

# Acknowledgements

I am very happy to have Professor Satish Kumar Joshi as my thesis Guide . He was always there to guide me whenever I required to complete my Thesis. On the completion of this work, it is my proud privilege to express my deep sense of gratitude and respect towards him for his skilled guidance, unfailing support and constant encouragement not only during this dissertation work but also over entire period of my association with him.

I wish to add special thanks to the prominent professions of the power industry from PGCIL, NTPC, BHEL , Crompton Greaves for giving a chance to collect the practical SFRA data for the transformer and helping by their unconditional support during the completion of Thesis.

Finally, no words are adequate to express my thanks to my family members for allowing me to spare my time for PHD work. I acknowledge with utmost warmth the unending support, love and affection received from my Husband, Daughter and Sister.

**Aradhana Ray**