

# Acknowledgement

---

God has been really kind to me in providing strength and love to move forward in this endeavor which has been full of crests and he has given me courage that enables me to face all the challenges during my research works. It would not have been possible to write this thesis without the help and support of the people around me. I am indebted to all of them however over here I would like to mention few special people.

It gives me great pleasure to acknowledge my indebtedness and profound sense of gratitude to my supervisor, Dr. H. R. Kataria, Professor, Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara for not only portentious me the research problem but also for his eminent guidance, constant encouragement, constructive counselling, stimulating discussions, affectionate encouragement and keen inspiration throughout the course leading this investigation to a successful accomplishment. In spite of his extremely busy schedule due to his many roles especially Dean of the faculty, he helped me whenever I needed his guidance. I am grateful to him particularly for his kindness, hospitality and understanding and for all the help and advice received from him not only related to the work but also on various aspects during the course of my investigations.

My sincere thanks go to Professor Dr. R. G. Vyas, Head of Department, Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Professor Dr. B. I. Dave, Professor Dr. V. O. Thomas and entire faculty members and staff in Department of Mathematics for assistance in my Ph. D. study. I am highly indebted to them for being there. I cannot forget the cooperation and encouragement that I have always received from Shri Gopalbhai, Prayagbhai and other non-teaching staff of the department.

Very special thanks to my loving friends Dr. Akhil S. Mittal, Dr. Harshad R. Patel, Mr. Rakesh R. Darji, Mr. Tushar Kulkarni, Mr. Vikash B. Agarwal, Dr. Bhavini M. Pandya and their family members for helping me throughout my research work and providing insights. Thanks to my research colleagues Mr. Prakash H. Patel, Ms. Mital H. Mistry for their valuable support. My sincere gratitude to all my teachers who have taught me during my studies from schooling to Ph. D. Special thanks to Dr. R. D. Mehta and Dr. D. J. Karia for their constant support.

I am also thankful to entire SVIT management Shri Bhaskarbhai Patel, Shri Bhaveshbhai Patel ,

Mr. Dipakbhai Patel, principal Dr. S. D. Toliwal my colleagues Dr. K. P. Mredula, Dr. A. K. Adhikary, Dr. K. L. Amlani, Ms. M. V. Umathe, Ms. D. M. Tapiawala, Ms. K. N. Gohel, Dr. D. K. Mathur, Ms. D. H. Patel, Dr. S. N. Solanki, Dr. A. M. Vahora, Dr. J. M. Mistry, Dr. S. P. Dalal, Dr. N. M. Trivedi and other faculty members of SVIT – Vasad for their love and friendly environment. My thanks to my ex colleagues Dr. Jayesh Deshkar, Dr. Y. B. Shukla, Dr. S. V. Shende, Ms. M. J. Doshi, Ms. B. V. Nathwani, Dr. D. N. Chalishajar, Dr. U. P. Acharya, Dr. N. S. Pathak and all others with whom I have worked. They all were great encouragement to me.

I express my deepest sense of gratitude to my beloved father Late Mr. Pinakinbhai Mehta, my mother Mrs. Rekhaben Mehta, my father-in-law Mr. Devanshubhai Mehta and mother-in-law Mrs. Rannaben Mehta for their moral support, innocent love, unfailing patience, affectionate encouragement, kind co-operation and valuable blessings.

Words are not enough to express my affectionate amiable thanks to my brothers Mr. Devang Mehta, Mr. Rikhav Mehta, my brother-in-law Mr. Manthan Mehta and their family members for their encouragement and unselfish commitment to support me; right from the registration till the successful completion of this journey.

Finally, Thanks to my better half, Mitali for being always there for strengthening my confidence, constantly motivating me in all the situations. Also my loving daughter, Dhviya for being such a good kid for always cheering me up and her love provided me a great relief in the minor crisis of confidence. They both are the backbone of this successful journey.

I am thankful to library staff and administrative staff of The Maharaja Sayajirao University of Baroda, Vadodara.

I am also indebted to all those researchers whose work (quoted in the bibliography) I have consulted.

Lastly, my obligations go to all those people who have supported me directly or indirectly for my research work.

**RAHUL MEHTA**