ACKNOWLEDGEMENT

I am highly indebted to Dr. A.S. Zadgaonkar, Professor, Govt. Engineering College, Raipur for his invaluable help and guidance during the course of this work. His cool and critical suggestions solved many ticklish problems.

I acknowledge my thanks to the Principal, Govt. Engineering College, Raipur for granting permission to do research work at Govt. Engineering College, Raipur. I also accord my sincere thanks to Prof. S.C. Tiwari, Professor and Head, Electrical Engineering Department for his kind cooperation during this research work. I will be failing in my duties, if I do not acknowledge with thanks the facilities provided by the Professor and Head, Chemical Engineering department for giving me unlimited access to the powerful computing facilities existing in the department.

I am grateful to Dr. Sudarshan Tiwari, Professor and Head, Department of Electronics, Motilal Nehru National Institute of Technology, ALLAHABAD for introducing me to the latest area of Multistage Interconnection Networks.

A project work spanning over several years can not be accomplished without significant contribution by the family members. I hereby place on record my respectful regards to my parents for boosting my moral. My wife Smita stood by my side like a traditional Indian housewife whereas my son Charu provided much needed rejuvenation by his innocent talks to break the monotony. My younger brother Saurabh and uncle Shri Sudhir Srivastava were a source of uninterrupted power to overcome all hardware problems and offer academic discussions in tricky situations. In fact, it was the cumulative power of their blessings, care and affection which imparted me the courage and confidence to make my dream come true.

(SANJAY KUMAR)