Acknowledgements

It is a pleasure for me to express my sincere and deepest gratitude to Professor Kali Pada Das, former Professor of the department of Applied Mathematics, University of Calcutta, under whose kind supervision and guidance the entire works contained in the thesis have been carried out. I have learned an immense amount from him. I cannot thank him enough for all of his time and energy he spent for me throughout the research work period.

I acknowledge the financial support of UGC major research project entitled "Nonlinear Water Wave Problems Related to Nonlinear Evolution Equations". A part of the research work contained in this thesis has been carried out under this project.

I am grateful to Mr. Arijit Sen who had been a part for several months of the above mentioned project and delivered sincere services whenever there is an official and technical need.

I am immensely grateful to my respected teachers whose lectures enriched my knowledge in mathematics. I am fortunate of being a student of Professor Mani Mitra and Professor Sadhan Kumar Mapa in the undergraduate classes at Presidency College. I feel proud of being a student of a number of excellent professors in the post-graduate classes at Calcutta University.

I have had the benefit of many discussions with Dr. Debasis Sarkar, Dr. Mridula Kanoria and senior research scholar Subhendu Paul of the department of Applied Mathematics, Calcutta University, while carrying out numerical works of the papers contained in this thesis.

I solemnly acknowledge the emotional support and encouragement that I received from the Professors of Belgharia Ramkrishna Mission Shilpapitha, Kolkata-700 056,
after the sudden demise of my father in 1993, to continue higher studies.

I express my deepest respect to my father, late Professor Harendra Nath Debsarma, whose lifestyle and activities have always been constant inspiration to me. His blessings made my work a success. It saddens me that he is not alive to see this day in my life.

I am deeply indebted to my mother Mrs. Subasini Debsarma and mother-in-law Mrs. Mangala Makal whose great sacrifice gave me the opportunity to pursue the research work leading to this thesis.

Finally, a special thank goes to my husband Mr. Lakshmikanta Makal. He has always been inspirational in understanding, patience and encouragements during the many long days and nights that were devoted to this research work. Words of thanks are only a token of my true appreciation for all he has done for me.

Kolkata, INDIA Suma Debsarma
September, 2006.