

## Acknowledgement

I am very grateful to Dr. Weerakorn Ongsakul, my advisor, for his encouragement, inspiration, fruitful discussion, and support in this research. I am also grateful to my committee members, Dr. Suwan Runggeratigul and Dr. Prinya Tantaswadi, for their valuable comments.

Special thanks are given to all senior students and friends, Mr. Pongsit Srihirin, Mr. Jerasorn Santisirisomboon, Mr. Yod Sukamongkol, Mr. Thanyapat Sakunkonchak, Mr. Taweesak Samanchuen, Mr. Adisorn Leelasuntitham, Mr. Seksan Laitrakun, Ms. Arunee Hongsuriya and Mr. Jarurote Tippayachai, for their kind advice and friendship.

Finally, I would like to thank the Electricity Generating Authority of Thailand (EGAT) for providing the test data.