

# Acknowledgements

I dedicate this work to the most important person in my life; my mother, to whom I owe everything I am and will be. This one goes for you, thank you maman.

I would like to thank the members of my committee for their time. Very special thanks to Dr. Z. Gürdal and E. Nikolaidis for patiently providing guidance and allowing me the freedom to pursue my own postulates and make and learn from my own mistakes.

Special thanks to Bragi Baldursson for his efforts in getting the optimization module up and running.

Finally, I would like to thank my many friends here in Blacksburg and specially Philippe, Amir, Bragi for their unconditional friendship and unlimited patience. My very special little brother, Mostafa, for his moral support and unconditional love.