Robert John Holash PhD

Muscle Physiology, Computational Biology

UNIVERSITY OF CALGARY

Professional Summary

Exercise physiologist and computational biologist specializing in skeletal muscle physiology, 3D stochastic modeling, and calcium diffusion in sarcomeres. Extensive experience in data science applications to human performance, scholarship of teaching and learning in exercise physiology, and interdisciplinary research collaboration bridging scientific discovery with educational innovation.

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https://scholar.google.com/citations?user=Qx4U24oAAAAJ&hl=en

https://www.researchgate.net/profile/John-Holash

https://linkedin.com/in/dr-john-holash-13082b2b

https://x.com/DrHolash

Education

2009-2017 **Doctorate in Muscle Physiology** — University of Calgary, Canada
Discipline: Skeletal Muscle Physiology.
Main subjects: Muscle Physiology, Computational Biology, Data Analysis, Structural Modeling, Stochastic Agent based Modelling.
Thesis: ”Three dimensional stochastic computer model of the skeletal muscle half sarcomere: changes in calcium diffusion caused by the myofilament lattice.”
Committee: Drs., Brian MacIntosh, Henk ter Keurs, Christian Jacob, Chris Barclay.

1997-2000 **Master of Science** — University of Calgary, Canada
Discipline: Exercise Physiology.
Main subjects: Cycling Power, Muscle Power.
Thesis: ”Validation of single maximal effort tests for power measurement.”
Committee:Drs., Brian MacIntosh, Stephen Norris, Douglas Syme.

1990-1993 **Bachelor's Degree in Physical Education** — University of Calgary, Canada
Main subjects: Outdoor Pursuits, Leadership in Extreme Environments.
Senior Project: ”Calgary River Cleanup, Conservation of Calgary Rivers and Pathways”.

Research and Professional Experience

2019-Current **Professor (Teaching) - Exercise Physiology** — Faculty of Kinesiology, University of Calgary
Teaching and research in exercise physiology, data science, and computational biology. Leading undergraduate and graduate instruction while supervising student research in muscle physiology and performance analysis.

2013-2018 **Data Scientist / Systems Architect** — Human Performance Laboratory, University of Calgary
Designed and developed computational solutions for research problems. Created custom software and algorithms for research equipment and specialized projects. Guest lecturer for multiple kinesiology courses.

2000-2013 **Senior Systems Analyst** Faculty of Kinesiology, University of Calgary
Technical lead for faculty IT infrastructure. Developed software solutions and managed research computing systems supporting faculty research operations.

1996-2000 **Research and Teaching Assistant** Faculty of Kinesiology, University of Calgary
Graduate teaching assistant for anatomy, physiology, and biomechanics courses. Research coordination and data analysis for exercise science studies.

Publications & Research

Published Journal Articles

Wearable Technology in Orthopaedic Surgery: Applications and Future Directions
Alexander W. Iwasyk, Sia S. Gaur, Alyssa Federico, John R. Holash, Fred Nicholls, Michael J. Monument, and Joseph K. Kendal
JBJS Reviews *13.7 (2025)*

Maximal active force in skinned muscle fibres from children with cerebral palsy
Venus Joumaa, Faizan Syed, Jason J Howard, Gavin K Thomas, Latif Omerkhil, Sach Dabgotra, Isaac Obrigewitsch, Shuyue Liu, Robert J Holash, Timothy R Leonard, and Walter Herzog
Journal of Biomechanics *186 (2025) p. 112710. DOI: 10.1016/j.jbiomech.2025.112710*

A Ramp- Versus Step-Transition to Constant-Work Rate Exercise Decreases Steady-State Oxygen Uptake
Gabriele Marinari, Danilo Iannetta, John R. Holash, Robin Trama, Robin Faricier, Alessandro M. Zagatto, Daniel A. Keir, and Juan M. Murias
Medicine & Science in Sports & Exercise *(May 2024). DOI: 10.1249/MSS.0000000000003372*

