ACKNOWLEDGEMENT

The author is very grateful to his guide Dr. R. ARUMUGANATHAN, Professor, Department of Mathematics and Computer Applications, PSG College of Technology, Coimbatore, for his inspiring guidance, constant encouragement and constructive suggestion throughout this research work. The motivation rendered by him in choosing the present work and his full fledged support for completion of this research work needs special mention.

The author expresses his sincere thanks to Dr. R. NADARAJAN, Professor and Head, Department of Mathematics and Computer Applications, PSG College of Technology, Coimbatore, for his valuable suggestions, co-operation and encouragement in providing necessary facilities.

The author wishes to thank Dr. R. RUDRAMOORTHY, Principal, PSG College of Technology and Polytechnic College, Coimbatore for giving permission to use all the facilities in the college without which the work would not have been completed.

The author wishes to express his sincere thanks and heartfelt gratitude to Dr. S. JAYARAMAN, Professor and Head, Department of Electronics and Communication Engineering, PSG College of Technology, Coimbatore, for his valuable technical support and guidance.
The author expresses his sincere thanks to Dr. S.N. SIVANANDAM, Professor and Head, Department of Computer Science and Engineering, PSG College of Technology, Coimbatore, for his motivation and support. Dr. K. RAMADOSS, Professor and Head, Department of Neurology, PSG Institute of Medical Sciences and Research, Coimbatore, deserves many thanks for his critical comments and suggestions.

The author wishes to thank all staff members of the Department of Mathematics and Computer Applications, PSG College of Technology, Coimbatore, for their kind cooperation, suggestions and useful discussions.

The author extends his sincere thanks to Mr. K. SIVAKUMAR, Department of Electronics and Communication Engineering, PSG College of Technology, Coimbatore, for his help during the development of the thesis work and Mr. C. VIMAL, Department of Bio-Medical Engineering, PSG College of Technology, Coimbatore, for his help rendered during the tenure of this work.

The author acknowledges his deep sense of gratitude and dedicates this work to his parents and family members who have always been a source of inspiration to him throughout his study of research work.