

RYAN C. A. FOLEY

Curriculum Vitae

Department of Kinesiology

Ontario Tech University

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🌐 Website

🐙 Github

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Education

- 2020–present **PhD (Candidate), Neuromechanics & Ergonomics**, Faculty of Health Sciences, Ontario Tech University, Oshawa, Ontario, Canada.
Towards the development of ergonomics fatigue exposure thresholds during complex repetitive work
Advisor : Dr. Nicholas La Delfa
- 2012–2015 **MSc, Neurophysiology**, Faculty of Science, Wilfrid Laurier University, Waterloo, Ontario, Canada.
Estimates of persistent inward current in human motor neurons during postural sway
Advisor : Dr. Jayne Kalmar
- 2008–2012 **BSc, Kinesiology**, Faculty of Science, Wilfrid Laurier University, Waterloo, Ontario, Canada.
Undergraduate Thesis: Training-induced adaptation of interhemispheric inhibition
Graduated with honors
Advisor : Dr. Jayne Kalmar

Publications

Refereed Journal Articles (n=10)

- 2026 Slade, G. E., Watterworth, M. W. B., Wakeely, F., Foley, R. C. A., and La Delfa, N. J. Asymmetric manual arm strength evident only in right-handed individuals. *IIEE Transactions on Occupational Ergonomics and Human Factors*, volume 14, pages 132–143, 2026.
- 2026 Hawke, K. V., Foley, R. C. A., La Delfa, N. J., and Logan-Sprenger, H. M. Effects of menthol mouth rinsing on performance and surface emg activity during heat-stressed cycling. *Nutrients*, volume 18, 2026.
- 2025 Foley, R. C. A., Callaghan, D. H., Forman, G. N., Graham, J. D., Holmes, M. W. R., and La Delfa, N. J. A comprehensive scoping review and meta-analysis of upper limb strength asymmetry. *Scientific Reports*, volume 15, 2025.
- 2022 Abdel-Malek, D. M., Foley, R. C. A., Wakeely, F., Graham, J. D., and La Delfa, N. J. Exploring localized muscle fatigue responses at current upper-extremity ergonomics threshold limit values. *Human Factors*, volume 64, pages 385–400, 2022.
- 2021 DeBoon, B., Foley, R. C. A., Nokleby, S., La Delfa, N. J., and Rossa, C. Nine degree-of-freedom kinematic modeling of the upper-limb complex for constrained workspace evaluation. *Journal of Biomechanical Engineering*, volume 143, page 021009, 2021.
- 2021 Cregg, A. C., Foley, R. C. A., Livingston, L. A., and La Delfa, N. J. A biomechanical evaluation of different footrest heights during standing computer work. *Ergonomics*, volume 64, pages 342–353, 2021.

- 2021 Abdel-Malek, D. M., Foley, R. C. A., Wakeely, F., Graham, J. D., and La Delfa, N. J. Calibrating ratings of perceived fatigue relative to objective measures of localised muscle fatigue using a feedback-based familiarisation protocol. *Theoretical Issues in Ergonomics Science*, volume 22, pages 511–527, 2021.
- 2019 Foley, R. C. A. and Kalmar, J. M. Estimates of persistent inward current in human motor neurons during postural sway. *Journal of Neurophysiology*, volume 122, pages 2095–2110, 2019.
- 2019 Dogra, S., Wolf, M., Jeffrey, M. P., Foley, R. C. A., Logan-Sprenger, H., Jones-Taggart, H., and Green-Johnson, J. M. Disrupting prolonged sitting reduces il-8 and lower leg swell in active young adults. *BMC Sports Science, Medicine and Rehabilitation*, volume 11, pages 1–7, 2019.
- 2017 Foley, R. C. A., Bulbrook, B. D., Button, D. C., and Holmes, M. W. R. Effects of a band loop on lower extremity muscle activity and kinematics during the barbell squat. *International journal of sports physical therapy*, volume 12, page 550, 2017.