Heavy-intensity priming exercise extends the V̇o2max plateau and increases peak-power output during ramp-incremental exercise
Gabriele Marinari, Danilo Iannetta, Robert John Holash, Alessandro M. Zagatto, Daniel A. Keir, and Juan M. Murias
American Journal of Physiology-Regulatory, Integrative and Comparative Physiology *327.2 (2 Aug. 2024) R164–R172. DOI: 10.1152/ajpregu.00016.2024*

Technological Breakthroughs in Sport: Current Practice and Future Potential of Artificial Intelligence, Virtual Reality, Augmented Reality, and Modern Data Visualization in Performance Analysis
VRA Cossich, D Carlgren, RJ Holash, and L Katz
Applied Sciences *13.23 (2023) pp. 12965–12965. DOI: 10.3390/app132312965*

A stochastic simulation of skeletal muscle calcium transients in a structurally realistic sarcomere model using MCell
Robert John Holash and Brian R. MacIntosh
PLOS Computational Biology *15.3 (Mar. 2019) pp. 1–25. Public Library of Science, DOI: 10.1371/journal.pcbi.1006712*

An innovative ergometer to measure neuromuscular fatigue immediately after cycling.
Douglas Doyle-Baker, John Temesi, Mary E Medysky, Robert J Holash, and Guillaume Y Millet
Medicine and Science in Sports and Exercise *50 (2 Feb. 2018) pp. 375–387. DOI: 10.1249/MSS.0000000000001427*

Skeletal muscle fatigue–regulation of excitation–contraction coupling to avoid metabolic catastrophe.
Brian R MacIntosh, Robert J Holash, and Jean-Marc Renaud
Journal of Cell Science *125.9 (2012) pp. 2105–2114. The Company of Biologists Ltd*

A comparison of exer-gaming interfaces for use in rehabilitation programs and research.
Kazumoto Tanaka, Jim Parker, Graham Baradoy, Dwayne Sheehan, John R Holash, and Larry Katz
Loading *6.9 (2012) pp. 69–81*

Feasibility of the two-hour marathon is a burning issue.
Jared R Fletcher, Shane P Esau, R John Holash, and Brian R MacIntosh
Journal of Applied Physiology (Bethesda, Md.: 1985) *110.1 (2011) 282–discussion*

Procedures for rat in situ skeletal muscle contractile properties.
Brian R MacIntosh, Shane P Esau, R John Holash, and Jared R Fletcher
Journal of Visual Experimentation *56 (2011)*

Verfahren für die Ratte
Brian R MacIntosh, Shane P Esau, R John Holash, and Jared R Fletcher
(2011)

Books / Book Chapters

Technological Breakthroughs in Sport
Victor R. A. Cossich, Dave Carlgren, Robert John Holash, and Larry Katz
2024. Encyclopedia.pub

Cardiac Function in Exercise.
B R MacIntosh and R J Holash
Chapter chap. 8: Open Textbook of Exercise Physiology. *2024, pp. Pp. 1–60. Open Education Alberta*

Skeletal Muscle Structure.
B R MacIntosh and R J Holash
Chapter chap. 4: Open Textbook of Exercise Physiology. *2023, pp. Pp. 1–60. Open Education Alberta*

Power output and force-velocity properties of muscle.
B R MacIntosh and R J Holash
Chapter chap. 11: Biomechanics and Biology of Movement. *2000, pp. Pp. 193–210. Human Kinetics*

Conference Presentations / Published Abstracts

Active properties of skinned muscle fibres from children with cerebral palsy.
Venus Joumaa, Jason Howard, Gavin Thomas, Sach Dabgotra, Christopher Roberts, Mahmoud Abusara, Shuyue Liu, R. John Holash, Shuyue Leonard, and Walter Herzog
Journal of Muscle Research and Cell Motility (2023). *European Muscle Conference. Florence, Italy*

Increased occupation of sarcomeric calcium buffers reduces required calcium release for similar troponin-c binding of subsequent activation.
Robert John Holash, Ian Smith, Walter Herzog, and Brian R MacIntosh
Journal of Muscle Research and Cell Motility vol. 37 (2017). *European Muscle Conference. Montpelier, France*

Effect of sarcomere length on calcium diffusion in a 3-D sarcomere model.
Robert John Holash and Brian R MacIntosh
Journal of Muscle Research and Cell Motility vol. 36 (2015). *European Muscle Conference. Strasbourg, Austria*

