ACKNOWLEDGEMENT

The endless thanks goes to Goddess “Saptashrungi” for all the blessings she has showered onto me, which has enabled me to write this last note in my research work. During the period of my research, as in the rest of my life, I have been blessed by great with some extraordinary people who have spun a web of support around me. Words can never be enough in expressing how grateful I am to those incredible people in my life that made this thesis possible. I would like an attempt to thank them for making my time during my research aperiod I will treasure.

My special and heartily thanks to my research supervisor, Prof. Dr. Rajendra S. Patil for presenting me such an interesting thesis topic. He has guided me with his invaluable suggestions, lightened up the way in my darkest times and encouraged me a lot in the academic as well as personal life. The convenient working environment he has created is greatly appreciated.

I am deeply indebted to Dr. Habib M. Pathan who encouraged and directed me during the journey. He has given me the best training, facilities and opportunities during the work. It was more than I had ever hoped for in my research life. It was a great pleasure for me to have a chance of working with him.

I avail this opportunity to express my deep and sincere feelings of gratitude to the Hon’ble Bapushaeb Shri Deepakbhai Patil, President, Hon’ble Smt. Kamaltai Patil, Secretary and Hon’ble Shri M. N. Patil, Co-ordinator, Poojya Sane Guruji Vidyaprasarak Mandal, Shahada for their support and encouragement.

I am thankful to Prof. S. B. Patil, Principal and Dr. A. S. Patil, Director-PG, PSGVPM’s Arts, Commerce and Science College, Shahada for constant support during the tenure of my research work.

My sincere thanks to Dr. I. J. Patil, Dr. J. B. Chaudhari, Dr. P. P. Jagtap, Dr. P. B. Ahirrao, Dr. M. S. Shinde, Mr. Milind Sonawane, Mr. Jitendra Suryavanshi, Smt. Swapna Samanta and Mr. Rahul Wagh for making leaving environment in Laboratory.
I am also thankful to Non-teaching staff, Mr. Arvind Pawar and Mr. Sudam Sonawane, Dept. of Physics, PSGVPM’s Arts, Commerce and Science College, Shahada, who helped me time to time.

I would also like to extend very special thanks to Hon’ble Kalyan Jadhav, President, KJEI’s, Pune and Principal, Trinity Polytechnic, Pune for their support and encouragement.

I am also deeply thankful to Dr. Pradip Patel for introducing me to a knowledgeable and humble personality Prof. Dr. R. S. Patil.

My exceptional thanks to Late. R. T. Pandit, Dr. P. T. Pandit, Adv. Ravindra Pandit and Dr. Pradeep Kurulkar who inspired, encouraged and supported me a lot in the academic as well as personal life.

Great thanks to Mr. Sudhanshu Pandit, Mr. Sameer Devasthe and Mr. Harshad Apshankar for always being with me and family during this journey.

I am also so thankful to my friends Dr. Vikram Athlye, Dr. H. R. Kulkarni, Sunil Marathe, Harish Sonar, Gaurang Mujumdar, Yogesh Marathe, Mahesh Borane, Ravi Marathe and Swapnil Padavi whose encouragement and endless help have provided me strength to do the work.

I am deeply obliged to Prof M. B. Rajendra Prasad and Dr. Sandeep A. Arote, my buddies and mentors who looked after and inspired me despite the enormous work pressures we were facing together. Today I am going to enclose our lengthy, informative and memorable discussions in thesis which I had with them.

Furthermore, I am thankful to Prof. M. V. Mandke, Dr. Shashikant D. Gunjal, Ravi, Niyamat, Yusuf, Vishal, Nitin and Pooja for supporting me to pursue my partial studies here in Advanced Physics Laboratory, Department of Physics, Savitribai Phule Pune University, Pune.

I am forever grateful to my grandparents, Late Yashodhabai and Smt. Usha Pathak, whose foresight and values paved the way for a privileged education.
Today I feel blessed to have this chance to thank my dear parents, Aaba and Aai who gently offer guidance, encouragement and unconditional support at each turn of the life. Without you and your hard work, which inspires me, it was never possible. Today I found myself lucky to give you this pleasure. Great thanks to my brother Sunil, who has always inspired me.

Bhagyashri, my wife, without whom this effort would have been worth nothing. Your love, support and constant patience have taught me so much about sacrifice, discipline and compromise – even if there were times when you said “I told you so”.

Arnav, my hero, who was born and spent many days with relatives to allow me to focus on work. I am deeply sorry for the time we spent apart.

My In-laws, for looking after Arnav, all your encouragement and profound understanding.

At the last but not least I am obliged to all my respected teachers from Primary to Post graduation who cultivated me.

Anil N. Kulkarni