ACKNOWLEDGEMENT

I am very grateful to the Vice-Chancellor and Research Coordinator, Manonmaniam Sundaranar University, Tirunelveli, and Dean (Academic), National Institute of Technology, Trichirapalli, for permitting me to undertake this research.

I wish to express my whole-hearted sense of gratitude to my beloved guide Dr. S. G. Ponnambalam, Associate Professor, School of Engineering, Monash University, Malaysia (Former Professor, National Institute of Technology, Tiruchirapalli, Tamilnadu) for providing proper guidance for the successful completion of this thesis.

Words cannot express my sincere acknowledgements to Dr. R. K. Suresh, Principal, PA College of Engineering and Technology, Pollachi for his unstinting efforts to support, help and advise whenever required. He has provided encouragement, moral support and guidance for completing this research.

I wish to express my gratitude and pranams to Swami Atmaramanandaji Maharaj, Secretary, Sri Ramakrishna Mission Vidyalaya and Swami Anuraganandaji Maharaj, Correspondent, Sri Ramakrishna Mission Vidyalaya Polytechnic College, Coimbatore for motivating me to do the research.

My appreciations are to my friends particularly Mr. B. Senthilkumar and Dr. A.S. Ramkumar for their suggestions and help.

I would like to thank my colleagues in Sri Ramakrishna Mission Vidyalaya Polytechnic College for their support and help.

The most vital acknowledgement is due to my parents, wife and daughters for having stood by me throughout this research work and providing me the much needed moral support.

I thank everyone who helped me in one way or other to complete my research. Finally, I thank the Management of Sri Ramakrishna Mission Vidyalaya Polytechnic College for the support extended to me during my research work.

Coimbatore
14.07.2008

S. Chandrasekaran