### MEASUREMENT OF TRUNK ACCELERATION IN ELDERLY WOMEN WITH AND WITHOUT BALANCE IMPAIRMENT **DURING WALKING OVER OBSTACLE**

ARUNEE PROMSRI

### MASTER OF SCIENCE

IN MOVEMENT AND EXERCISE SCIENCES

THE GRADUATE SCHOOL **CHIANG MAI UNIVERSITY AUGUST 2009** 

### MEASUREMENT OF TRUNK ACCELERATION IN ELDERLY WOMEN WITH AND WITHOUT BALANCE IMPAIRMENT DURING WALKING OVER OBSTACLE

ARUNEE PROMSRI

## A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE

IN MOVEMENT AND EXERCISE SCIENCES

Copyright by Chiang Mai University

All rights reserved

THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
AUGUST 2009

### MEASUREMENT OF TRUNK ACCELERATION IN ELDERLY WOMEN WITH AND WITHOUT BALANCE IMPAIRMENT DURING WALKING OVER OBSTACLE

### ARUNEE PROMSRI

# THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN MOVEMENT AND EXERCISE SCIENCES

**EXAMINING COMMITTEE** 

	Rumpa Boon sull	CHAIRPERSON
	Asst. Prof. Dr. Rumpa Boonsi	nsukh
วิมสิทธิ์	S. Chammylood	MEMBER
	Asst. Prof. Dr. Samatchai Chami	nongkich
Copyright <sup>©</sup>	Monter Charinda	

Lect. Dr. Nuanlaor Thawinchai

24 August 2009

© Copyright by Chiang Mai University

### ACKNOWLEDGMENT

I would like to express my sincere appreciation and grateful thank to my thesis advisor, Asst. Prof. Dr. Samatchai Chamnongkich for his valuable guidance and encourage me throughout this thesis. I would like to thank my thesis advisory committee, Asst. Dr. Rumpa Boonsinsukh and Dr. Nuanlaor Thawinchai for their advice and support throughout this research project.

I would like to express a great thank to all participants to participate my research and I would like to thank the Piyamal elderly service center and the social welfare development for the older person, Tammapakorn, Chiang Mai for facilitating the participants and providing location.

Especially, I would like to give the special appreciation to my father who stood by my side throughout my graduate career and has helped me strive to do my best and maintain a positive attitude throughout my study period.

ลิปสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright by Chiang Mai University
All rights reserved