



from Research
to Practice
to Prevention

2018 ACE | CROSH

**49th Annual ACE Conference
& 6th CROSH Conference**

HOLIDAY INN, SUDBURY OCTOBER 15 - 18, 2018



Association of Canadian Ergonomists
Association Canadienne d'Ergonomie



centre for research in
occupational safety and health
at Laurentian University | centre de recherche sur la
santé et sécurité au travail
à l'Université Laurentienne

ace-ergocanada.ca

VENUE MAP



WELCOME FROM ACE

We are pleased to welcome you to the 49th annual conference of the Association of Canadian Ergonomists (ACE) hosted jointly with the 6th Conference of the Centre for Research in Occupational Safety and Health (CROSH).

The conference theme, "From Research to Practice to Prevention" illustrates the cycle in the prevention of injuries and illnesses. It signifies the research work by CROSH but also echoes continued effort by ACE to promote research and awareness of ergonomics and human factors. We explore the many ways both ergonomics and health and safety comprehension is expanding, and how the application of this knowledge can have a positive impact on everyone in any sector.

Internationally renowned speakers, practicing ergonomists and H&S professionals, researchers and students will present their most recent work in oral presentations, panel discussions, workshops, and symposia sessions.

The annual conference will provide ample opportunities for professional networking and an opportunity to interact with exhibitors who provide products, services and support to the health and safety community and organizations.

Welcome to Sudbury!

Karen Hoodless

President, Association of Canadian Ergonomists

WELCOME FROM CROSH

Dear Conference Attendee,

It is with great pleasure that we welcome you to the 6th annual CROSH conference, hosted jointly with the 49th annual ACE conference, entitled: "From Research – to Practice – to Prevention." The Centre for Research in Occupational Safety and Health strives to be at the forefront of occupational health and safety research to bring the latest knowledge and innovative practices in OHS to our community partners.

We thank each of you for attending and for bringing your expertise to this event. As health and safety leaders, you are our greatest asset. Throughout this conference we invite you to engage, share experiences, and help us continue to shape the future of ergonomics in workplaces across northern Ontario and beyond.

We would like to take this opportunity to acknowledge the efforts of our Conference organizing committee members, including: Natalie Carscadden, Ron Carscadden, Patricia Hope, Alison Godwin, Caleb Leduc, Peg Scherzinger, and Brandon Vance. Special thanks as well to our graphic designers at Design de Plume.

We would also like to acknowledge the generous support of our conference sponsors; without these contributions, this conference would not have been possible.

On behalf of CROSH and the conference sponsors, welcome to Sudbury!

Sincerely,

Dr. Sandra Dorman
Director, CROSH

Dr. Tammy Eger
Research Chair, CROSH

WELCOME

WELCOME FROM MPP FRANCE GELINAS & JAMIE WEST

Welcome to the 2018 Conference ‘From Research – To Practice – To Prevention’; co-hosted by the Centre for Research in Occupational Safety and Health (CROSH) and the Association for Canadian Ergonomists (ACE). It is an exciting time in Occupational Health and Safety as we continue to grow, adapt and respond to workers’ and workplaces’ needs to solve relevant issues. Workplaces face many challenges and health and safety organizations best address these challenges through collaborative, knowledge transfer and exchange, like this conference.

As your representatives for Sudbury and Nickel Belt and long-term supporters of Health and Safety in the workplace, we were happy to see that Sudbury was the choice for the 49th national ACE conference, co-hosted this year with CROSH.

Equally significant was the conference theme; we recognize that there is often a disconnect between current best practices, identified in research studies, and the real-time application in practice. Regular collaborative efforts, like this conference, are essential to bridge this gap.

Therefore, we would like to thank each of you for attending this conference and bringing your expertise to the gathering. You, as researchers, practitioners, and health and safety leaders, have the vision, the knowledge, the wherewithal and the experience to help our communities move towards a better future. We wish you a productive conference and an enjoyable stay in Sudbury.

Sincerely,

France Gélinas, MPP Nickel Belt

Jamie West, MPP Sudbury

Conference Organizing Committee	Conference Scientific Committee	
Natalie Carscadden	Natalie Carscadden	Patricia Hope
Ron Carscadden	Dr. Sandra Dorman	Heather Johnston
Dr. Sandra Dorman	Dr. Janessa Drake	Caleb Leduc
Dr. Tammy Eger	Dr. Tammy Eger	Dr. Mallorie Leduc
Dr. Alison Godwin	Dr. Dominique Gagnon	Dr. Brent Lievers
Patricia Hope	Dr. Alison Godwin	Trevor Schell
Caleb Leduc	Katie Goggins	Peg Scherzinger
Peg Scherzinger	Dr. Mike Holmes	Dr. Kathryn Sinden
Brandon Vance		Brandon Vance

TABLE OF CONTENTS

<u>WELCOME</u>	<u>3</u>
<u>KEYNOTE SPEAKER BIOGRAPHIES</u>	<u>6</u>
<u>PRE-CONFERENCE WORKSHOP</u>	<u>8</u>
<u>PROGRAM AT A GLANCE</u>	<u>10</u>
<u>TECHNICAL PROGRAM</u>	<u>12</u>
<u>EXHIBITOR SHOWCASE</u>	<u>20</u>

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Prof Neil Mansfield

*Head of Engineering,
Nottingham Trent
University, UK*

President of Chartered
Institute of Ergonomics
and Human Factors

Neil is Professor and Head of Engineering at Nottingham Trent University UK, where he leads an ambitious new department seeking to create a new breed of engineers ready to invent our future world. This initiative gives equal weight to the fundamentals of engineering and to creative project delivery. Prior to working at Nottingham Trent he was a Professor at Imperial College London where he helped set up a School of Design Engineering, and was Associate Dean for Research at Loughborough Design School. He has a long track-record in the world of Ergonomics and Human Factors Engineering, having completed his PhD in Biomechanics of Humans Exposed to Vibration and Shock, and research on optimisation of well being for those working in challenging environments, ranging from military and off-road machinery through to design to maintain the independence of the oldest car drivers. He previously chaired the ISO committee tasked with writing standards on whole-body vibration, and was editor of the journal Ergonomics for 10 years. He is now President of the Chartered Institute of Ergonomics and Human Factors.



