

## Acknowledgements

For the achievement of my thesis, I would like to express my gratitude to the following people: I would like to acknowledge Prince of Songkla University for partially funding this study and Thailand Department of Land Development for providing the land-use data. I would like to thank Mrs. Narttaya Jungjaruntham for sharing her data giving suggestions for Remote Sensing data from the GIS center, Prince of Songkla University. I would like to thank Dr. Noodchanart Kongchouy for advising me to study and also directing me in the statistical analysis. I would like to thank Miss Cornelia Appianing for helping me in doing this research. I would like to thank Asst. Prof. Thakerng Wongsirichot for suggestions. I am also very grateful to our “family” PSU in Pattani especially Asst. Prof. Chamnein Choonpradub, Asst. Prof. Apiradee Lim, Asst. Prof. Phatrawan Thongkanchum and all Ph.D. students for sharing knowledge, suggestions and working together.

Most of all, I want to express my sincere gratitude to my advisor, Prof. Don McNeil for his inspiration and also guiding me to do the best research whereas the as well as his knowledge outside class gave me extraordinary experiences in my life.

My appreciation to Aj.Lyn McNeil who took care of me when I did the research in Sydney. I would like to thank Dr. Kannika Meshram and Dr. Kehui Luo who took care and gave me suggestions when doing the research at the Department of Statistics, Macquarie University, Sydney. Thank you all for your corporation in providing me a good opportunity to do a good research. Finally, I would like to thank my family for supporting and encouraging me to pursue Ph.D. degree.

Orawit Thinnukool