

# Acadia University

## Master's Research Opportunity (MSc – Thesis) Biomedical AI, Signal Processing & Physiological Modelling for GI Health

### Project Description

A funded MSc research position is available at Acadia University within an NSERC-supported international research collaboration focused on AI-enabled gastrointestinal (GI) diagnostics. The project emphasizes biomedical signal processing, machine learning, and physiological modelling of GI motility using clinical datasets and close collaboration with GI specialists.

### Research Focus

- Biomedical signal processing of GI motility data
- Machine learning for physiological time-series analysis
- Computational and physiological modelling of GI peristalsis
- Translating clinical requirements into data-driven system models

### Preferred Background

- Biomedical Engineering or Medical Physics
- Electrical / Computer Engineering (biomedical focus)
- Computer Science (AI/ML or data science focus)
- Strong programming skills in Python or MATLAB

### Funding & Training

- Term-based stipend provided for the duration of the MSc program
- Interdisciplinary supervision and structured mentoring
- Opportunities for peer-reviewed publications and international collaboration

### Supervisor & Research Environment

**Supervisor:** Dr. Esteve J. Hassan  
Associate Professor, Computer Science & Engineering  
Director, Acadia AIoT Research Hub (AARH)

The student will be embedded within the Acadia AIoT Research Hub, working at the intersection of biomedical engineering, AI, and digital health technologies.

### Application Process

Please email the following to [esteve.hassan@acadiau.ca](mailto:esteve.hassan@acadiau.ca):

- CV
- Academic transcript
- Short statement of research interests