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Mr. Connor Robert Humphries

Correspondence language: English

Sex: Male

Date of Birth: 10/27

Canadian Residency Status: Canadian Citizen

Country of Citizenship: Canada

Contact Information

The primary information is denoted by (*)

Address

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Mr. Connor Humphries

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes

Degrees

2026/1 (2027/12)	Master's Thesis, Masters of Science, Earth and Space Science, York University Degree Status: In Progress Supervisors: Lee, Regina, 2026/1 - 2027/12
2021/9 - 2025/4	Bachelor's Honours, Bachelor of Engineering, Space Engineering, York University Degree Status: Completed
2019/1 - 2019/12	Bachelor's, Bachelor of Engineering Technology, Environmental Studies, Cape Breton University Degree Status: Completed
2015/9 - 2018/4	Diploma, Advanced Diploma, Sustainable Energy and Building Technologies, Humber College Degree Status: Completed
2013/9 - 2015/4	Diploma, Diploma, Landscape Technician, Humber College Degree Status: Completed

Credentials

2025/4	Certificate of Proficiency in Amateur Radio: Basic with Honours Advanced, Innovation, Science and Economic Development Canada (ISED) Research Disciplines: Communication
2025/3	STK Certified Level 2, Ansys Research Disciplines: Aeronautical Engineering
2023/11 - 2025/11	Certified Spinning Instructor, Mad Dogg Athletics Research Disciplines: Health Administration
2023/7 - 2025/7	Certified Personal Trainer Level 2, World Instructor Training Schools Research Disciplines: Health Administration

Recognitions

2026/9 - 2027/4	Dr. Anthony Szeto Graduate Scholarship in Earth and Space Science - 10,000 (Canadian dollar) York University Distinction Awarded to a full-time graduate student in Earth and Space Science who demonstrates strong academic achievement, research performance, and communication skills through teaching, presentations, or research dissemination. The scholarship supports graduate research in Earth and Space Science and is funded by the Lorraine Ng Charitable Foundation in recognition of Dr. Anthony Szeto's career at York University.
2026/9 - 2027/8	Queen Elizabeth II Graduate Scholarship in Science and Technology - 15,000 (Canadian dollar) York University Distinction Awarded the Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST), a merit-based provincial scholarship supporting excellence in graduate studies in science and technology.
2026/4	NSERC Canada Graduate Research Scholarship – Master's (CGRS-M) (Canadian dollar) Natural Sciences and Engineering Research Council of Canada (NSERC) Distinction Listed as an Alternate in the 2026 NSERC CGRS-M national competition.
2026/3	AI for Earth - Scholarship Recipient (Canadian dollar) Alberta Machine Intelligence Institute Distinction The AI for Earth Scholarship Program equips post-secondary students in Environmental Sciences and Meteorology with the AI literacy and skills needed to tackle today's challenges and tomorrow's opportunities. Supported by Environment and Climate Change Canada (ECCC), the scholarship looks to train the next generation of professionals who will use AI to solve the world's most complex environmental and meteorological challenges.
2026/1 - 2026/12	York Graduate Scholarship - 6,000 (Canadian dollar) York University Distinction An entrance scholarship provided within the first year of graduate studies with the amount varying pending on the level of prior academic success.
2024/10 - 2025/4	Lassonde Undergraduate Research Award (LURA) - 4,300 (Canadian dollar) York University Distinction A merit-based award from the Lassonde School of Engineering at York University supporting undergraduate students who demonstrate academic excellence and strong research potential, similar to the criteria of the NSERC USRA. The award provides funding and hands-on experience for faculty-supervised research projects. This award supported my work as an Undergraduate Researcher in the Nanosatellite Research Laboratory under Professor Regina Lee, for the continued enhancement and modifications of the Space-Based Optical Imaging Simulator (SBOIS) for use by Magellan Aerospace.

