## **ACKNOWLEDGEMENT**

First of all, I would like to express my sincere gratitude to my supervisor Prof. Satyabrata Jit for his continuous support, motivation and valuable guidance. His immense knowledge and guidance helped me a lot to carry out my research work. Without his precious and whole hearted support the successful completion of this research work would have not been possible. His broad knowledge and enthusiasm for work will always be a source of inspiration for me.

A vote of thanks from the bottom of my heart goes to the Head of Electronics Engineering Department, Indian Institute of Technology (Banaras Hindu University), Varanasi for providing me all of the necessary tools and lab facilities to conduct my research work. I would also like to thank all the faculty members, laboratory staff, librarians and office staff for their kind cooperation and encouragement during this journey.

I would like to express my special thanks to my seniors Dr. Sarvesh Dubey, Dr. Mirgender Kumar, Dr. Purnima Hazra, Dr. Divya Somvanshi, Dr. Meenakshi Choudhary, Dr. Aniruddh Bahadur Yadav, Dr. Kumar Shubham, Dr. Vinod Kumar, Dr. Sunny Sharma, Dr. Kunal Singh for their constant encouragement and their appreciated suggestions. I have great pleasure in acknowledging my gratitude to my colleagues and fellow Mr. Balraj Singh, Mr. Gopal Rawat, Mr. Hemant Kumar, Mr Sanjay Kumar, Mr. Yogesh Kumar, Mr. Chandan Kumar, Mr. Lalit Chandra, Mr. P. K. Sahu, Mr. Amit Kumar, Mr. Ashwini Mishra, Mr. Deepak Kumar, Mr. Kamlaksh Baral, Mr. Prince Kumar Singh, Mr. Smriti Ratan, for their motivation, support, and encouragement. My thanks and deep appreciations also go to all staff members of CRME lab, Department of Electronics Engineering, especially to Mr. M.K. Saxena, Mr. S.C. Yadav, Mr. Shyam Narayan, Mr. Vinay Srivastava and Mr. Sanjeev Srivastava for their kind cooperation.

I would also like to mention my deep regards for Dr. Sweta Chander, postdoctoral research fellow in Electronics Engineering Department who helped me with her constant support, involvement and encouragement during my research journey.

Finally, no word will be enough to express my deepest reverence to my loving parents, without their faith in me and their endless sacrifices for me, I wouldn't have been reached at this position, this thesis is dedicated to my parents.

At last, I would like to thank Lord Krishna for giving me the strength, knowledge, ability and opportunity to undertake this research study and to complete it satisfactorily. Without his blessings, this achievement would not have been possible.

Date:	(Ekta Goel)