Acknowledgment

Although the completion of a Ph.D is looked upon as an individual accomplishment, it is rarely achieved without the help of many people. The research presented in this thesis is no exception. I would like to express my gratitude to the following people for support and guidance through the process of researching for and writing this thesis:

• Dr. E. M. Somashekharan Nair, my advisor, for making his time and experience available to me, inspiring me and for the ample freedom he allowed me in conducting my research;

• Dr. C. G. Nandakumar, for serving on my committee, supporting me with the correct direction and good literature for this research;

• Dr. K. P. Narayanan, for serving on my committee, and encouraging me to think thoroughly;

• Cdr. P. K. Satheesh Babu, for paving the way for successful completion of my research by giving me adequate time and opportunity and for all the supportive encouragement;

• The Indian Navy, for having given me the time, opportunity and the requisite approvals for pursuing this research;

• Dr. T. Sahoo, of Indian Institute of Technology, Kharagpur, for being my mentor, for being the guiding light for my research and helping me out both morally and technically especially when it mattered most;

• My beloved wife, Indu, for her love, encouragement and understanding. For giving me a free hand at home to do whatever and whenever I wanted to do for my research. For partnering me in all aspects of life and making this work fun and meaningful. Her constant confidence in me helped me push forward and overcome the obstacles and challenges which presented themselves;

• Pratham and Garima, my children, for their smiles and hugs and for being the stress busters of the frustrations due to the blockades in the work;
• My parents, for having faith in me, inspiring me to take up the research, encouraging my curiosity and to “carry on regardless” of the ups and downs during the course of the study;

• My inlaws for their selfless support, blessing and encouragement;

• Finally, I would like to thank GOD, for His great and magnificent creation and giving us a Universe governed by laws, and for providing us with the tools that allow us to discover and learn about them.

Nitin Agarwala