The importance of structure on: calcium release, diffusion, and binding in a spatially realistic 3-D sarcomere model.
Robert John Holash and Brian R MacIntosh
(2013). *Biomedical Basis for Human Performance Across the Lifespan*

3-Dimentional calcium kinetics; release, diffusion, binding, and uptake in a multicompartmental, skeletal muscle 1/2 sarcomere.
Robert John Holash and Brian R MacIntosh
Applied Physiology, Nutrition, and Metabolism vol. 37 (2012). *Canadian Society of Exercise Physiology Conference, CSEP*

Modelling calcium diffusion, binding, and uptake in a spatially realistic 3-dimensional sarcomere model.
Robert John Holash and Brian R MacIntosh
Journal of Muscle Research and Cell Motility vol. 33 (2012). *European Muscle Conference. Rhodes, Greece*

A comparison of exer-gaming interfaces for use in rehabilitation programs and research.
Kazumoto Tanaka, Jim Parker, Graham Baradoy, Dwayne Sheehan, John R Holash, and Larry Katz
Loading vol. 6.9 (2012). *Interactive Media Conference. Calgary, Alberta*

Micro-physiological simulation of calcium diffusion in a 3-dimensional sarcomere model.
Robert John Holash and Brian R MacIntosh

Applied Physiology, Nutrition, and Metabolism vol. 36 (2011). *Canadian Society of Exercise Physiology Conference, CSEP*

Can the second head of myosin bind to the adjacent thin filament?
Robert John Holash and Brian R MacIntosh
(2009). *Multi-scale Muscle Mechanics Conference. Woods Hole, Massachusetts*

Skeletal muscle filament spacing changes with contraction.
Robert John Holash and Brian R MacIntosh
Applied Physiology, Nutrition, and Metabolism (2009). *Canadian Society of Exercise Physiology Conference, CSEP*

Modelling calcium release in a simplified two dimensional skeletal muscle model using the agent-based system Netlogo.
Robert John Holash and Brian R MacIntosh
Applied Physiology, Nutrition, and Metabolism vol. 33 (2008). *Canadian Society of Exercise Physiology Conference, CSEP*

Validation of single maximal effort tests for peak power output.
Robert John Holash, Igor Kopecky, Krista Sevdhal, and Brian R MacIntosh
Canadian Journal of Applied Physiology vol. 25 (2000). *Canadian Society of Exercise Physiology Conference, CSEP*

Theses

Three dimensional stochastic computer model of the skeletal muscle half sarcomere: changes in calcium diffusion caused by the myofilament lattice.
Robert John Holash

Validation of single maximal effort tests for power measurement.
Robert John Holash
Masters of Science Thesis, University of Calgary

Research Supervision & Mentoring

Current Graduate Students - Committee Member

2021-Present **PhD. Keenan McDougal** Faculty of Kinesiology
Alterations in fatigue, efficiency, and pedaling mechanics during incremental and constant-load high-intensity cycling

2019-Present **PhD. Jim Griffiths** Faculty of Kinesiology
Heart Rate Novel Methods of Detection

Graduated Students - Committee Member(2021-2024)

2022-2024 **PhD. Gabriele Marinari** Faculty of Kinesiology
New approaches to characterize the $\dot{V}O_2$ slow component and its physiological mechanisms

2022-2024 **MSc. Brynn Lindstrom** Faculty of Kinesiology
Does critical power underestimate thresholds in experienced exercisers

2023-2024 **MSc. Timi Ajayai** Faculty of Kinesiology
Detrended fluctuation analysis of heart rate data during constant intensity exercise

2022-2024 **MSc. Marissa Doroshuk** Faculty of Kinesiology
Novel Ovulation Research-Recruitment Methods for an App Study

2022-2024 **MSc. Alissa Kazakoff** Faculty of Kinesiology
Novel Ovulation Research-Recruitment Methods for an App

