ACKNOWLEDGEMENTS

In every research, a researcher turns out to be a hypocrite unless the researcher religiously acknowledges the contribution, cooperation, influence and guidance of the supervisor and academic facilitators. With this in mind, I would like to take this opportunity to express my heartfelt gratitude to Prof. Anjan Mukherjee, Department of Mathematics, Tripura University for his valuable guidance, great encouragement and constant supervision throughout my research work.

I wish to express my sincere gratitude to Dr. Shyamal Debnath, Department of Mathematics, Tripura University. With all sincerity, I also acknowledge the respected faculty members of the Department of Mathematics for their kind inspiration and suggestion for completing this research work.

I would like to address special thanks to the unknown reviewers of my thesis, for accepting to read and review this thesis. I wish to thank the authors, developers and maintainers of the open source used in this work. I would like to appreciate all the researchers whose works I have used, initially in understanding my field of research and later for updates.

I am indebted to my family members, for sustaining me through many long days during this research work. Especially my Father, Sri Babul Kanti Das for his non-stop source of inspirations which helped me completing the thesis and I am greatly indebted to my Mother, Smt. Jayanti Das whose lots of sacrifices, continuous moral support and most of all for my loving, supportive, encouraging and patient wife Mrs. Payel Baishnab (Das) faithful support during the final stages of this Ph.D. is so appreciated. Thank you.

(Ajoy Kanti Das)