

**DYNAMIC SIMULATION AND MEASUREMENT  
OF ELECTRON BEAM PROPERTIES FROM  
PHOTOCATHODE RF GUN OF FREE-  
ELECTRON LASER LABORATORY  
AT KYOTO UNIVERSITY**

**KANTAPHON DAMMINSEK**

**MASTER OF SCIENCE  
IN PHYSICS**

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**GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY  
APRIL 2016**

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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 encircled by a border containing the university's name in Thai script at the top and 'CHIANG MAI UNIVERSITY 1964' in English at the bottom.

**KANTAPHON DAMMINSEK**

**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN PHYSICS

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26 April 2016

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