ACKNOWLEDGMENT

I deem it a privilege and pleasure to work under the guidance of Dr. H.M. Mahesh, Reader, Department of Electronic Science, Bangalore University. It gives me a great pleasure to express profound sense of gratitude to Dr. H.M. Mahesh, for his special care, stimulating discussion and inspired guidance throughout the work. He has been a constant and consistent source of strength, sharing of my concerns by enriching me with his own regard.

I would like to express my sincere gratitude to my research supervisor Dr. H.M. Ravikumar, HOD, Department of Electronics and Communication, Sayhadri Institute of Technology, Mangalore for his insight, generosity and for guiding me through challenging research work.

I am thankful to Prof. B.S. Sherigara, Honorable Vice Chancellor, and Former Professor, Dept. of Industrial Chemistry, Kuvempu University, Shankaraghatta, Shimoga for his constant support during my research work.

It is my pleasure to express my gratitude to Mr. B.N. Jagadale, Coordinator, Dept. of Electronics, Kuvempu University, Shankaraghatta, Shimoga and Dr. H.S. Jayanna, Professor, Department of Physics, Kuvempu University, Shankaraghatta, Shimoga for facilitating my research work.

I would like to acknowledge the Management National Education Society, JNN College of Engineering, Shimoga for providing me an opportunity to pursue this research work.

I would like to thank Dr. R. Srinivas Rao Kunte, Principal, JNN College of Engineering, Shimoga for his continuous support and encouragement.

I also thank Prof. P. S. Rajashekharaiah, Principal, NES Polytechnique, Shimoga, and Prof. S. Amarappa, HOD, Department of Telecommunication Engineering, Shimoga for their continuous encouragement and moral support throughout my research work.
I am grateful to my brother Mr. M.B. Rajashekar, Software Engineer, Sling Media, Bangalore and Mr. T.R. Venkatesh, Software Engineer, IBM, Bangalore, with whom research discussions were always stimulating, a lot of interesting ideas and challenges arose from our discussion and setting the basis of my research work.

I am indebted to my research and teaching colleagues of the department Mr. Madihally Nagaraj, and Mrs. Veena K.N who provided much needed comfort through a lively environment at college, and for their support during my research work.

I also thank the staff of the library of IISc, Bangalore, IIT Bombay, JNNCE Shimoga and Kuvempu University and Smt. Usha, Lab technician, Department of IS, JNNCE, Shimoga, for their timely help and providing useful information for my research work.

I would like to express my earnest gratitude to my parents, In-laws Smt. Girijamma and Sri. S. Sadashivappa, brothers and sisters for their constant encouragement and moral support, without which any of my achievements would not have been possible.

I am very grateful to my father Sri. M.T. Basavarajappa, who sparkled my early interest in engineering. His undoubting confidence gave me the strength to overcome any difficulties and to maintain high goals. Thanks to my mother Smt. Vinodamma, for her love and countless sacrifices to raise and to give me the best possible education.

I am deeply indebted to my husband Sri. S. Jayaraj for his unconditional support, inspiration and love for allowing me to involve in research, made it possible to achieve this. None of this would have been possible without his love and caring. Finally, my deepest gratitude to my children’s Chi. Nischitha S.J. and Chi. Shrijan S.J. for the joy and the happiness they brings to me during our many moments together.

- Ushadevi M.B.