sense of gratitude to my loving parents Sri. R. Krishna Mohan Das, Smt. R. Nirmala and to my
father in-law Sri. S.Raja Rao and mother in-law Smt.S.Seetamma. I also express my sincere thanks to my brother R.Kishore Kumar, sister-in-law R.Prabha, sister A.AnuRadha, brother-in-law A.Srinivas, sister-in-law N.Suneetha and co-brother N.Sesha Giri, for their encouragement during the research work.

I am really lucky that my better half, Karuna Sree and my loving daughter, Sreeja stood by my side throughout my hard work and tensions in carrying out my research work.

Finally, I express my thanks and whole hearted gratitude to all those who rendered help and encouragement at critical moments for the successful completion of this work.

R.SANTHI KUMAR