Manuscripts in preparation for publication (n=4)

- Foley, R. C. A., Potvin, J. R., Fuglevand, A. J., and La Delfa, N. J. Recovery rates of motor units after fatiguing contractions: a simulation study and dataset.
- Foley, R. C. A., Porto, R. C., and La Delfa, N. J. Predicting muscle fatigue during automotive assembly: A case study on the effects of model mix and variable build options.
- Foley, R. C. A., MacMillan, V., Tanaka, T. D., and Nugent, K. The application of force plate technology for the forensic examination of stamping devices.
- Foley, R. C. A. and La Delfa, N. J. Examination of work breaks and job rotation using a motor-unit based fatigue model.

Technical Reports (n=1)

- 2018 Foley, R. C. A., Abdel-Malek, D. M., Russell, M. S., and La Delfa, N. J. Biomechanical assessment of shoulder exposures and fatigue during simulated wingsuit flight. 9 pages. *Submitted to UOIT Automotive Centre of Excellence & Dr. Angelo Grubescic. August, 2018.*

Refereed Conference Proceedings (n=16)

- 2026 Foley, R. C. A., Potvin, J. R., Fuglevand, A. J., and La Delfa, N. J. Optimising recovery parameters in a motor unit-based model of muscle fatigue. XXVI Congress of the International Society of Electrophysiology & Kinesiology. Jyväskylä, Finland. June, 2026.
- 2025 Foley, R. C. A., Porto, R. C., and La Delfa, N. J. Predicting muscle fatigue during automotive assembly: A case study on the effects of model mix and variable build options. Human Factors and Ergonomics Society ASPIRE 2025 Annual General Meeting. Chicago, IL, USA. October, 2025.
- 2024 Lywood, H., Foley, R. C. A., and Lloyd, M. Gross motor skill proficiency and physical activity in children with autism spectrum disorder: A correlational study. North American Federation of Adapted Physical Activity 2024 Annual General Meeting. Ithaca, NY, USA. September, 2024.
- 2024 Foley, R. C. A. and La Delfa, N. J. Examination of work breaks and job rotation using a motor-unit based fatigue model. International Ergonomics Association 2024 Triennial General Meeting. Seogwipo, Jeju, Republic of Korea. August, 2024.
- 2024 Foley, R. C. A., Callaghan, D. H., Forman, G. N., Graham, J. D., Holmes, M. W. R., and La Delfa, N. J. A scoping review of upper limb strength asymmetry for ergonomics. International Ergonomics Association 2024 Triennial General Meeting. Seogwipo, Jeju, Republic of Korea. August, 2024.
- 2023 Foley, R. C. A., Watterworth, M. W. B., Issa, J. M., and La Delfa, N. J. Probing the influence of exertion/rest pacing on predicted muscle fatigue. American College of Sports Medicine Annual General Meeting, Denver, CO, USA. May, volume 55, page 236, 2023.

