ACKNOWLEDGEMENTS

The completion of this research work would not have been possible without the encouragement, help and support of many individuals. It is my privilege to thank the people who have supported and guided me throughout this research work. I am grateful to Dr. Francis C. Peter, Vice Chancellor, St. Peter’s University for giving me an opportunity to carry out my research in the university.

I am very much thankful to Dr. M.A. Dorai Rangasamy, Registrar, St. Peter’s University and Dr. S. Gunasekaran, Dean (R&D), St. Peter’s University for their constant help and academic, St. Peter’s University for valuable suggestion.

I would express my thanks and appreciation to my supervisor, Dr. V. Kannan, Professor and Principal, Jeppiaar Institute of Technology, Chennai, for his guidance throughout my Ph.D. program. I especially thank him for inspiring me in solving the research problems.

I would like to thank Dr. S. Pushpa, Professor and Head, Department of Computer Science and Engineering, St. Peter’s University, for her encouragement and constant source of motivation.

I also thank Dr. G. P. Ramesh, Professor and Head, Department of Electronics and Communication, St. Peter’s University, a great person for his endless support. Besides my supervisor, I am thank full to the rest of my doctoral committee members, Dr. C. Arun, Professor and Head, Department of Computer Science and Engineering, RMK Engineering College, Chennai and Dr. V. Cyril Raj, Dean, Department of Computer Science and Engineering, Dr. MGR Educational and Research Institute, University, Chennai. Finally, I would like to thank all those who were directly or indirectly helpful in carrying out this research.