## Acknowlegement

I am very grateful to my advisor, Prof. Cheng Chen, for his leadership and advice. I also thank Prof. Jyj-Jiun Shann and Dr. Guan-Joe Lai for their comments and valuable suggestions.

There are many people whom I wish to thank. First, I thank Yi-Hsuan Lee for providing me with the program of random graph generator and useful suggestions. Ming-Chih Chen, Ming-Tien Chang, Chien-Wei Chen, Wen-Pin Liu, Chia-Chun Lee and Wei-Fan Yang are excellent fellows, I felt happy and relaxed because of your presence.

Finally, I am grateful to my dearest family. I also send my sincere thanks to my best friends, Yung-Ting Chen, Po-Cheng Wang and Chia-Jen Hsu. They accompany me all the time. Speical thanks to Pei-Fang Lee for her encouragement.

