
Acknowledgements

It would not have been possible to write this doctoral thesis without the help and support of the kind people around me. Many people influenced my research work. I shall try to list out all the name who have influenced my work directly or indirectly.

First of all I would like to thank the supreme power of the Almighty God who is the one who has always guided me to work on the right path. Then, I would like to express the deepest appreciation to my supervisor, Dr. Jayendra Nath Bandyopadhyay, and co-supervisor, Dr. Tapomoy Guha Sarkar. They continually and convincingly conveyed a spirit of adventure in regards to research. Without their guidance and help my Ph.D. would not have been possible.

I would also like to express my sincere gratitude to the faculty members of the Physics department, the DRC convenors, HODs, and all research scholars of the department through my tenure, especially my DAC members, Dr. Rakesh Choubisa and Dr. Amol Holkundkar for their valuable advice and constant encouragement. I am highly thankful to my DAC members for devoting their valuable time for reviewing and refining this thesis and to access the progress of my work. The technical staff of the department, Rajeev Ji, Srikant Ji and Kundan ji are also gratefully thanked for their help.

I am also grateful to the Vice-Chancellor, the Director, Deans and Associate Deans of various divisions of the Birla Institute of Technology & Science, Pilani, for their support for the smooth functioning of the various mechanism related to

my research work.

I express my gratitude to all the present and past Deans and Associate Deans of AGSRD for their constant official support in organizing my research work. All other staff members of AGSRD, Raghuvver Ji, and Mahipal Ji are also gratefully thanked for their help.

I am also grateful to my friend, Geeta for her help and support, and especially to my nephew, Deepak Jangid for his help to solve my all technical problems related to thesis writing.

I am most grateful to my parents, Mrs. Vimla and Mr. P.C. Jangid, my In-laws, Mrs. Manju and Mr. J. P. Sharma, brothers, Jayant and Rahul, sisters, Rajni & her family and Reya for their love and support.

And of course, my husband, Praveen, and daughter, Kaavya, for always be ready to help me and stand with me in every situation, without them none of this would have been possible.

Rashmi Jangir . . .