

ACKNOWLEDGEMENTS

I am overwhelmed with pleasure and pride to express my feelings and a sense of indebtedness in gesture of acknowledgement to different persons for their valuable guidance and wise direction during the course of my research.

At first I take this opportunity to express my sincere and profound gratitude, regards and appreciation to my supervisors Dr. Biswapati Jana, Associate Professor, Department of Computer Science, Vidyasagar University, West Bengal, India-721102 and Dr. P K Das Gupta, Scientist-‘G’, Associate Director, Defence Research Organisation, PXE, Chandipur, Odisha, India-756025 for proposing topic of the present Ph.D. thesis and for introducing me to the magnificent field of research in Computer Science. I am deeply indebted to them for their constant encouragement, constructive criticism, wise and valuable suggestions received all through the period of this investigation. Their knowledge, kindness, patience, sincerity, and vision have provided me with lifetime benefits.

Besides my supervisors, I would like to express my earnest and the true sense of gratitude to my organisation, Defence Research and Development Organisation (DRDO) and Dr. B K Das, Outstanding Scientist, Director, Integrated Test Range, Chandipur, Odisha, India-756025 for giving me permission and providing all the facilities, resources, motivations and encouragement to undertake the research work. I would also like to express my sincere gratitude to Sri H K Ratha, Scientist-‘G’, Additional Director, Sri Rakesh Barua, Scientist-‘F’ Group Director, Sri Ranjit Marndi, Sri Animesh Bhar, Sri Siddhartha Debnath, Sri Debangshu Ball, Sri Amit Sardar, Sri Sandipan Sarkar, Sri Lalatendu Das, Sri Tarun Kar, Sri Samar Dash and all other colleagues of my department for their continuous contribution with their valuable guidance, ideas, cooperation and encouragement.

I would like to thank Ms Anumita Dasgupta, Sri D Kalyan Kumar, Sri Nikhil Kumar Singh, Sri Vinit Kumar Agrawal, Sri Saikat Das, Sri Tarinee Prasad Sahoo and Ms Harshitha Kata for their compassionate support.

I am highly grateful to Prof. Ranjan Chakrabarti, Honorable Vice-Chancellor and Dr. Jayanta Kishore Nandi, Registrar, for providing me all facilities needed to carry out my research work. I convey my sincere gratitude to Prof. J. K. Mondal, Department of Computer Science and Engineering, Kalyani University, West Bengal for his guidance and support at every stage of my Ph.D. study. I convey my heartfelt thanks to the faculty and staff members of the Department of Computer Science, Vidyasagar University for their encouragement and help in different ways.

I would like to thank all the members of the thesis examination committee: Prof. Satyajit Saha (Convener of PhD Committee), Prof. Madhumangal Pal, Prof. J.K. Mandal, Prof. R.K. Samanta, Prof. Subrata Kumar De (Dean of Science) for their suggestions and advices for improving my thesis work.

I would like to express my earnest and the true sense of gratitude to Sri. Soamdeep Singha for his continuous contribution with his valuable guidance, invaluable ideas, and encouragement. I am truly indebted to him for his compassionate support.

My sincere gratitude to co-researchers Dr. P Pal, Dr. S. Kanrar, Sri P Choudhury, Sri R. Das, and Sri S. Manna for their encouragement and helpful suggestions. I ardently acknowledge my debt to Dr. Sharmistha Jana for her co-operation and psychological support to keep the momentum of this research work.

I would like to thank Sri Tuasin Mallick, Sri Bidyut Dalal, Sri Munna Amitya Soo, Sri Subrata Hens and Sri Chanchal Mallick for their compassionate support.

I must acknowledge my debt for those who have constantly inspired, en-

couraged and motivated me. It is almost impossible for me to express any formal gratitude to my father Sri Jitendra Nath Kaity, mother Smt Uma Rani Kaity, father-in-law Sri Bikash Chandra Karmakar and mother-in-law Smt Bharati Karmakar without them the execution of this work would not have been possible. I express my sincere gratitude to my brothers, sisters, niece and nephews for their continuous support, motivation and encouragement.

Finally, I ardently acknowledge my debt to my better half Dolan, who is the source of inspiration for both my research and my life and without her unstinting support, encouragement and positive energy this research could not have been given a due shape. I must mention the main inspiration of my research work was the smiling faces of my beloved sons Agnish and Arnish.

Date:

Sourav Kaity
Vidyasagar University, Midnapore