- 2024/5 - 2024/8 Undergraduate Student Research Award (USRA) - 6,000 (Canadian dollar)
Natural Sciences and Engineering Research Council of Canada (NSERC)
Distinction
A national merit-based award from the Natural Sciences and Engineering Research Council of Canada (NSERC) recognizing undergraduate students with academic excellence and research potential. This award supported my work as an Undergraduate Researcher in the Nanosatellite Research Laboratory under Professor Regina Lee, where I enhanced and modified the Space-Based Optical Imaging Simulator (SBOIS) for use by Magellan Aerospace.
- 2023/5 - 2024/4 Lassonde Undergraduate Research Award (LURA) - 14,300 (Canadian dollar)
York University
Distinction
A merit-based award from the Lassonde School of Engineering at York University supporting undergraduate students who demonstrate academic excellence and strong research potential, similar to the criteria of the NSERC USRA. The award provides funding and hands-on experience for faculty-supervised research projects. This award supported my role as an Undergraduate Researcher in the Nanosatellite Research Laboratory under Professor Regina Lee, where I contributed to the development and enhancement of the Space-Based Optical Imaging Simulator (SBOIS) in collaboration with industry partners. It provided funding for full-time summer-term work and part-time (10hr/week) Fall and Winter research positions.
- 2022/9 - 2025/4 Lassonde Scholarship - 45,000 (Canadian dollar)
York University
Distinction
Merit based scholarship awarded by the Lassonde School of Engineering, York University for those showing the spirit of a "Renaissance Engineer", including academic excellence, leadership, creativity, and innovation in engineering and science. Recipients are selected based on GPA (≥ 7.0), demonstrated leadership or entrepreneurial talent, and engagement within the broader community. Cannot be held with other renewing scholarships such as the York University Continuing Student Scholarship. Awarded annually for \$15,000, with each renewal contingent on continued fulfillment of these criteria and a review of the recipient's contributions. Maximum of three renewals.
- 2021/10 - 2021/10 BEST Technology Impact Prize - 60 (Canadian dollar)
York University
Prize / Award
BEST Technology Impact Prize, awarded at the UNHack three-day design sprint competition at the Lassonde School of Engineering, for teams placing in the top three. UNHack challenges participants to develop novel solutions addressing UN Sustainable Development Goals and attracts over 1000 student participants.
- 2021/9 - 2023/4 York University Continuing Student Scholarship - 1,760 (Canadian dollar)
York University
Distinction
Annual award automatically provided to students with outstanding academic results within their academic sessions. The award varies based on course load and academic achievement.

User Profile

Fields of Application: Environment, Foundations and Knowledge Acquisition, Security, Transport

Areas of Research: Modelization and Simulation, Neuronal Systems, Optics and Photonics

Research Specialization Keywords: Space Situational Awareness, Space Engineering, Artificial Intelligence, Optical Imaging, Sensor Simulation, Machine Learning, Satellite Design, Space Debris Simulation, Resident Space Objects, Space Domain Awareness

Research Disciplines: Aeronautical Engineering

Employment

2026/1 - 2027/12	Teaching Assistant York University Part-time, Sessional Tenure Status: Non Tenure Track Conducted laboratory sessions for classes, assisted individuals in learning the materials, and graded class work.
2026/7 - 2026/10	Software Developer Satellite and Space Development, Magellan Aerospace Full-time Converting MATLAB simulation and image-processing software into C++, implementing new functionality, and profiling and optimizing runtime and memory performance. Supporting the continued development of optical space situational awareness algorithms and simulations for mission-related applications. Research Disciplines: Computer Engineering and Software Engineering, Astronomy and Astrophysics Fields of Application: Environment
2025/11 - 2025/12	Research Assistant Faculty of Science, Lassonde School of Engineering, York University Part-time Tenure Status: Non Tenure Track Conducting a comprehensive literature review on AI applications in Space Situational Awareness, evaluating state-of-the-art techniques to guide ongoing lab research and inform my upcoming Master's thesis. This work establishes a preliminary connection between York University and Korea's Astronomy and Space Science Institute (KASI), aligning with their research interests and supporting future collaboration.
2024/9 - 2025/4	Spin Class Group Instructor Tait McKenzie Centre, York University Part-time The role at the Tait McKenzie Centre at York University, Designed and independently delivered hour-long stationary indoor cycling classes for participants ranging from beginners to trained athletes. Maintained responsibility for monitoring form, safety, and performance, applying real-time adjustments. Iteratively revised class choreography and structure based on participant feedback and performance metrics. This role demonstrates skills in independent project design, process evaluation, and data-driven decision-making, directly applicable to iterative research workflows and collaborative lab environments. Every class is a new experiment with different variables based on participation.

2023/5 - 2025/4	Undergraduate Researcher Faculty of Science, Earth and Space Science and Engineering, York University Full-time Tenure Status: Non Tenure Track Conducted research under Professor Regina Lee at the Nanosatellite Research Laboratory on the Space-Based Optical Imaging Simulator (SBOIS). Developed simulation tools in Python and MATLAB for in-space optical modeling and integrated mission-specific adaptations in collaboration with Magellan Aerospace for the Redwing Microsatellite mission. Worked full-time May–August and part-time (10 hrs/week) during academic terms (September–April) under NSERC USRA and LURA funding.
2019/5 - 2022/12	Customer Service Representative, Stockroom Keeper, Cashier Home Hardware Full-time A role with which I interacted with customers in every position within a retail setting, and worked through every chain of the place outside the role of a manager.
2012/10 - 2016/5	Lane Attendant and Counter Staff Bowlerama Rexdale Part-time

