

**M.Sc. Defense**  
**Dale Schick-Martin**  
**DATE: Tuesday August 17<sup>th</sup>, 2010**  
**TIME: 10:00a.m.**  
**PLACE: Science Complex 1511**  
**University of Guelph**

**THESIS TITLE:**

Implementation and first results of the beam scanning and data acquisition system for the Guelph nuclear microprobe

**ABSTRACT:**

This thesis outlines the development of the Guelph high-resolution proton microprobe and particularly the contribution of Dale Schick-Martin. This thesis broadly discusses the general operating principles behind the microprobe, the components which comprise the microprobe and how they interact. In greater detail, the design and construction of a beam blanking system, the alignment procedure and the collection and analysis of preliminary standardization data are discussed. Applications for the proton microprobe as well as potential future projects are also discussed.

**EXAMINING COMMITTEE:**

**Chair: Dr. Robert Wickham**

**Advisor: Dr. Diane DeKerckhove**

**Advisory Committee Member(s): Dr. DeTong Jiang, Dr. Joanne O'Meara**