

TREVOR ABLETT

University of Toronto Institute for Aerospace Studies ◊ 4925 Dufferin St. ◊ Toronto, ON M3H 5T6
(647) · 997 · 8738 ◊ trevor.ablett@robotics.utias.utoronto.ca ◊ trevorablett.github.io

EDUCATION

Ph.D (in progress), University of Toronto, Toronto, Ontario 2017 - Present
Institute for Aerospace Studies, Space and Terrestrial Autonomous Robotics Systems Lab
Supervisor: Dr. Jonathan Kelly.

Overall GPA: 4.0/4.0

M.A.Sc. (Transferred to PhD), University of Toronto, Toronto, Ontario 2016 - 2017
Institute for Aerospace Studies, Space and Terrestrial Autonomous Robotics Systems Lab
Supervisor: Dr. Jonathan Kelly.

Overall GPA: 4.0/4.0

B.Eng., Mechatronics, McMaster University, Hamilton, Ontario 2011 - 2015
Faculty of Engineering, Dept. of Computing and Science

Summa cum laude, Overall GPA: 3.9/4.0

B.A., Psychology, McMaster University, Hamilton, Ontario 2009 - 2015
Faculty of Social Sciences, Dept. of Psychology, Neuroscience and Behaviour

Summa cum laude, Overall GPA: 3.9/4.0

AWARDS

Ontario Graduate Scholarship (OGS) September 2018 - August 2019
University of Toronto *Toronto, ON*

· \$5000 per semester, \$15000 total.

Ontario Graduate Scholarship (OGS) September 2017 - April 2018
University of Toronto *Toronto, ON*

· \$5000 per semester, \$10000 total.

University (Senate) Scholarship September 2013 - August 2014
McMaster University *Hamilton, ON*

· \$800

McMaster Honour Award, Level 3 September 2009 - August 2011
McMaster University *Hamilton, ON*

· \$2000 per year, \$4000 total.

PUBLICATIONS

1. O. Limoyo, **T. L. Ablett**, F. Marić, L. Volpatti, and J. Kelly, "Self-Calibration of Mobile Manipulator Kinematic and Sensor Extrinsic Parameters Through Contact-Based Interaction," in *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA'18)*, Brisbane, Queensland, Australia, May 2018

PATENTS

1. J. Kelly, O. Limoyo, and **T. Ablett**, “Method of Calibrating a Mobile Manipulator,” no. Ser. No. 62/637,282, 2018
2. R. Peters, C. V. Tran, **T. L. Ablett**, L. J. Lepore, and M. J. Sergenese, “Vision-based System for Navigating a Robot Through an Indoor Space,” no. WO2017066870A1, 2017

TEACHING EXPERIENCE

University of Toronto

January 2018 - April 2018

Teaching Assistant

Toronto, ON

Course Title: AER521 - Mobile Robotics

- Course with both undergraduate and graduate level students
- Developed, administered, and graded MATLAB/robotics laboratories

University of Toronto

January 2018 - April 2018

Teaching Assistant

Toronto, ON

Course Title: APS106 - Fundamentals of Computer Programming

- First year programming course using Python
- Administered weekly programming laboratories to students and aided in ongoing development of course

University of Toronto

September 2016 - December 2016

Teaching Assistant

Toronto, ON

Course Title: ROB501 - Computer Vision for Robotics

- Course with both undergraduate and graduate level students
- Administered MATLAB and computer vision tutorials
- Aided in development and marking of MATLAB based computer vision assignments

McMaster University

January 2015 - April 2015

Teaching Assistant

Hamilton, ON

Course Title: Software Engineering 2DA4 - Digital Systems and Interfacing

- Administered labs using Verilog HDL and Altera based FPGAs

McMaster University

September 2014 - December 2014

Teaching Assistant

Hamilton, ON

Course Title: Software Engineering 3I03 - Communications Skills

- Created presentation materials for tutorials on giving software engineering presentations
- Ran weekly mandatory tutorials for 30 students

WORK EXPERIENCE

Callisto Mechanical

April 2015 - June 2016

Controls Engineer in Training

Niagara-on-the-Lake, ON

- Management and execution of research based projects in vision, robotics, and controls
- Named on pending patent for a vision-based Automated Guided Vehicle
- Development of software based controls, HMIs, and SCADA for OEM machines to be used in process automation
- Worked with various software and hardware tools, including Java and C++ based embedded systems, PLCs, and HMIs
- Attended numerous sites for commissioning of various machines and software systems

Self Employed – University Level Private Tutor

September 2013 - April 2015

*Introductory Level Programming**Hamilton, ON*

- Charged a small fee for private tutoring sessions in an introductory level programming class where assignments were completed using Python.

Callisto Integration

May 2014 - August 2014

*Controls Engineer in Training**Hamilton, ON*

- Lead designer of HMI for a Solar Farm
- PLC programming and debugging of existing systems

Venture Engineering and Science Camp

May 2013 - April 2014

*Computer/Technology/Robotics Instructor**Hamilton, ON*

- Designed various electronics, computer, and robotics projects for elementary school aged children

VOLUNTEER EXPERIENCE

Bay Area Science and Engineering Fair (BASEF)

January 2017 - April 2017

*Team Mentor**Burlington, ON*

- Provided weekly assistance and advice to an elementary school science fair team

Industry Education Council of Hamilton

January 2015 - June 2015

*Code Club - Instructor**Hamilton, ON*

- Ran a lunchtime club for elementary school students to learn programming through simple projects

TECHNICAL STRENGTHS

Programming Languages

Python, C++, C, Java, MATLAB, LaTeX, Verilog, Ladder Logic

Frameworks/Libraries

numpy, scipy, pytorch, ROS, OpenCV, scikit-learn

Hardware

Arduino, Raspberry Pi, PIC microcontroller, various actuators and sensors

Tools

Linux (CLI), Windows, MS Office, Git, SVN