

to the love and encouragement of my family. I cannot thank my parents enough for giving me the opportunity to freely pursue my educational goals. This thesis is one more step in a path made possible by their unwavering support.

Finally, I would like to thank my wife Erika for ensuring that the last two years of my life were not entirely consumed by graduate studies. She has an amazing ability to make even the most discouraging problems seem manageable. Her love and understanding have given me the strength to complete this thesis.