

## Acknowledgements

To My God “Allahu Subhanahu Wa Taala”, The Most Merciful, The Most Beneficent, I should express my great thanks by worshipping Him sincerely. To Him I should praise a lot.

To my committee chairman, Professor Hanif D. Sherali, I wish to express my utmost gratitude. I was truly fortunate to be able to study under such a gifted individual. His guidance, encouragement, and patience were invaluable to my successful completion of this degree. Thanks and appreciation are also to the other members of the advisory committee for their inputs to my education and my research, and also for their encouragement.

To my parents, I owe the credit for instilling in me a belief in the value of education. Their unlimited love and support has influenced every part of my life.

Finally, and most importantly, I wish to thank my husband Aref Al-derbas and my children Yousef, Sheikha and Abdullah, for their love, understanding, encouragement, and sacrifices, all of which made this degree possible