- 2023 Foley, R. C. A., Callaghan, D. H., Forman, G. N., Graham, J. D., Holmes, M. W. R., and La Delfa, N. J. A scoping review on the effect of hand dominance on upper extremity strength. The 26th Annual Applied Ergonomics Conference New Orleans, Louisiana, USA. March, 2023.
 - 2022 Wakeely, F., Watterworth, M. W. B., Foley, R. C. A., and La Delfa, N. J. Exploring the biomechanical basis for a strength asymmetry between dominant and non-dominant arms. Exploring the biomechanical basis for a strength asymmetry between dominant and non-dominant arms. North American Congress on Biomechanics (NACOB). Ottawa, Ontario, Canada. August, 2022.
 - 2022 La Delfa, N. J. and Foley, R. C. A. Using empirical and computational models of muscle fatigue to develop and validate repetitive work thresholds in ergonomics. XXIV Congress of the International Society of Electrophysiology & Kinesiology. Quebec City, Quebec, Canada. June, 2022.
 - 2022 Foley, R. C. A. and La Delfa, N. J. Examining the influence of exertion/rest order effects on predicted muscle fatigue: a simulation study. XXIV Congress of the International Society of Electrophysiology & Kinesiology. Quebec City, Quebec, Canada. June, 2022.
 - 2021 Foley, R. C. A., Abdel-Malek, D. M., Wakeely, F., Graham, J. D., and La Delfa, N. J. Validating the upper limb localized muscle fatigue physical exposure limits. The 21st Biennial Meeting of the Canadian Society for Biomechanics. May, 2021.
 - 2021 Cregg, A. C., Foley, R. C. A., Livingston, L., and La Delfa, N. J. An examination of different footrest heights during standing computer work. The 21st Biennial Meeting of the Canadian Society for Biomechanics. May, 2021.
 - 2019 La Delfa, N. J., F., Wakeely, Abdel-Malek, D. M., Foley, R. C. A., and Graham, J. D. Experimental repeatability of an upper extremity muscle fatigue protocol. XXVII Congress of the International Society of Biomechanics & 43rd Annual Meeting of the American Society of Biomechanics. Calgary, Alberta, Canada. August, 2019.
 - 2018 Wolf, M., Jeffrey, M. P., Foley, R. C. A., Logan-Sprenger, H., Jones-Taggart, H., Green-Johnson, J. M., and Dogra, S. Disrupting prolonged sitting reduces il-8 and lower leg swell in active young adults. Canadian Society for Exercise Physiology 2019 Annual General Meeting. Niagara Falls, Ontario, CAN. October, 2018.
 - 2014 Foley, R. C. A. and Kalmar, J. M. Estimates of persistent inward current in human motor neurons during postural sway. The Society for Neuroscience Annual Meeting. Washington D.C, USA. November, 2014.
 - 2013 Foley, R. C. A. and Kalmar, J. M. Training induced adaptation of interhemispheric inhibition. In American College of Sports Medicine Annual General Meeting, Indianapolis, IN, USA. May, 2013.
- [Non-refereed Conference Presentations & Posters \(n=21\)](#)
- 2025 Foley, R. C. A., Callaghan, D. H., Forman, G. N., Graham, J. D., Holmes, M. W. R., and La Delfa, N. J. A comprehensive scoping review and meta-analysis of upper limb strength asymmetry. Ontario Biomechanics Conference (OBC), Ontario Tech University, Oshawa, Ontario. May, 2025.
 - 2024 Slade, G. E., Foley, R. C. A., and La Delfa, N. J. Zooming in: Examining fatigue-recovery rates of individual motor units. Ontario Biomechanics Conference (OBC), York University, Toronto, Ontario. May, 2024.
 - 2024 Slade, G. E., Foley, R. C. A., and La Delfa, N. J. Investigating individual motor unit recovery rates: A pilot study. Faculty of Health Sciences Undergraduate Research Practicum Poster Day, Ontario Tech University, Oshawa, Ontario. April, 2024.
 - 2024 Fredericks, S. C. K., Foley, R. C. A., and La Delfa, N. J. Assessment of DeLorme, Oxford, and DAPRE musculoskeletal rehabilitation protocols. Faculty of Health Sciences Undergraduate Research Practicum Poster Day, Ontario Tech University, Oshawa, Ontario. April, 2024.
 - 2024 Fredericks, S. C. K., Foley, R. C. A., and La Delfa, N. J. Assessment of DeLorme, Oxford, and DAPRE musculoskeletal rehabilitation protocols. Ontario Biomechanics Conference (OBC), York University, Toronto, Ontario. May, 2024.

