ACKNOWLEDGEMENT

Though only my name appears on the cover of this dissertation, a great many people have contributed to its production. I owe my gratitude to all those people who have made this dissertation possible and because of whom my research experience has been one that I will cherish forever.

First, I would like to thank the Supreme Power, the GOD, since born to till now for each moment give their support, being with me and always guided me to work on the right path of life. Without his grace, this would not have been possible.

I would like to express my deepest sincere gratitude to my supervisor Dr. S. Sendilvelan, Principal of PERI Institute of Technology, Mannivakkam, Chennai for giving me a unique opportunity to work on such an important topic. His continuous guidance, invaluable suggestions, affectionate encouragement, generous help and important acumen are greatly acknowledged. His keen interest on the topic and enthusiastic support on my effort was a source of inspiration to carry out the study. He has paid much of the invaluable time and the painstaking effort for the whole research. I consider myself fortunate to work under his supervision.

I would like to express my special appreciation to my DC member, Dr. S. Arul, Principal, Sri Sastha Institute of Engineering and Technology, Chennai for his patience and circumspective guidance and support. I am grateful to another DC Member, Dr. M. Senthilkumar, Principal, SKR Engineering College, Chennai for his valuable comments on my thesis.

I take this opportunity to sincerely acknowledge the Professor Dr. Ramachandramurthy, St. Peters University, Avadi for his understanding, encouragement and personal attention which have provided good and smooth basis for my Ph.D. tenure.
I would like to thank the Vice chancellor, Chairman and the management of our esteemed St. Peter’s University for giving me the wonderful opportunity to do my research.

It’s my fortune to gratefully acknowledge the support of some special individuals. Words fail me to express my appreciation to Dr. N. R. Alamelu for her support, generous care and the homely feeling at AVIT, Chennai. She was always beside me during the happy and hard moments to push me and motivate me.

I warmly thank Mr. M. Prabhahar, for his valuable advice and friendly help. His extensive discussions around my work and interesting explorations in operations have been very helpful for this study.

I really need to thank Mrs. R. Subhatra Devi, she has been so helpful in proof reading this thesis.

I would like to thank my parents, Mr. R. Ragavan and Mrs. N. Nagasundari, and my wife Mrs. M. Amsalakshmi for their faith in me and allowing me to be as ambitious as I wanted. It was under their watchful eye that I gained so much drive and an ability to tackle challenges head on.

Last but not least, I would like to thank my friends for their sincere encouragement and inspiration throughout my research work and lifting me uphill this phase of life. I owe everything to them. Besides this, several people have knowingly and unknowingly helped me in the successful completion of this thesis.

(MURALI MANOHAR R.)