



**UNIVERSITY OF WATERLOO  
FACULTY OF ENGINEERING**

## **DOCTORAL THESIS ACCEPTANCE**

**Date:** December 21, 2015

**SURNAME:** Liu

**GIVEN NAME:** Guocheng

**Department:** Electrical & Computer Engineering

**ID:** 20401465

**Thesis Title:**

**Semiconductor Nanowire Based Piezoelectric Energy Harvesters: Modeling,  
Fabrication, and Characterization**

***This is to certify that the above mentioned thesis has been defended and found  
acceptable with all required changes and revisions made.***

A handwritten signature in black ink, appearing to be a stylized name.

Associate Dean, Graduate Studies  
Faculty of Engineering