- 2024 Foley, R. C. A. and La Delfa, N. J. The effect of muscle length on fatigue rate: accounting for muscle mechanics using a motor unit fatigue model. Ontario Biomechanics Conference (OBC), York University, Toronto, Ontario. May, 2024.
- 2023 Issa, J., Foley, R. C. A., and La Delfa, N. J. Impact of force-time histories on a motor unit-based model for predicting muscle fatigue. 12th Annual Research Practicum Poster Day. UOIT, Oshawa, Ontario. April, 2023.
- 2023 Foley, R. C. A. and La Delfa, N. J. Modeling the effect of unique force-time histories on predicted muscle fatigue. Ontario Biomechanics Conference (OBC), University of Waterloo, Waterloo, Ontario. May, 2023.
- 2022 Callaghan, D. H., Foley, R. C. A., Forman, G. N., Holmes, M. W. R., and La Delfa, N. J. Scoping review of the effects of handedness on upper limb strength. 11th Annual Research Practicum Poster Day. UOIT, Oshawa, Ontario. April, 2022.
- 2020 Wakeely, F., Norman, S., Watterworth, M. W. B., Foley, R. C. A., and La Delfa, N. J. The effect of handedness on manual arm strength. 17th Ontario Biomechanics Conference, Aliston, Ontario. (conference postponed last minute due to COVID-19) March, 2020.
- 2020 Foley, R. C. A., Abdel-Malek, D. M., Wakeely, F., Graham, J. D., and La Delfa, N. J. Evaluating muscle fatigue at current ergonomics threshold limit value exposure levels. 17th Ontario Biomechanics Conference, Aliston, Ontario. (conference postponed last minute due to COVID-19) March, 2020.
- 2019 Wakeely, F., Abdel-Malek, D. M., Foley, R. C. A., Graham, J. D., and La Delfa, N. J. Experimental repeatability of an upper extremity muscle fatigue protocol. 16th Ontario Biomechanics Conference, Aliston, Ontario. March, 2019.
- 2019 Wakeely, F., Abdel-Malek, D. M., Foley, R. C. A., Graham, J. D., and La Delfa, N. J. Experimental repeatability of an upper extremity muscle fatigue protocol. 11th Annual Research Practicum Poster Day. UOIT, Oshawa, Ontario. April, 2019.
- 2019 Abdel-Malek, D. M., Wakeely, F., Foley, R. C. A., Graham, J. D., and La Delfa, N. J. Does feedback training improve ratings of perceived fatigue during a repetitive upper extremity task? Southern Ontario Motor Behaviour Symposium. University of Toronto, Toronto, Ontario. May, 2019.
- 2019 Abdel-Malek, D. M., Wakeely, F., Foley, R. C. A., Graham, J. D., and La Delfa, N. J. Can a period of familiarization improve ratings of perceived fatigue relative to objective measures of muscle fatigue? 16th Ontario Biomechanics Conference, Aliston, Ontario. March, 2019.
- 2018 Dogra, S., Wolf, M., Jeffrey, M. P., Foley, R. C. A., Logan-Sprenger, H., Jones-Taggart, H., and Green-Johnson, J. M. Disrupting prolonged sitting reduces il-8 and lower leg swell in active young adults. 10th Annual Research Practicum Poster Day. UOIT, Oshawa, Ontario. April, 2018.
- 2018 Cregg, A. C., Foley, R. C. A., La Delfa, N. J., and Livingston, L. Changes in lumbar spine posture, muscle activation and centre of pressure while performing standing work with different footrest heights. 15th Ontario Biomechanics Conference, Aliston, Ontario. March, 2018.
- 2014 Foley, R. C. A. and Kalmar, J. M. Estimates of persistent inward current in human motor neurons during postural sway. Ontario Exercise Physiology, Barrie, Ontario. March, 2014.
- 2013 Foley, R. C. A. and Kalmar, J. M. The use of a novel bi-manual training task to induce changes in interhemispheric cortical excitability. Ontario Exercise Physiology, Barrie, Ontario. March, 2013.
- 2013 Foley, R. C. A. and Kalmar, J. M. Training induced adaptation of interhemispheric inhibition. The 4th Annual Muscle Health Awareness Day, Muscle Health Research Centre at York University, North York, Ontario. MHAD POSTER AWARD FINALIST - MSc May, 2013.
- 2013 Foley, R. C. A. and Kalmar, J. M. Training induced adaptation of interhemispheric inhibition. 2013 Exercise and Neuroscience Group's Biennial Meeting. Oshawa, Ontario. June, 2013.