2021-2022 **MSc. Mary Mackie** Faculty of Kinesiology
The "Step-Ramp-Step" Protocol: Evaluating the Effects of a Smaller First Step Amplitude and Different Ramp Slopes to Determine the VO_2 Mean Response Time and the Expression of the VO2 Slow Component During Ramp-Incremental Tests

Graduate Student Mentoring

2021-2022 **Jesse Oswald** MKin Capstone Project
Mentoring undergraduate students in Honours Research projects

2021-2022 **Keenan McDougal** CURE Program
CURE Coach Course research project design in Kinesiology 375

2021-2022 **Krystyna Sandowski** CURE Program & MKin Capstone
CURE Coach Course research project design and Alternative Laboratory Teaching Methods in Undergraduate Kinesiology

Current Undergraduate Research Students (2024-2025)

2025 **NSERC Award - Sunnie Vuong**
Structural Characteristics of Two Muscles from Children with Cerebral Palsy

2025 **PURE Award - Abdul-samad Ahmend**
Structural properties and mitochondrial function of cardiac muscle in response to a high-fat and high-sucrose diet in female rats

2024-2025 **Honours 590 - Dana Litvak**
Cold Water Immersion for Exercise-Induced Muscle Damage Recovery: A Systematized Umbrella Review

2024-2025 **Honours 590 - Sia Gaur**
Assessing the Impact of Exercise Duration, Intensity, and Modality on Cardiovascular Health Outcomes Using Wearable Technology: A Correlational Analysis

Former Undergraduate Research Students (2020-2024)

2024 **NSERC Award - Arianna Hu**
Investigating the effect of flash freezing on active force production of skinned fibres

2024 **Summer Internship - Latif Oerkhil**
Investigating active force and sarcomeric protein content in gracilis muscle of children with cerebral palsy

2023-2024 **Honours 590 - Conner Hass**
Palmer cooling and the effect on metabolic work production on exercise performance

2023-2024 **Honours 590 - Thomas Manktelow**
X-country skiing double poling efficiency

2023 **NSERC Award - Birtej Mangat**
Investigating the Mechanical Properties of Cardiac Muscle in Obese Rats

2023 **Summer Internship - Latif Omerkhil**
Investigating active force in muscle fibres from children with cerebral palsy

2022-2023 **KNES 466 - Ashley Matesic**
Relative Hip Drop Timing at Different Speeds and its Relationship to Performance and Force Production in Cross-Country Skiing Double Poling

2022 **Faculty Research Funding - Thomas Manktelow**
Objective Analysis of Double-Pole Timing in X-Country Skiing

2022 **PURE Studentship - Gavin Thomas**
Active force in skeletal muscle fibres from children with cerebral palsy

2021-2022 **KNES 490 Honours - Allysan Lui**
Assessment of Aerobic power in Collegiate Contemporary Dance Using a High-Intensity Dance Performance Fitness Test (DAFT2)

2021-2022 **KNES 490 Honours - Chantal Vogel**
Effect of Zwift's Virtual Setting on Individual Outcomes and Performance in Comparison to Traditional Stationary Cycling

2021-2022 **KNES 490 Honours - Andreas Cordido**
Exercise Thresholds: Functional Threshold Power on an Exergaming Platform versus Power Output at the Respiratory Compensation Point

2021 **Biomedical Engineering - Maleeka Malik**
Investigating the changes in titin isoforms and concentration and sarcomere organization in skeletal muscles of obese rats

2020-2021 **KNES 490 Honours - Ashley Lorenz**
Investigating Physical Activity Intensity of Virtual Reality Exergame in Recreationally Active Young Adults

2020-2021 **KNES 604 - Tara McNeil**
Physiology of Swimming

Grants and Awards

Major Research Grants

2024 **Spark Grant - McCaig Institute for Bone and Joint Health** **Grant Value: $20,000**
Project: *ACTIVATION: Activity Capture To Investigate Voluntary Activity in Oncology and Normal populations*. Co-investigator with Dr. Joel Kendal.

2024 **Science of Teaching and Learning (SOTL) Grant** **Grant Value: $40,000**
Project: *Evaluating Enhanced Learning Outcomes: Developing a Multimedia Library with Educational Videos and Interactive Tools for Laboratory Training*. Co-investigator with Dr. Venus Joumaa.

