

ACKNOWLEDGMENTS

First of all the author want to recognize Asst. Prof. Dr. Napat Harnpornchai who has been a mentor and advisor to author for a number of years for his constant support, trust, and advice which in many instances far beyond his advisory duties. The author still in debt for his introducing author to the fascinating world of neural networks and structural dynamic.

Specifically, the author would like to acknowledge Asst. Prof. Dr. Nakhorn Poovarodom, the author committee, for his invaluable coursework of structural dynamic, which is an important part in this research.

Appreciation is also owed to Prof. Dr. Ramakoti Sadananda for his neural network experience. Many of his suggestion and comment are very useful to improve the author thesis.

The author would like to thank his junior student, a former undergraduate student (academic year 2000 and 2001 batches) of Civil Engineering Program, Sirindhorn International Institute of Technology, Thammasat University for their work in senior project, the author could not finished his thesis with out their help.

Sincere thanks are due to all of his friends for their support and their help during his study.

Profound thanks are also given to the secretary of Civil Engineering Program. Ms. Cholthicha Pradidkwan for her enduring patience, kind services, cooperation and support throughout this study.

The author could not have been able to complete this project without the support of his parents, who provided him with great amounts of encouragement and love. They were truly gracious to instill in me the importance of a persistent work ethic.

Finally, the author has profound gratefulness towards all those who directly and indirectly helped and encouraged him all through the thesis study.