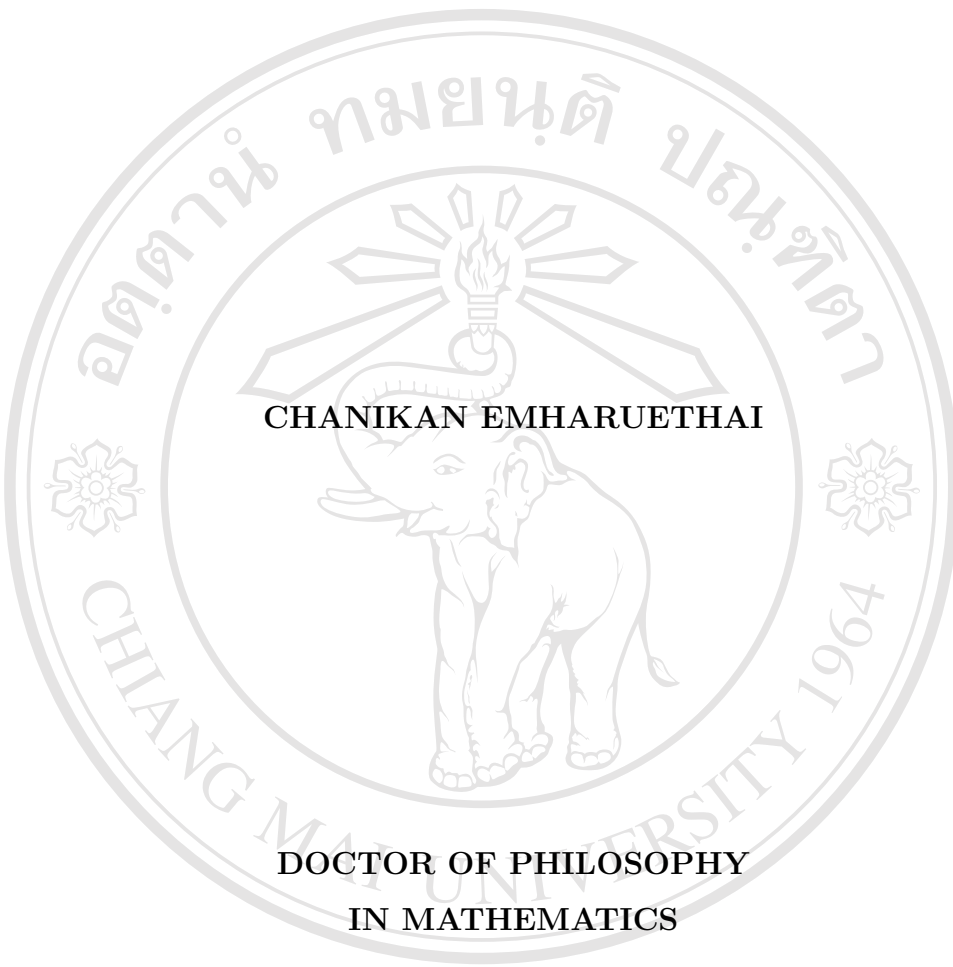


H_∞ CONTROL PROBLEM FOR CERTAIN DYNAMICAL
SYSTEMS WITH TIME-VARYING DELAY

The seal of Chiang Mai University is a circular emblem. It features a central figure of an elephant standing and facing left. Above the elephant's head is a five-pointed star with a flame-like center. The entire emblem is enclosed within a circular border. The Thai text "มหาวิทยาลัยเชียงใหม่" (Mahavithayalai Chiang Mai) is written along the top arc, and "CHANG MAI UNIVERSITY 1964" is written along the bottom arc. Two decorative floral motifs are positioned on the left and right sides of the seal.