2021 **CURE - Curriculum Based Undergraduate Research Experience** **Grant Value: $10,000**
Project: *Redevelopment of Lab component of Kinesiology 375 so that final lab experiment is student enquiry driven*. Taylor Institute for Teaching and Learning.

2019 **Faculty of Kinesiology Startup Funds** **Grant Value: $40,000**
Research startup funding for new faculty position. University of Calgary.

Student Training Grants

2025 **NSERC Undergraduate Student Research Award - Sunnie Vuong** **Grant Value: $6,000**
Project: *Structural Characteristics of Two Muscles from Children with Cerebral Palsy*.

2025 **PURE Award - Abdul-samad Ahmend** **Grant Value: $7,000**
Project: *Structural properties and mitochondrial function of cardiac muscle in response to a high-fat and high-sucrose diet in female rats*.

2024 **NSERC Undergraduate Student Research Award - Arianna Hu** **Grant Value: $6,000**
Project: *Investigating the effects of flash freezing on active force production of skinned muscle fibres*.

2023 **NSERC Undergraduate Student Research Award - Birtej Mangat** **Grant Value: $6,000**
Project: *Investigating the Mechanical Properties of Cardiac Muscle in Obese Rats*.

2022 **PURE Studentship Grant - Gavin Thomas** **Grant Value: $7,000**
Project: *Investigating active force in skeletal muscle fibres from children with cerebral palsy*.

2022 **Faculty of Kinesiology Undergraduate Research Scholarship - Thomas Manktelow** **Grant Value: $7,000**
Project: *Objective Analysis of Double-Pole Timing in X-Country Skiing*.

Teaching and Recognition Awards

2023 **Faculty of Kinesiology COVID Outstanding Achievement Award** University of Calgary
Recognition for exceptional contributions during the COVID-19 pandemic period.

2021 **BME/Faculty of Science Summer Student Best Presentation Award** University of Calgary
For Maleeka Malik: *Titin isoform changes in an obesity feeding rat model*.

2013 **Young Investigator Award** University of Calgary
Best Presentation: *The importance of structure on calcium release, diffusion, and binding in a spatially realistic 3-D Sarcomere Model*. Bio-medical Basis for Human Performance Across the Lifespan.

2013 **Outstanding Leadership (Staff) Award** Roger Jackson Centre for Health and Wellness
University of Calgary recognition for exceptional leadership contributions.

Research Travel and Development Grants

2012 **Research Travel Grant** Faculty of Graduate Studies, University of Calgary
Support for conference presentation and research collaboration.

2011 **Excellence in Research Grant** Faculty of Graduate Studies, University of Calgary
Graduate student research support funding.

Historical Awards and Recognition

1998 **Alberta Sports Research Grant** Government of Alberta
Development of electronic bike ergometer for sports performance research.

1996 **Alberta Parks and Recreation Grant** University of Calgary
Measuring muscle tone in children with Downs Syndrome.

1996 **You Make a Difference Award** Canadian National Institute for the Blind
Recognition for blind bowling program development and leadership.

1994 **Clean World Award** International Association for Environmental Urban Living
For accomplishments running the Calgary River Clean-up 1994.

1993 **Mayor's Environmental Stewardship Award** City of Calgary
Presented by Mayor Al Duer for organizing and running the Calgary River Clean-up 1993.

Grant Summary Total research funding secured: >$149,000 | Student training awards supervised: $39,000 | Teaching innovation grants: $50,000

Teaching & Courses Taught

Undergraduate Courses

2019-2024 **KNES 213 - Introduction to Kinesiology** Fall/Winter/Spring terms | 11 sections | Avg: 140 students/section
An introduction to research in kinesiology with an emphasis on understanding the research process, including basic statistical knowledge, and its relationship to critical thinking. Practical application of concepts through direct involvement in individual and group projects.

2020-2023 **KNES 375 - Tests and Measurements** Fall/Winter terms | 5 sections | Avg: 76 students/section
Establishment of tests, criteria for selection of tests, measurement devices used to evaluate physiological status, human growth, and skill levels in physical activity programs.

