ACKNOWLEDGEMENTS

I am deeply indebted to express my sincere gratitude and grateful thanks to my Research Guide, Prof. B. Rama Murthy, Head of the Department of Instrumentation & USIC and Coordinator of Department of Electronics for his enthusiastic guidance, constant encouragement and untiring efforts throughout the course of these investigations. He was a constant source of inspiration with his professional approach throughout the course of this work. I am much beholden to him for teaching me certain aspects of life, which I find very useful in the process of building up my career.

I am also deemed it grateful to express my sincere thanks and gratitude to Prof. T. Ramanujappa, Dean of Physical Sciences, Prof. K. Ragahavendra Rao, Prof. R. Jeevan Kumar, Prof T. Subba Rao and Dr. K. Lakshmaiah, Department of Physics for their support and help to complete my Ph.D work.

I am also equally grateful and thankful to Dr. P. Thimmaiah, Assistant Professor, Department of Electronics for his keen interest and all kind of cooperation and encouragement during the course of my research work.

I am also expressing my special gratitude and thanks to my research colleague Mr. K. Tanveer Alam, Academic assistant, Department of Electronics for his constant help and cooperation and suggestions to complete and bringing my thesis into final form and also I am equally thankful to Smt. Dr. N. Anju Latha, UGC- Post-Doctoral Fellow, Department of Instrumentation & USIC for her help in my Ph.D thesis preparation and her valuable suggestions during my research work.

I am also very thankful to all my research colleagues Smt. U. Sunitha, Smt. R. Harini, Academic Assistants, Mr. Ashraf Ahammed, Mr. B.
Dhanunjayam, and Smt. N.N. Nagamma for all their cooperation to complete my Ph.D work successfully.

It is my pleasure to say thanks to Mr. G. Yellappa, Record Asst. for all his help in administrative matters support to complete in my research work.

It is also my duty to express my sincere thanks and gratitude to Mr. Vinay Hegde and Mr. Gireesh Gachinamath, Application Engineers of Gipzonics Private Limited, Bangalore for their valuable suggestions given throughout the research work.

I wish to express my special thanks to Dr. S. Ravi, Prof. and Head, Department of Electronics and Communication, Dr. M.G.R. University for his keen support and cooperation during the course of my research work.

It gives me immense of pleasure to thank Mr. B.C. Premkumar, Pramukhatech Private Limited, Bangalore for his valuable suggestions and moral support rendered to me throughout this course.

Last but not least, my sincere thanks are due to my wife Smt Sahana and my son Srijan Delampady and my family members who patiently bare the inconveniences caused by me during the course of my Ph.D work.

SURESH.D