

## **ACKNOWLEDGEMENTS**

I want to start by expressing my deep gratitude to God for giving me the strength and faith to start this journey and the ability to finally complete this work.

This thesis would not be possible without the support of many individuals, to whom I would like to express my gratitude. First and foremost, I would like to thank my supervisor, Dr. K. Iyakutti, CSIR Emeritus Scientist School of Physics, Madurai Kamaraj University for the opportunity of working with him, and for his continuous guidance, motivations, and encouragement throughout my Ph.D. studies. His trust and support in delegation have instilled in me great confidence and were key factors in my development as a person and as a researcher.

I would like also to thank many faculty members of the Madurai Kamaraj University, most notably Dr. K. Alagarsamy, Department of Computer Centre for his valuable input and suggestions. I would like to thank fellow research scholars Mr. Sureshkumar, Mr. Ramasubramaniam, Mrs. Lakshmi and Mr. Justus for their valuable support and guidance in the process.

I wanted to express my sincere thanks to my friends Mr. Venkatavaradan, Mr. Swaminathan, Mr. Sharan Padmanabhan and Mr. Nachiappan for their encouragement and support.

I am especially deeply indebted to my wife Mrs. Srigowri Rajesh who shared my delight and distress with me while doing my research work. She has encouraged me throughout this journey in many ways but also supported me during the process of writing this thesis. She has greatly enriched my life

emotionally and spiritually through her unconditional support and love. I would like to extend my special thanks to my lovely kids Samyuktha and Rohan for sacrificing their childhood time in this process.

I would like to extend my thanks to my parents Mr. Devadas and Mrs. Jalaja who had been behind me in all the times throughout my life.

## **DEDICATION**

I would like to dedicate this thesis to my family for living with the thesis as well as me, and for countless ways they ensured that I would finish every bits and pieces. Without their patience, encouragement and understanding, this work would have not been possible.

*To my Wife, Daughter and Son*