

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 Institute of Higher Education and Research, Chennai for giving me an opportunity to carry out my research in the university.

I also thank **Dr. L. MaheshKumar, Registrar** and **Dr. S. Gunasekaran**, Dean, R&D, St Peter's Institute of Higher Education and Research for their constant help and support throughout the course of my research work.

I am highly indebted to my supervisor **Dr. G. P. Ramesh**, Professor and Head, Department of Electronics and Communication Engineering, St Peter's Institute of Higher Education and Research, Chennai, for given me an opportunity to work under his guidance. I would like to express my sincere gratitude to him for his valuable guidance, insightful suggestions, sustained encouragement, constructive inputs and support during my doctoral studies.

I am grateful to my doctoral committee members **Dr. E. Logashanmugam**, Professor and Dean (Staff Affairs), Department of Electronics and Communication Engineering, Sathyabama Institute of Science and Technology, Chennai, and **Dr. R. Madhusudhanan**, Professor, Department of Electrical and Electronics Engineering, Easwari Engineering College, Chennai, for their guidance during my doctoral studies.

I thank specially Dr. K. Balaji, Professor and Head, Department of Electrical and Electronics Engineering, St Peter's Institute of Higher Education and Research for their help during this research.

Finally, I would like to thank all those who were directly or indirectly helpful in carrying out this research.