ACKNOWLEDGEMENTS

The research presented in this Thesis has been carried out under the valuable and expert guidance of Professor R.N. Keshavamurty. I wish to express here my deep sense of gratitude to him for his keen interest in my progress and his encouragement in my endeavours. I am also grateful to him for his critical reading of the manuscript and constructive comments.

I am very grateful to Professor P.R. Pisharoty with whom I had a number of helpful and illuminating discussions. I am also grateful to Professor S.P. Pandya for his kind interest and encouragement during the course of this research.

My sincere thanks are due to Dr. Man-Kin Mak for his valuable suggestions during his visit to the Physical Research Laboratory. My heartfelt thanks are also due to Drs. V. Satyan, B.N. Goswami and H.S.S. Sinha for the many useful discussions I had with them.

My sincere thanks are due to Professors R.V. Prat and B. Buti, R.K. Varma, J.C. Parikh, K.H. Bhatt, A. Sen, A.C. Das, A.K. Sundaram, S.B. Khadkikar and to Drs. A.R. Prasanna and V.B. Sheorey. I acknowledge here the fruitful discussions I had with some of them.

During the preparation of this Thesis, I have been helped in a number of ways by Dr. N.N. Rao and
D.N. Patro. I wish to express here my thanks and appreciations to them. My sincere thanks are also due to Drs. Surjalal Sharma, Mannil Mohan, Kamalesh Kar, A.K. Ambastha, Rhama Venkataraman and Aswin Oza, D.K. Chakraborty, A.K. Choudhary, Aparna, Marab, Awinash, Harish, Nautiyal, Kailash, Usha, Chitra, Subkaraman, Vishnu Mayya, S.V. Kasture and V.T. Viswanathan for their co-operation and help.

I express my heartfelt thanks to Mr. P.S. Shah and his colleagues for providing the computer facilities; Mrs. R.R. Bharucha, Mrs. Urmila Ghiya, Miss Swadha Majmudar and their colleagues for providing the library services; Mr. Shanti K. Bhavsar for neat copying of the diagrams and Mr. Nayan D. Dave and Mr. E.R. Ranpura for preparing excellent photographs of diagrams.

I gratefully acknowledge the help rendered by Mr. P.P. Narayanan for his timely and prompt typing of the Thesis with personal care. Thanks are also due to Mr. Babulal Bramhabhatt for neat cyclostyling of the Thesis.

I am greatly indebted to the University Grants Commission, India for the award of Teacher Fellowship which enabled me to carry out this research at the Physical Research Laboratory, Ahmedabad. I am also thankful to the Principal and Secretary of Stewart Science College, Cuttack to allow me to stay on leave which enabled
me to complete this Thesis.

Shefali has come in my life at the right moment of this research. Her constant companionship and warm encouragement has helped me a lot in completing this research and the Thesis writing in time. It's a pleasure to thank her here.

No list of acknowledgement is ever complete nor what is expressed ever adequate. To all who have helped me in various ways I offer my heartfelt thanks.