Acknowledgments

Though, only my name appears on the cover of this dissertation, so many great people have contributed to its production. I owe my gratitude to all those people who have made this thesis possible and because of whom my doctoral experience has been one that I will cherish forever.

With sincere appreciation, i take this opportunity to express my profound gratitude and deep regards to my adviser Dr. Santosh Kumar Singh, Associate Professor, Electrical Engineering Department IIT(BHU), Varanasi for his exemplary guidance, monitoring and constant encouragement throughout the course of this dissertation.

I am obliged to faculty members, in particular Dr. N. K. Swami Naidu, Dr. Shyam Kamal, and staff members, in particular Mr. Dharmendra, Mr. Umesh Mishra, Mr. Patel, Mr. R. C. Sharma and Mr. B. L. Singh, of Electrical Engineering Department, IIT(BHU), Varanasi. In addition, I want to express my deepest gratitude to Dr. Avneet Kumar who supported me throughout my thesis work. I am grateful to Mr. Pilli Naresh Kumar, Dr. Motiur Reza, who provided me technical, moral and emotional support during my research program.

A very special gratitude goes out to my colleagues and friends with special mention to Mr. P. Vijay Babu, Dr. Kranthi kumar, Dr. Rajaram Kumar, Mr. Siva, Dr. Anish Ahamd, Mr. B. Vinod Kumar, Dr. Chayan Gupta and Mr. Abhinandan routray

Last but not the least, I thank specially to my parents, Mrs. M Rameswari and Late M. Ramakrishna, my sister M. Revathi, my uncle Mr. K. Sreedhar, and my friends B. Murali, G. Bhanu for their constant support and encouragement, without which this assignment would have not been completed at all. I am grateful to my other family members who have supported me along the way.

Date: _____

M Raghuram