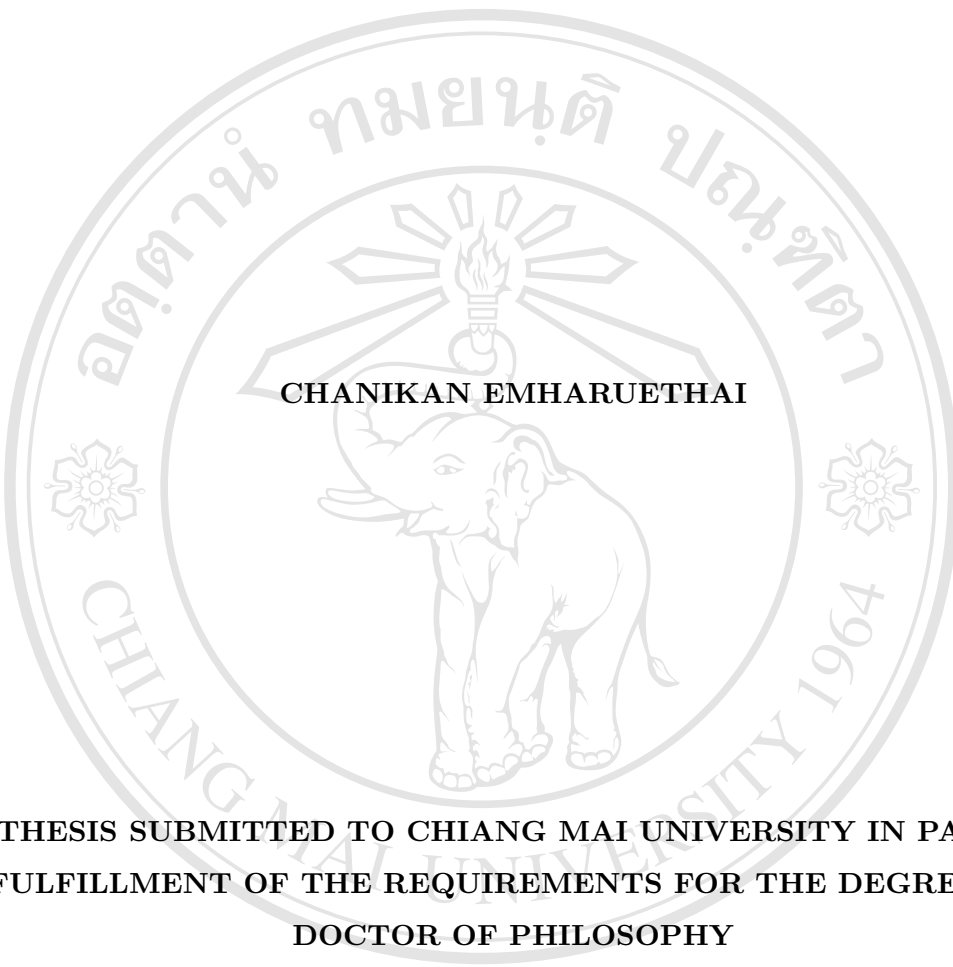
CHANIKAN EMHARUETHAI

DOCTOR OF PHILOSOPHY
IN MATHEMATICS

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GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
DECEMBER 2014

H_∞ CONTROL PROBLEM FOR CERTAIN DYNAMICAL SYSTEMS
WITH TIME-VARYING DELAY

The seal of Chiang Mai University is a large, faint circular emblem in the background. It features a central elephant facing left, with a torch above its head. The text "มหาวิทยาลัยเชียงใหม่" (Mahavithayalai Chiang Mai) is written in Thai script along the top arc, and "CHIANG MAI UNIVERSITY 1964" is written in English along the bottom arc. Two decorative floral motifs are positioned on the left and right sides of the seal.

CHANIKAN EMHARUETHAI

A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN MATHEMATICS

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GRADUATE SCHOOL, CHIANG MAI UNIVERSITY
DECEMBER 2014

H_∞ CONTROL PROBLEM FOR CERTAIN DYNAMICAL SYSTEMS
WITH TIME-VARYING DELAY

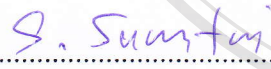
CHANIKAN EMHARUETHAI

THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN MATHEMATICS

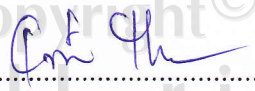
Examination Committee:


..... Chairman
(Lect. Dr. Thongchai Botmart)

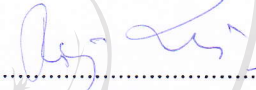

..... Member
(Assoc. Prof. Dr. Piyapong Niamsup)

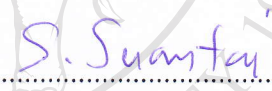

..... Member
(Prof. Dr. Suthep Suantai)

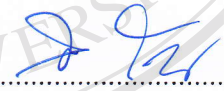

..... Member
(Asst. Prof. Dr. Thaned Rojsiraphisal)


..... Member
(Asst. Prof. Dr. Kanit Mukdasai)

Advisory Committee:


..... Advisor
(Assoc. Prof. Dr. Piyapong Niamsup)


..... Co-advisor
(Prof. Dr. Suthep Suantai)


..... Co-advisor
(Asst. Prof. Dr. Thaned Rojsiraphisal)

15 December 2014

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Chanikan Emharuethai

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