ACKNOWLEDGEMENT

I thank all who in one way or the other contributed in the completion of the thesis. First, I give thanks to the almighty God for protection and the ability to complete the work.

I would like to express my profound gratitude to my respected supervisor, Prof. Bhaskar Gupta of Department of Electronics and Telecommunication Engineering, Jadavpur University. I express my indebtedness to Prof. Bhaskar Gupta for the continuous guidance, valuable advice and constant encouragement throughout the whole period of research work. I could not have imagined having a better advisor and mentor for my Ph.D. study. I am also grateful to the head of the department, E.T.C.E Dept., Jadavpur University for providing me with the necessary facilities.

Most of the measurements of my research work were carried out at Microstrip Laboratory of our Department at Jadavpur University but few of the measurements were done at the ETC department of Kalyani University. I express my deep and sincere gratitude to Prof. Partha Pratim Sarkar for his generous help in this regard.

I also express my sincere thanks to my family friend Mr. Alla Radesh Kumar for helping technically in many ways, which enabled me to finish the work in stipulated time.

I am deeply thankful to all the co-scholars of the Microstrip Laboratory of our Department at Jadavpur University for the constant support, stimulating discussions and for all the fun during the Research work. The support from my fellow researchers and friends, Mr. Sudipto Maity, Dr. Rajendra Prosad Ghosh, Mr. Kaushik Patra, Dr. S. Sankarlingam, Mr.
Sharanbasappa B Belamgi, Dr. Samik Chakraborty, Mrs. Ayona Chakraborty are really noteworthy.

Special gratitude to my friend and colleague Mr. Sayantan Dhar, for his valuable time and suggestions which I was lucky to get throughout the tenure of my research work.

My sincere gratitude towards the senior management of Heritage Institute of Technology for allowing me to pursue the research work.

No words are sufficient enough to express my heartfelt thanks for the constant inspiration and support from my daughter, Kasturi & husband, Kaushik, supporting spiritually, standing by me during the odds and cheering me throughout the tenure.

Last but not the least, I would like to express my deepest gratitude toward my parents, Dr. R N Mitra and Late Mrs Dipti Mitra, who encouraged me throughout my Research and whose blessings and support have been the constant motivation towards completion of the thesis.

May the Almighty God richly bless all of us ……

Sriparna Mitra