ACKNOWLEDGEMENT

I am deeply indebted to my Supervisor, Prof. C. Chandran for his inspiring and invaluable guidance throughout my research work. I would like to thank him for all the advice, encouragement, help and everything that I learnt from him during this period. Without him this thesis would not have been possible. Besides my advisor, I would like to thank the rest of my teachers: Dr. K. Jayakumar, Prof. N. Raju and Prof. M. Manoharan for their encouragement, insightful comments, and hard questions. Also, I wish to thank Dr. Haritha N Haridas and Ms. Juviyriya for their support.

I express my sincere thanks to the University Grants Commission of India, for providing Research Fellowship during the entire period of this study.

I would like to specially thank Prof. J.R.M. Hosking (IBM Research Division, USA) for his kind interest in Chapters 4 and 5 of this thesis and his encouragement throughout the data analysis part of this work. It was a pleasure in learning the basics of L-moments from him especially for computation and applications of L-moments.

I would like to thank Sri. S. Suthagaran and Sri. M.V. Shantakumar Librarians of the department for their constant help during this work. I also thank all administrative staff of the department of statistics for providing help in many ways during my stay.

I am very lucky to have Sri. K. Radakrishnan Nair, Sri. K.E. Rajasekaran, Sri. V. M. Chacko, Sri. V. Jilesh, Sri. Cyriac George and Sri. Joby K Jose as my research colleagues. I would like to thank all of them for the support I have received.

I would like to thank the research scholars Libeesh and Ratheesh of the department of Mathematics and Noufal and Shinoj of the department of English for their help during my research period.

My deep gratitude for my parents and my brother for being with me all the time.

Nidhin, K.