2010-2024 **KNES 381 - Computer Applications** Fall/Winter terms | 4 sections | 24 students/section
An introduction to the use of the computer in kinesiology which involves hands-on experiences with selected software packages.

2020-2021 **KNES 355 - Human Growth and Development** Winter terms | 2 sections | Avg: 250 students/section
The physiological, anatomical, emotional and social changes in human growth and development, with a view to the planning and selection of appropriate programs in physical education, sport, and dance.

2022 **KNES 475 - Physiological Bases of Athletic Performance** Winter term | 1 section | 40 students
The physiological factors and principles of training affecting performance will be reviewed and challenged on the scientific basis of experimental evidence.

Graduate Courses

2020-2024 **KNES 606/613/614 - Applied Exercise Physiology Practicum** Fall/Winter terms | 8 sections | Avg: 14 students/section
Comprehensive graduate-level laboratory course covering advanced exercise testing and research methodology.

Honours Students and Self-Directed Studies

2020-2025 **Honours Research Projects** 15+ students supervised
KNES 490/590 Honours projects, KNES 466 Advanced Biomechanics projects, and KNES 604 Advanced Studies. Covering diverse research areas including VR fitness, dance performance, skiing biomechanics, swimming physiology, and exercise technology applications.

Teaching Summary Course portfolio: 6 different courses | Total sections taught: 31+ | Students instructed: >2,600 | Teaching innovations: Flipped classroom methodology, student-driven laboratory experiments, VR/technology integration | Recognition: Featured in university teaching showcase, CURE grant recipient, COVID Outstanding Achievement Award

Service and Professional Activities

Research Institute Memberships

2024-Current **Alberta Children's Hospital Research Institute** University of Calgary
Alberta Health Services and the Alberta Children's Hospital Foundation

2024-Current **McCaig Institute for Bone and Joint Health** — University of Calgary
Associate Member, Cumming School of Medicine

Faculty and University Committee Service

2024 **Search Committee: Exercise Physiology Position** — Faculty of Kinesiology
University of Calgary

2022-Current **Teaching and Learning Committee** — Faculty of Kinesiology
University of Calgary

2021-Current **Ethics Committee for Human Studies** — Faculty of Kinesiology
Faculty representative, University of Calgary

2019-Current **Learning Technologies Advisory Committee** — Taylor Institute for Teaching and Learning
Faculty of Kinesiology representative

2021-2022 **National Survey of Student Engagement** — Faculty of Kinesiology
University of Calgary

2021 **Search Committee: Human Growth and Development Position** — Faculty of Kinesiology
University of Calgary

2020 **Student Orientation Online Technologies Special Committee** — Central Orientation Committee
University of Calgary

2019-2021 **New Student Orientation** — Faculty of Kinesiology
University of Calgary

2019-2021 **Student Orientation - Faculty Advisor Panel** — Faculty of Kinesiology
University of Calgary

2019 **YUJA Video Evaluation Group** — Taylor Institute for Teaching and Learning
Faculty of Kinesiology representative

External Academic Service

2020-Present **Thesis Examiner - PhD Candidacy Exams** — Various Faculties
Thomas Tripp (2023), Cody van Rassel (2022), Nada Abughazaleh - Biomedical Engineering (2021), Calaine Inglis (2020)

2020-Present **Thesis Neutral Chair** — Various Faculties
15+ doctoral and master's thesis defenses across Kinesiology and Biomedical Engineering

2018-2019 **Invited Reviewer** — International Society of Biomechanics
Calgary, Alberta

Conference Organization and Support

2019 **Team Captain, Speaker Ready Room** — ISB/ASB Calgary
International Society of Biomechanics Conference, Calgary

2019 **Course Maintenance** — International Biathlon Union
World Cup at Canmore Nordic Centre

2006-2007 **Technology Coordinator** — CSEP Conference
Canadian Society for Exercise Physiology, Banff

2002 **Presentation Assistant** — World Congress of Biomechanics
Calgary, Alberta

1999-2000 **Technology Coordinator** — CSEP Conference
Canadian Society for Exercise Physiology, Canmore

