

Eric Godden

Queen's University
Dept. of Electrical & Computer Engineering
99 University Avenue
Kingston, ON M4G1H9

T: 647-355-3010

Email: 18eg16@queensu.ca
<https://www.linkedin.com/in/ericgodden/>

RESEARCH INTERESTS

Human-robot interaction and immersive virtual experiences. Topics of interest include safe robotic control strategies for the application of physical human-robot interaction, haptic proxies for delivering realistic haptic stimuli into virtual reality applications, and virtual reality applications that facilitate useful and pedagogic experiences.

EDUCATION

Queen's University Kingston, ON
PhD Candidate Electrical & Computer Engineering Expected: August 2027
Advisor: Matthew Pan, PhD

Queen's University Kingston, ON
BASc Mechanical and Materials Engineering April 2023

RESEARCH EXPERIENCE

Ingenuity Labs, Queen's University Kingston, ON
Research Student May 2022-April 2023

- Lead the haptic feedback component of the project while working collaboratively with a graduate student at Queen's University and practicing surgeons at Sunnybrook Health Sciences Centre.
- Facilitated the development and evaluation of multiple haptic feedback systems to decrease the occupational risk for practicing fluoroscopic surgeons.
- Performed literature review of the haptics field and applied findings to develop a novel system that minimizes the cognitive load experience by the user by applying a more natural haptic sensation.

Condair LTD. & Queen's University Kingston, ON
Research & Development Student September 2022-April 2023

- Collaborated with 4 other final-year undergraduate students and our industry partner, Condair LTD., to design and develop an autonomous mobile humidification system for a capstone design project.
- Performed iterative design process, including rapid prototyping and testing, while working with industry partner to ensure design requirements were met.
- Analyzed HVAC market and developed cost breakdown for client to lower time-to-market and ensure a consumer-ready product.

PCIGITI Lab, The Hospital for Sick Children Toronto, ON
Research Student May-August 2021

- Developed a novel three-dimensional surveying system for the characterization of custom magnets to be used within surgical tools.
- Maintained and upgraded a MR-compatible surgical robot for prostate brachytherapy to allow for full range and loading requirements.
- Created design prototypes using machine and 3D-printing facilities to test feasibility within MR sensitive environments.

TEACHING EXPERIENCE

Teaching assistant for “Electrical and Computer Engineering Design and Practice”, Queen’s University

- Grading, lab sessions, student project management

Fall 2023/2024

Teaching assistant for “Principles of Design and Development”, Queen’s University

- Grading, lab sessions, office hours

Winter 2024

EXTRACURRICULAR ACTIVITIES

Varsity Men’s Rugby, Queen’s University

Kingston, ON

Player/Captain

September 2019-April 2025

- Managed on- and off-field team performance while acting as team captain (2023-present).
- Interacted with the university and Kingston communities through fundraising and charity events.
- Developed strong time-management skills and work ethic through the balance of a full academic load with a heavy athletic schedule.

ACADEMIC HONORS

- NSERC Postgraduate Scholarships-Doctoral (September 2025 – present)
- Connected Minds PhD Scholarship (May 2025 – present)
- The F.E. Smith Award in Communications Engineering Theory (September 2024 – August 2025)
- NSERC Alexander G. Bell Canada Graduate Scholar (September 2023 – August 2024)
- NSERC Undergraduate Student Research Award (May 2022 - August 2022)
- Dean’s Honour List (September 2019 – April 2023)
- OUA Academic All-Star (September 2019 – April 2023)
- Principal’s Scholarship (September 2019)

PROFESSIONAL AFFILIATIONS AND REVIEW ACTIVITIES

- IEEE Student Member, IEEE Young Professionals.
- Delegate reviewer for IEEE International Conference on Robotics and Automation 2025.
- Delegate reviewer for IEEE Transactions on Human-Robot Interaction (November 2025).

PUBLICATIONS

Journal papers

1. Eric Godden, William Steedman, and Matthew Pan, “Robotic Characterization of Markerless Hand-Tracking on Meta Quest Pro and Quest 3 Virtual Reality Headsets”, IEEE Transactions on Visualization and Computer Graphics, May 2025.

Conference poster papers

1. Eric Godden and Matthew Pan, “Towards Robotic Haptic Proxies in Virtual Reality”, IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Kingston Canada, August 6-9 2024.

PRESENTATIONS

- IEEE VR 2025, *Robotic Characterization of Markerless Hand-Tracking on Meta Quest Pro and Quest 3 Virtual Reality Headsets*, Saint-Malo France, March 8-12 2025.
- MECH 853 Paper Presentation, *Propping Up Virtual Reality with Haptic Proxies*, Kingston, ON, March 15, 2024.
- ELEC 845 Course Project Presentation, *Model Predictive Control For Trajectory Tracking In Non-Holonomic Vehicles*, Kingston, ON, November 29, 2023.
- CISC 813 Paper Presentation, *Deadline-Aware Multi-Agent Tour Planning*, Kingston, ON, November 21, 2023.