Acknowledgements

It gives me immense pleasure to express my gratitude towards my teacher and my idol Dr. Dinesh Khurana for sharing his wealth of knowledge and wisdom with me, for being an inspiration, for always being very friendly and for keeping patience with me all these years.

I am extremely grateful to Prof. Surjeet Singh for many discussions during the work of [GKS]. I am also thankful to Prof. Donald Passman and Prof. Bergman for all the Mathematics that I could learn from them through electronic correspondence.

I am thankful to Professor A. K. Bhandari, Chairman and Professor Madhu Raka, former chairperson, for providing the necessary facilities during the course of my Ph.D work. I am thankful to all the teachers of the Department and also to the teachers who taught me during my school and college years, for their constant encouragement all these years.

I am grateful to the iconic teachers at IISER, Mohali for showing ‘what real mathematics is’ and making me realize that there is so much to learn that even the entire life is not enough for that.

It is difficult for me to express my emotions and my gratitude in words, towards my parents Sh. Joginder Singh and Smt. Ravinder Kaur, my sister Mrs. Chamandeep and jija ji Mr. Jaspreet Singh for their unconditional love, their support and faith in every decision taken by me and above all for their hearty blessings.

I owe my deep sense of gratitude to my friends Geetika Di, Kalpana Di, Anuradha di, Aarti Di, Ramneek Di, Vikas, Pooja, Pratima, Leetika at the Department, Shalini Di, Shelly, Ajay, Preetinder at IISER, Mohali and Rachita, Abhilekha, Bhavneet, Raman, Heena, Manasi, Radhika, Khush, Meghna, Neha at hostel and also, Ritu Di, Angel, Harpreet, Navreet, Aman and Dr. Jitender Singh at GNDU, Amritsar. I am thankful to them for always creating a lively and homely atmosphere around me. It would have been impossible for me to handle the pressure at times without the love, support and selfless attitude of my friends. I am indebted to God for blessing me with these wonderful friends.

I am thankful to Council of Scientific and Industrial Research, New Delhi for their financial assistance in the form of research fellowship.

I am extremely thankful to the library staff and the office staff of the Department.

Above all, I am grateful to God for blessing me always and for always being there for me.

Date: 28-07-2011
Place: Chandigarh

Harpreet Kaur