1999 **Presentation Assistant** — International Society of Biomechanics
Calgary, Alberta

1995-1996 **Technology Director** — Special Olympics Canada Winter Games
Calgary, Alberta

Professional Memberships

1997-Current **Canadian Society for Exercise Physiology** — CSEP
27+ years membership

2010-Current **European Muscle Physiology Society** — EMC
14+ years membership

2010-Current **Canadian High Performance Computing Society** — HPC
14+ years membership

2025-Current **European Congress of Sports Science** — ECSS
New member

Volunteer and Community Service

2003-2016 **Board Member** — Canadian Internet Registration Authority
CIRA - Technology governance and policy

1995-1996 **Technology Director & Program Coordinator** — Special Olympics Calgary
Special Olympics Canada Winter Games and swimming programs

1995-1996 **Program Facilitator** — Grace Hospital
Preparation for Re-entry into Education Program (PREP)

1993-1996 **Environmental Director** — Calgary Canoe Club & Calgary Area Outdoor Council
Environmental stewardship and outdoor education

1993-1996 **Environmental Advisor** — Mayor's Environmental Committee
City of Calgary environmental initiatives

1992-1995 **Emergency Room Support** — Calgary General and Rocky View Hospitals
Volunteer healthcare support

Service Summary Committee service: 15+ university committees | External service: 20+ thesis examinations | Conference organization: 8+ major conferences | Professional memberships: 25+ years combined | Community leadership: 20+ years volunteer service

Media & Public Engagement

2025 **Exploring the AI Running Revolution** — Run to the Top Podcast | The ultimate running podcast
https://open.spotify.com/episode/0yN8RkAbjMh3j2qS2IjOW8

2025 **Can A Weighted Vest Amp Up Your Daily Walk?.** Canadian Living: Sara Romano
https://www.canadianliving.com/health-fitness/article/can-a-weighted-vest-amp-up-your-daily-walk

2024 **Technology is revolutionizing sport performance.** Future Tense Podcast
https://www.abc.net.au/listen/programs/futuretense/technology-future-of-sport-cheating-advancement-performance-peak/104040538

2024 **Calgary Hearld: How to cold down when the heat is on.** Calgary Hearld
https://calgaryherald.com/health/diet-fitness/how-to-cool-down-when-the-heat-is-on

2024 **N.S. woman says ocean plunges offering her health benefits** Global News
https://globalnews.ca/video/10233505/n-s-woman-says-ocean-plunges-offering-her-health-benefits/

2024 **Cold Plunges for the new year** CBC -Edmonton Live
January 8th

2024 **West coast cold plunges** CKNW 980 Vancouver with Scott Shantz
January 5th

2024 **Cold Plunge fad or fact** CHEB -Edmonton Live
January 4th

2024 **Cold plunges are all the rage. But what does the science say?** CBC news
https://www.cbc.ca/news/canada/cold-plunges-1.7072906

2023 **Innovator/Educator –Dr. John Holash** Taylor Institute for Teaching and Learning Video series
https://youtu.be/ht2z2Jpy1Bc?si=M88XOgBj6ROXxCmF

2023 **Are you ready to take the plunge? Experts weigh in on cold plunge benefits** Global News
https://globalnews.ca/the-curator/10042896/cold-plunge-benefits/

2023 **Best of Health Magazine:The Many Health Benefits of Nordic Skiing** readers digest
https://www.besthealthmag.ca/article/nordic-skiing-cross-country-skiing?_cmp=stf

2023 **Why some people are taking a wintry dip from the banks of the Bow River** CBC News
https://t.co/yGpoTu8sB5

2022 **UToday News Article: Course revamp is a hit with kinesiology students when they create their own fitness tests** UToday
https://news.ucalgary.ca/news/course-revamp-hit-kinesiology-students-when-they-create-their-own-fitness-tests

2022 **Council on Undergraduate Research: Course revamp is a hit with kinesiology students when they create their own fitness tests** CUR.org
https://www.cur.org/course-revamp-is-a-hit-with-kinesiology-students-when-they-create-their-own-fitness-tests/

