ACKNOWLEDGEMENTS

First of all, I am thankful to the almighty for creating a path for me to carry out Research in the field of Mechanical Engineering.

I also express my sincere thanks to Sh. Sandeep Ji Maharaj who has always been a light of inspiration which helped me to cover this journey.

I wish to acknowledge my gratitude to the persons who have made this research work possible. At the outset, I wish to acknowledge my sincere thanks to my supervisor Dr. M.F. Wani for his invaluable guidance, co-operation and support throughout this research study. Without his dedication, professional expertise and patient attitude, this research endeavour would not have been possible.

The author attributes the completion of this research work to his mother Mrs. Chander kala Anand, father Mr. M.C. Anand, sister Dr. Sarika Anand, brother Mr. Rajesh, sister-in-law Mrs. Royal and nephew Rahul Anand who have always been a vital source of motivation and strength for all time endeavours.

It is inevitable to express my special thanks to the telecommunication network provided by BSNL and Airtel, which contributed a lot, particularly during the period of unrest in Kashmir in 2008 and 2010. Telephone and internet were also the tools which facilitated in the successful completion of this research work.

Thanks are also due to Mrs Wani and her Children Wamiq and Aimin for their patient and cooperative attitude at times.

Finally, I express my sincere thanks to my spouse Aditi who bore with me during the last lap of this journey.

(Ankush Anand)