Invited Presentations & Lectures (n=17)

- 2024 Foley, R. C. A. Fatigue Prediction for Work Scheduling Interventions in Automotive Manufacturing, GM Safety Day - Ergonomics Working Group, Ontario Tech University, Oshawa, ON, CAN.
- 2024 Foley, R. C. A. Mechanisms and Methods in Neuromuscular Fatigue, KINE2130 - Exercise Physiology, Ontario Tech University, Oshawa, ON, CAN.
- 2023 Foley, R. C. A. and La Delfa, N. J. Simulating force-time history order effects on muscle fatigue: implications for work/rest scheduling and job rotation, Center for Research Excellence in Musculoskeletal Disorders (CRE-MSD) | 2023 Research Day Meeting, Waterloo, ON, CAN. May 2023.
- 2023 Foley, R. C. A. Mechanisms and Methods in Neuromuscular Fatigue, KINE2130 - Exercise Physiology, Ontario Tech University, Oshawa, ON, CAN.
- 2022 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2022 Foley, R. C. A. Mechanisms and Methods in Neuromuscular Fatigue, KINE2130 - Exercise Physiology, Ontario Tech University, Oshawa, ON, CAN.
- 2021 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2021 Foley, R. C. A. Mechanisms and Methods in Neuromuscular Fatigue, KINE2130 - Exercise Physiology, Ontario Tech University, Oshawa, ON, CAN.
- 2020 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2019 Foley, R. C. A. Structural vs. Functional Brain Changes After Head Injury, Health Promotion in Diverse Populations, Durham College, Oshawa, ON, CAN.
- 2019 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2018 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2017 Foley, R. C. A. Wearable Tech Born out of Research Instruments, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2016 Foley, R. C. A. Introduction to Writing Filters using Microsoft Excel, HLSC5322 - Theory and Application of Biomedical Signals and Images, Ontario Tech University, Oshawa, ON, CAN.
- 2014 Foley, R. C. A. Intrinsic Mechanisms of Alpha Motor Neuron Gain, KP425 - Neuromuscular Function in Exercise, Wilfrid Laurier University, Waterloo, ON, CAN.
- 2013 Foley, R. C. A. A Neuromuscular Approach to Muscle Cramps during Long-Duration Exercise, KP422 - Advanced Exercise Physiology, Wilfrid Laurier University, Waterloo, ON, CAN.
- 2013 Foley, R. C. A. TMS: An Introduction to MEPs and Paired-Pulse Research, Musculoskeletal Disorders Research Centre, Wilfrid Laurier University, Waterloo, ON, CAN.

Grants, Awards, & Scholarships (Total = \$94,099)

- 2025 **Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST)** PhD Health Sciences, Ontario Tech University – \$15,000
- 2025 **Ontario Tech School of Graduate and Postdoctoral Studies Student Conference Travel Award** Human Factors and Ergonomics Society ASPIRE 2025, Title: Predicting muscle fatigue during automotive assembly: A case study on the effects of model mix and variable build options. Ontario Tech University – \$300
- 2024 **Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST)** PhD Health Sciences, Ontario Tech University – \$15,000