2022 **KQ Education Group: Course revamp is a hit with kinesiology students when they create their own fitness tests** KQ Education Group
https://kqeducationgroup.com/course-revamp-is-a-hit-with-kinesiology-students-when-they-create-their-own-fitness-tests-news/

2021 **Spotify Podcast COVID Coffee Chats @ Ucalgary**
Episode 8: Creating a flipped Classroom with John Holash Spotify Podcast
https://open.spotify.com/episode/1yF8Ff4Zn62JHdBuZ1LB6q?si=0ead0ddf70f24661

2021	**Calgary Journal by Lee Reed: Connection between Mental Health and Exercise. Interview with Dr. John Holash**	Calgary Journal
2021	**UToday News Article: HealthyU team creates accessible, cost-friendly workouts catered to students' busy lives** https://www.ucalgary.ca/news/healthyu-team-creates-accessible-cost-friendly-workouts-catered-students-busy-lives	UToday

Training & Learning

2024	**Faculty of Kinesiology Teaching and Learning retreat**	Alt Hotel
2022-24	**Kaggle.com Computer programming and Data visualization programming**	online
2022	**TI 0746-002 Developing Your Teaching Dossier for Tenure and/or Promotion**	Taylor Institute
2022	**TI 0913-003 Creating a Flipped Lesson**	Taylor Institute
2022	**TI 0765-004 Intentional D2L Course Shell Design**	Taylor Institute
2022	**TI 0795-003 Online Student Assessment**	Taylor Institute
2022	**TI 0783-001 Undergraduate Research and Experiential Learning: Focusing Strategies for Courses & Programs**	Taylor Institute
2022	**Academic Integrity in Online courses: Adapting during COVID (March 25)**	Taylor Institute
2021	**Learning to teach online**	Linda Learning
2021	**Data science essentials with R**	Linda Learning
2021	**Creating fun and Engaging Video Training: The Why**	Linda Learning
2022	**Learning Git and GitHub**	Linda Learning
2022	**Web Scraping in Python**	Linda Learning
2022	**Using Python with Excel**	Linda Learning
2022	**Excel Advanced formulas and Functions**	Linda Learning
2020	**Putting your course online (March 23)**	Taylor Institute
2020	**Increasing engagement with eLearning programs**	Linda Learning
2020	**eLearning essentials: Visual design**	Linda Learning
2020	**eLearning essentials: Instructional design**	Linda Learning
2020	**Developing and delivering online courses**	Taylor Institute
2019	**Teaching Days**	Taylor Institute
2019	**Data Science with Python**	Linda Learning
2018	**Spill Response Training**	Online, UofC

2018	**Bio-Safety Training**	Online, UofC
2017	**Chematix / Lab Manager**	Chematix, UofC
2007	**Animal Care and Handling**	Online, UofC
2018	**Occupational Health and Safety Orientation**	Online, UofC
2018	**Workplace Inspections Training**	Online, UofC
2016	**WHMIS 2015**	Online, UofC
2016	**Bio-Safety Program Training**	Online, UofC
2016	**Hazard Assessment Training**	Online, UofC

Certifications

2020	**RSO- Range Safety officer**	Canmore Nordic Centre
2016	**FIS X-Country Ski Official** **cross country skiing international federation of sport, officials course**	Canmore Nordic Centre
2013	**ADI Instruments System Management and Teaching basics** **ADI System Management and Physiology Instruction modules**	University of Saskatoon
2008	**ITIL Intermediate Level V3 certification** **Standards for Computer Support**	University of Calgary
2005	**Management Training** **Franklin Covey Leadership**	Franklin Covey Leadership
2004	**Microsoft Certified System Architect** **MCSA**	Continuing Education, UofC
2001	**Microsoft Certified Database Professional** **MCDP**	Continuing Education, UofC
1998	**Microsoft Certified Professional** **MCP**	Continuing Education, UofC
1994	**Canadian Association of Alpine Ski Instructors** **CSIA Level I**	Canada Olympic Park, WinSport
1994	**Canadian Association of Nordic Ski Instructors** **CASI Level I**	Canada Olympic Park, WinSport
1992	**Canadian Recreational Canoe Association** **CRCA Level V**	Calgary Canoe Club

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