Research Funding History

Awarded [n=1]

2026/1 - 2026/8 Principal Applicant	Space Situational Awareness Algorithm Design, Grant Funding Sources: 2026/1 - 2026/8 Mathematics of Information Technology and Complex Systems (MITACS) Globalink Research Award Total Funding - 12,000 (Canadian dollar) Portion of Funding Received - 0 Funding Competitive?: Yes Principal Investigator : Lee, Regina; Park, Jong Uk
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Staff Supervision

Event Administration

2023/10 - 2024/1	Administrator, Declaration Week: Space Day with CSA Flight Controller Julie Winterburn, Association, 2024/1 - 2024/1
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Event Participation

Guest Speaker, EngSoc Talks, Association, 2023/11 - 2023/11
Guest speakers on the benefits of conferences, why one should participate in their engineering society, and how to sign up.

Community and Volunteer Activities

- 2023/8 - 2024/4 Space Engineering Representative, Lassonde Engineering Society
Served as a liaison between the Space Engineering Program and faculty. Represent the program at academic, outreach, and industry-facing events. Communicate technical concepts to non-specialist audiences, and gather student feedback to report to faculty. Contribute to the planning and execution of events to promote program visibility.
- 2024/2 - 2024/2 Booth Staff, York University
Ontario Science Center booth member representing the Nanosatellite Research Laboratory at York University. Providing information on the RSONAR project and hyping up the exploration of space for younger generations.
- 2023/10 - 2023/10 Presenter, York University
Performing outreach activities for students with a presentation on the Nanosatellite Research lab's project RSONAR and Space Situational Awareness.

International Collaboration Activities

- 2026/3 - 2026/5 Research Collaboration, Korea, South
Research collaboration with the Korea Astronomy and Space Science Institute (KASI), carrying out joint work on non-generative and generative artificial intelligence developments within the field of Space Situational Awareness paired with York University. A MITACS Globalink award of up to \$12,000 has been preliminarily approved; release and final amount pending.

Committee Memberships

- 2023/5 - 2024/4 Committee Member, Lassonde Engineering Society, Lassonde Engineering Society
Elected representative within the Lassonde Engineering Society, the official student governing body for engineering programs at York University. Responsible for leading space-related initiatives, including conference coordination, event planning, academic communications, and funding allocations for student projects and clubs.

Other Memberships

- 2021/9 - 2022/4 Mechanical and Science Team Member, Robotics Society
Participated in the design and construction of competition rovers for events such as the Canadian and International Rover Challenges. Contributed to the development of a lightweight chassis and supported experiments simulating the detection of signs of life in controlled test environments.

Presentations

- (2026). Space Debris and Space Situational Awareness. A.Y Jackson Secondary School Guest Lecture, Toronto, Canada
Main Audience: General Public
Invited?: Yes, Competitive?: No
Description / Contribution Value: Two lectures to grade 9 students within the secondary school teaching them about the hazards of space debris within the rapidly developing space environment. It further included two activities for the students to get a hands on experience.

2. (2025). Biofidelic Head and Brain Design for Blunt Force Concussions. Capstone Day, Toronto, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: No
3. (2024). Exploring and Cleaning up Space Junk. Exploring by the Seat of Your Pants Educational Livestream Series, Canada
Main Audience: General Public
Invited?: Yes, Keynote?: No, Competitive?: No
4. (2024). Resident Space Objects (RSOs) Mapping. International GIS Day Graduate Colloquium, Toronto, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No, Competitive?: No

Publications

Conference Publications

1. Humphries, C; Driedger, M; Qashoa, R; Harrison, P; Lee, R. (2024). Interpolation to Extrapolation, Expanding the Space Based Optical Imaging Simulator for AdaptiveRSO Detection and Tracking Algorithms. Lassonde undergraduate Summer Research Conference 2024. Lassonde Undergraduate Research Conference, ,
Conference Date: 2024/8
Poster
First Listed Author
Published
Refereed?: No, Invited?: No

Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)
2. Humphries, C; Qashoa, R; Clark, R; Lee, R. (2023). Space-Based Optical Imaging Simulator: Object Insertion Tool. Lassonde undergraduate Summer Research Conference 2023. Lassonde Undergraduate Research Conference, ,
Conference Date: 2023/8
Poster
First Listed Author
Published
Refereed?: No, Invited?: No
Number of Contributors: 4

Funding Sources: Lassonde School of Engineering