

**APPROXIMATE SOLUTION OF HIGH ORDER LINEAR
VOLTERRA-FREDHOLM INTEGRO-DIFFERENTIAL
EQUATIONS IN TERMS OF
TAYLOR POLYNOMIALS**

JAKGRIT SOMPONG

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF SCIENCE
IN APPLIED MATHEMATICS**

**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
SEPTEMBER 2002**

**APPROXIMATE SOLUTION OF HIGH ORDER LINEAR
VOLTERRA-FREDHOLM INTEGRO-DIFFERENTIAL
EQUATIONS IN TERMS OF
TAYLOR POLYNOMIALS**

JAKGRIT SOMPONG

**THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF SCIENCE
IN APPLIED MATHEMATICS**

EXAMINING COMMITTEE

.....*T. Chankong*.....**CHAIRMAN**
Assoc. Prof. Totsaporn Chankong

.....*S. Wasuwanich*.....**MEMBER**
Assoc. Prof. Sudhira Wasuwanich

.....*Suttiruk Jiarpinitnun*.....**MEMBER**
Asst. Prof. Suttiruk Jiarpinitnun

19 SEPTEMBER 2002

© Copyright by the Graduate School, Chiang Mai University

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to Assoc. Prof. Totsaporn Chankong, my advisor, for her instruction and constant encouragement of my investigation, which enabled me to carry out my study successfully.

I would like to thank the following individuals for their valuable comments and suggestions, Assoc. Prof. Sudhira Wasuwanich and Asst. Prof. Suttiruk Jiarpinitnun.

I also thank to all teachers for their previous valuable lectures during my study at the department of mathematics of Chiang Mai University.

I wish to thank all of my classmates and friends for their useful help and warm friendship, which will never be forgotten.

Finally, I gratefully appreciate my beloved family for their love, encouragement, benevolent and sacrifices.

Jakgrit Sompong