- 2024 **Mitacs Accelerate Program Industrial Research Internship – Cort Research & Innovation Inc.** Title: Experimental and modelling approaches to optimise repetitive task analysis in the automotive industry – \$45,000
- 2022 **Center for Research Excellence in Musculoskeletal Disorders Seed Grant** Title: Computational and experimental evaluation of exertion/rest order effects on muscle fatigue development during complex repetitive work – \$12,424
- 2022 **Professional Enhancement Review Subcommittee Travel Grant** XXIV Congress of the International Society of Electrophysiology & Kinesiology. Symposium presentation, Title: Examining the influence of exertion/rest order effects on predicted muscle fatigue: a simulation study – \$425
- 2020 **Graduate Entrance Scholarship** Wilfrid Laurier University, MSc Kinesiology, Supervisor Dr. Jayne Kalmar – \$1,000
- 2020 **Dean's List In-Program Scholarship** Wilfrid Laurier University, BSc Kinesiology – \$500
- 2019 **'Fiercely Ontario Tech' Staff Award of Excellence** Recognizes a frontline staff member who consistently strives to support a culture of service excellence. By their actions, this individual motivates and inspires the people around them to excel in service to students and/or staff and faculty at the university
- 2018 **UOIT Teaching and Learning Student Choice Award Nominee** For exceptional teaching dedication in HLSC4414U: Advanced Topics in Neuromuscular Physiology
- 2014 **Wilfrid Laurier University Faculty of Science Students' Association Conference Travel Award** 44th Annual Meeting of the Society for Neuroscience, Title: Estimates of persistent inward current in human motor neurons during postural sway, MSc Kinesiology – \$700
- 2013 **Muscle Health Awareness Day Poster Presentation Finalist** at The Muscle Health Research Centre at York University - Title: Training induced adaptation of interhemispheric inhibition
- 2013 **Graduate Scholarship** \$3,750

Research Assistantships (Total = \$78,761)

- 2026 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$6,000
- 2025 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$8,000
- 2023 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$16,000
- 2022 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$14,000
- 2021 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$17,000
- 2021 **NSERC Graduate Research Assistantship** Dr. Bernadette Murphy – \$3,000
- 2020 **NSERC Graduate Research Assistantship** Dr. Nicholas La Delfa – \$4,011
- 2014 **Graduate Research Assistantship** Dr. Jayne Kalmar – \$5,250
- 2013 **Graduate Research Assistantship** Dr. Jayne Kalmar – \$5,500

Work Experience

Ontario Tech University, Oshawa, ON, CAN

Aug 2014 - **Kinesiology Lab Technician.**

Present Managed all day to day operations of the Kinesiology Teaching Labs - 1800 student hours weekly and training of 30 Teaching assistants

Creation of custom instruments and experimental design for teaching

Managed the design, move and re-opening of four brand new lab spaces

Sept 2019 – **Kinesiology Lab Specialist.**

Sept 2020 Management of lab budget, scheduling, TA allocation, and internships and designed a new space for department research and teaching labs

Managed the undergrad lab curriculum through COVID-19 pandemic safely

Hired and trained a replacement Kinesiology Lab Technician

[Cort Research and Innovation, Windsor, ON, CAN](#)

Jan 2024 – **Advanced Ergonomics Project Consultant.**

Dec 2024 Evaluated work scheduling intervention efficacy for a Detroit-based automotive manufacturer using advanced neuromuscular fatigue prediction models

Consulted between a variety of parties in cutting-edge automotive assembly situations

Conducted several sensor-instrumented on-line data collections across a variety of North American plants for the purposes of building advanced job fatigue simulations

[Monir Precision Monitoring, Mississauga, ON, CAN](#)

May 2009 – **Inclinometer Monitoring Specialist.**

Sept 2011 Collected geostructural measurements of shoring deformations in large-scale excavation sites

Maintained and calibrated delicate equipment in hostile environments to ensure measurement accuracy

Produced detailed engineering reports to inform structural shoring design and tie-back interventions

Teaching Experience

[Ontario Tech University, Oshawa, Ontario, Canada](#)

