



**COLLEGE of ENGINEERING
AND PHYSICAL SCIENCES**

SCHOOL OF COMPUTER SCIENCE

PhD Qualifying Examination

Thursday July 25, 2019 at 10:00AM in Reynolds, Room 1101

**Investigating Student Self-Efficacy and Engagement using
Automated Feedback**

James Fraser

Chair: Dr. Gary Grewal

Advisor: Dr. Judi McCuaig

Co-Advisor: Dr. Daniel Gillis

Non-Advisory Committee: Dr. Denis Nikitenko

Non-Advisory Committee: Dr. Gary Umphrey [Math & Stats]

ABSTRACT:

Increased classroom sizes have diminished educators' ability to provide students with personalized attention and educational support. Online courses can exacerbate these challenges with larger student numbers, a reduction in course-structure, and the lack of timely personalized feedback. Automated assessment systems enable students to practice and receive timely feedback without grading penalties, which could reinforce students' theoretical knowledge, confidence, and engagement while minimizing educator marking overload.

The goal of this research is to explore the relationships between students' characteristics and behaviors within an online automated assessment system. Our research has developed an educational platform for an online automated assessment system called IFS. The investigation will examine the categorization for IFS users and will identify significant trends relating to student's course performance, experience, and learning patterns.