## Acknowledgments

I would like to express my sincere gratitude to my advisor Dr. Puneet Sharma for his expert supervision and research insight. Above all, he provided me with unflinching encouragement and support in various ways. I am greatful to him for his inspirations, constant support, and the great patience. It was his valuable suggestions, understanding, enthusiasm and vivid discussions that helped me to complete my doctoral work. This thesis would not have been possible without his constant support and motivation.

I am thankful to IIT Jodhpur for providing me with the necessary facilities which helped me accomplish my research work. I would like to thank my Student Research Committee (SRC) members Dr. Deepak M. Fulwani, Dr. Kirankumar R. Hiremath and Dr. Gaurav Bhatnagar for their fruitful suggestions.

I gratefully acknowledge MHRD for providing the financial support which made my journey smooth and comfortable.

I would like to thank my family for their love, support, and sacrifices. Words can not express my feelings how grateful I am to my parents; Mr. Ram Kishan Raghav and Mrs. Somwati Pundhir and in-laws Mr. Ramesh Tomar and Mrs. Sunita Tomar for all of the sacrifices that you have made for me. Your prayer for me was what sustained me thus far. A great thanks to my lovely sister Abha Raghav and brother Anand Raghav for their love and affection. I would also like to thank my beloved wife, Aarti Tomar for continued support and encouragement. I would like to dedicate this thesis to my beloved daughter Nimanshi, who is the pride and joy of my life.

A big thanks to my friends Dileep Kumar, Rohit Kumar, Prashant Kumar and Vishal Sharma for their help and support. It was wonderful and memorable time we had in IIT Delhi during the workshop.

I want to thank God for good health and giving me the strength to accomplish my research work.

. . .