ACKNOWLEDGEMENTS

Though only my name appears on the cover of the thesis, I could never have reached the heights or explored the depths without the help, support, guidance and efforts of a lot of people. I owe my gratitude to all those people who have made the thesis possible.

First and foremost I offer my sincere gratitude to my guide, Dr. K. Seetharaman, Associate Professor of Computer Science and Engineering, who supported me throughout my research with patience and knowledge. I have been amazingly fortunate to have a guide who gave me the freedom to explore on my own and at the same time the guidance to recover when my steps faltered. His understanding, encouragement and personal guidance have provided a good basis for the thesis.

I am grateful to Dr. V. Ramalingam, Professor and Head, Department of Computer Science and Engineering, for his constant encouragement. I thank him for the excellent research environment he has created to learn and pursue research work.

I warmly thank Mr. G. Prabakaran, Assistant Professor, Department of Computer Science and Engineering, for his valuable advice and friendly help. He has always been there to give advice. His extensive discussions around my work and his detailed and constructive comments have been very helpful for the research.

I sincerely thank my friend and research colleague Mrs. M. Thillaikarasi, Assistant Professor, Department of Computer Science and Engineering, for sparing her time with me to give moral support and help. Her approach towards life boosted my self-confidence and also discussions with her encouraged me at all the time.
I would like to thank my research colleagues Mr. M. Kamarasan, Mr. S. Sathiamoorthy, and Mr. M. Jeyakarthic, for their numerous discussions on related topics that helped me to improve my knowledge in the area.

Most importantly, none of these would have been possible without the love and patience of my family. Words cannot describe the encouragement, affection and love of my wife Mrs. S. Kavitha. I thank her for all the help, care and moral support she provided during the entire period.

My loving thanks are due to my daughters R. Nithusha and R. Priyanka. I would like to thank my mother Mrs. R. Renuka and my sisters Mrs. R. Dhanalakshmi and Mrs. R. Punithavalli, especially my sister Mrs. R. Dhanalakshmi, Assistant Professor in Instrumentation Engineering, for making me what I am today.

I would like to make a special mention of the extreme support given by my brothers-in-law Mr. S. Sudharsanan and Mr. R. Balasundaram during the most critical part of my life. Without them, nothing is possible in my life; they are the gifts given by God in my life. I also thank all other members of my family and my friends.

Finally, and most importantly, I would like to thank the almighty God, for making things possible.

[R. Ragupathy]