Sept.,2023 – ***Sessional Instructor.***

May 2024 KINE4990 - Kinesiology Internship I

Sept.,2020 – ***Sessional Instructor.***

May2021 HLSC4990 - Kinesiology Internship I & II

Sept.,2017 – ***Sessional Instructor.***

present HLSC4414U - Advanced Topics in Neuromuscular Physiology

Relevant Coursework & Certificates

Advanced Biomechanics - Wilfrid Laurier University

Neuromuscular Function In Exercise - Wilfrid Laurier University

Research Methods I & II - Wilfrid Laurier University

Instrumentation in Biophysical Research - University of Waterloo

Statistical Reasoning & Experimental Analysis - Wilfrid Laurier University

Neurocognition of Movement - Wilfrid Laurier University

Interdisciplinary Perspectives in Health Data & Technology - Ontario Tech University

Advanced Concepts in Neuromechanics - Ontario Tech University

Critical Perspectives in Research & Knowledge Translation in HS - Ontario Tech University

Comprehensive Exams - Topics on Machine Learning and Bayesian Methods for Muscle Fatigue

Prediction - Ontario Tech University

Certificate in University Teaching - Ontario Tech University

Certificate in Fundamentals of Machine Learning - Coursera via Stanford University

Computer skills

Programming Languages Python, MATLAB, R, $\LaTeX$

Signal Acquisition	CED Signal & Spike2, ADI LabChart, Basic NIC LabVIEW, OTBioLab
Advanced Analysis and Simulation	Visual3D, OpenSim
Ergonomics & DHMs	Process Simulate Tecnomatix Human, Santos, 3DSSPP, HandPak, Arm Force Field, Work(s)
CAD & 3D Printing	Autodesk Inventor, FormLabs

Scientific Techniques

Biomechanics	Upper and Lower Body Kinematics Vicon, Optotrak, TheiaMarkerless, XSens, Maxtraq Kinetics Force Plates ▪ Exoskeletons ▪ Factory & Custom Load Cells ▪ Isokinetic Dynamometer
Neurophysiology	Surface, Intramuscular, HDsEMG Electromyography(EMG), Transcranial Magnetic Stimulation(TMS), Electroencephalography(EEG), Peripheral Nerve Stimulation
Exercise Physiology	Direct and Indirect Metabolic Tests, Cardiac Stress Testing, Spirometry, Environmental Physiology, Blood Oxygenation via Near Infrared Spectroscopy (NIRS)

Institutional Committee Service

Ontario Tech University, Oshawa, Ontario, Canada

2022-present	FHSc Graduate Program Committee.
2014-present	Health Science Recruitment Representative.
2020-present	Virtual Learning and Simulation Group.
2020-2022	COVID-19 Faculty Research Operation Committee.
	Durham College, Oshawa, Ontario, Canada
2021-present	Fitness & Health Promotion Program Advisory Committee.

Teaching Assistantships

Ontario Tech University, Oshawa, Ontario, Canada

Fall, 2022	KINE4477U: Applied Techniques in Neuromechanics.
	Wilfrid Laurier University, Waterloo, Ontario, Canada
Winter, 2014	KP222: Human Physiology.
Fall, 2013	KP422: Advanced Exercise Physiology.
Fall, 2013	KP425: Neuromuscular Function in Exercise.
Winter, 2013	KP321: Exercise Physiology.
Fall, 2012	KP122: Biodynamical Aspects of Physical Activity.
Fall, 2012	KP425: Neuromuscular Function in Exercise.

Volunteer Service

2017-present	Ontario Tech Athletics - Muscle Strength Testing for ACL Injury Rehabilitation.
June 2017	Host - Special Olympics Canada Fitness Testing.
2017-2020	Ski Canada - Physiological Testing.
2014-present	Ontario Tech Kinesiology Highschool Tour Sessions.
2014-2020	Ontario Tech Kinesiology Representative - Ontario Universities Fair.

Previous Supervisors

Dr. Nicholas La Delfa

*Associate Professor, Department of
Kinesiology*

Ontario Tech University

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Dr. Jayne Kalmar

*Associate Professor, Department of
Kinesiology*

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