# ACKNOWLEDGEMENTS

I would like to express my grateful admiration to the hearted supports of JICA – Japan, represented by AUN-Seed/Net scholarship program in training for Asian countries' human resources. The program sponsors not only for scientific development but also for deep humanity. Experiences in the international environment have helped us understand the culture of the different ethnic groups in the world, especially in the Asian countries and Japan. With all the knowledge gained in the past years, I believe that I am able to promote the program's noble in my future work.

Ho Chi Minh University of Technology (HCMUT), Chulalongkorn University, Hokkaido University, and the Lectures have provided the most favourable conditions and equipments to help me complete the PhD research. I greatly appreciate all their kind supports. Furthermore, I would like to thank Assoc. Prof. Phan Dinh Tuan and Assoc. Prof. Le Van Nam, Vice Rectors of HCMUT, Assoc. Prof. Nguyen Thanh Nghi, Deputy Minister of Construction Viet Nam, who have supported and encouraged me to pursue my PhD study. I also would like to express my gratitude to Mr. Nakakuma, Dr.Nipon, Mr. Wanna and Dr. Yamazoe, N who have given me suggestions and data to complete my research.

My profound thanks go to The Thesis Committee for their important comments that have been helping me improve my thesis with a good progress as well as figure out the future research directions. I am sincerely grateful to **Professor Hiroyuki Tanaka**, my co-advisor, for his enthusiasm, but strict attitude in working which helped me experience the professional research environment that I have ever been. In addition, several trips together with him give me good impressions of Japanese cuisine and people here as well as strong spirit to conduct my research in Hokkaido University. I am deeply indebted to my advisor, Associate Professor **Wanchai Teparaksa** from Chulalongkorn University, whose helps, stimulating suggestions and encouragement have instructed me in doing PhD research. I have learned a lot from him, an exemplary teacher in class with numerous experiences in the industry, which has motivated me to overcome some difficult periods in research.

Additionally, I would specially like to send my acknowledgement to my family, my friends, and my co-workers, who always have been supported, taken care and given me the possibility to perform my thesis. Especially, I give my honest thanks to my wife and my little daughter Uyen Nhi whose patient love enabled me to complete the doctoral study.