Marie Laberge, PhD

Associate Professor

Université de Montréal's
École de réadaptation
Regular researcher at
CINBIOSE and CHU
Ste-Justine

Marie Laberge received her PhD in Biological Sciences (specialized in ergonomics) from UQAM in 2011. She is an associate professor at Université de Montréal's École de réadaptation (rehabilitation school) and a regular researcher at the CHU Ste-Justine's research centre and at CINBIOSE. She has also been an adjunct scientist at the Institute for Work & Health since 2012. She received a Junior 1 Career Award grant for the quality of her research from FRQ-IRSST (2015-2019).

Marie Laberge's research focuses on preventing work disability in adolescents with learning difficulties. She has developed several prevention interventions as part of action research with schools and school boards in Quebec that offer the Work-Oriented Training Path (WOTP) program. On this path, young people who are struggling in school go on in-company pre-employment internships to develop their employability. The young people who take part in this program are exposed to numerous risk factors for occupational injury and must develop basic skills to protect themselves at work throughout their lives. By applying constructive ergonomics and professional teaching practices, Marie Laberge's research team develops methods and tools to foster the development of a lasting prevention culture in these young people and the adults guiding them through the process. Marie has, among other things, developed interventions that draw on the added value of information and communication technologies to favour professional integration. Her intervention development approaches are sex- and gender-sensitive. In that regard, she is currently leading a Canadian Institutes of Health Research (CIHR) team of 20 researchers assessing the taking into account of sex and gender in interventions conducted to transfer knowledge of occupational and environmental health.



Dr. Richard Gasaway is widely considered to be one of North America's leading authorities on human error, situational awareness and high-risk decision making processes. His work has been chronicled in more than 450 books, book chapters, journals and website articles and he has delivered over 4,000 presentations to 62,000+ first responders, business leaders, industrial workers, medical providers, utility workers and military personnel worldwide. Dr. Gasaway served 33 years on the front lines as a firefighter, EMT-Paramedic, company officer, training officer and fire chief. His doctoral research included the study of cognitive neuroscience and the human factors that flaw situational awareness and impact high-risk decision making.

Dr. Richard Gasaway

President & Principal Consultant, Gasaway Consulting Group, LLC

Chief Scientist, Situational Awareness Matters
Resident Instructor,
Executive Fire Officer Program, National Fire Academy

Dr. Trask is an Associate Professor at the University of Saskatchewan in Saskatoon and Canada Research Chair in Ergonomics and Musculoskeletal Health. As director of the Ergonomics Lab at the Canadian Centre for Health and Safety in Agriculture, she leads an interdisciplinary research program that focusses on ergonomics in agriculture and other heavy industries. Dr. Trask has published over 60 peer-reviewed articles in ergonomics and occupational health journals. She is a strong advocate for evidence-based prevention strategies and for the economic and health benefits of occupational health and safety research and works to promote both in her role as president of the Canadian Association for Research in Work and Health (CARWH).



Dr. Catherine Trask

Canada Research Chair in Ergonomics and Musculoskeletal Health

Associate Professor,
Canadian Centre for Health and Safety in Agriculture
University of Saskatchewan

Dr. Trask has a strong interest in exposure assessment methodology and economic efficiency. In July 2013 her work in this area was awarded the Research Prize at the 8th International Conference on the Prevention of Work-related Musculoskeletal Disorders (PREMUS) in South Korea. Her research combines the 'user-centred design' approach central to ergonomics with the hierarchy of control paradigm of industrial hygiene and community-engaged research strategies from public health. Current projects include multi-faceted and mixed-method evaluation of workplace interventions, lab-based investigation of the performance impacts of whole body vibration, and quantification of physical exposures in understudied populations.

HOW TO INTEGRATE ERGONOMICS INTO THE ENGINEERING DESIGN PROCESS

Dr. Judy Village¹, Dr. Patrick Neumann²

¹ School of Population and Public Health UBC, Vancouver, BC, Canada

² Department of Mechanical and Industrial Engineering, Ryerson University, Toronto, Ontario

Workshop Overview

In this one-day workshop, participants will learn about how human factors/ergonomics can be effectively integrated into the engineering design process to improve not only worker health, but business performance. Participants will learn about HF and the industrialization process and various production design issues and strategies. They will also learn how to link HF to corporate strategies to gain support from senior management for HF. Ergonomists will be challenged to think about gaps in their understanding of engineering design language, tools and techniques and strategize to find ways to gain this information in order to work more effectively on a team with engineers. Common business improvement strategies such as “Lean” and “Six Sigma” will be discussed highlighting ways that HF can enhance these strategies. Several engineering design tools that have been adapted for HF will be presented (such as the failure mode effects analysis, and design for assembly). Participants will learn ways to work with engineering groups to adapt other engineering design tools and techniques to include HF.

Objectives of the Workshop:

At the end of this workshop, participants will be able to:

- Explain why ergonomics is typically left out of the engineering design process
- Describe typical design processes for how work is organized
- Describe ways to integrate ergonomics into the engineering design process based on the design for human factors (HF) theory
- Explain key principles of lean manufacturing and how HF can be integrated into lean
- Use tools to navigate the corporate strategy (cognitive mapping) and the design process (process mapping)
- Show how other engineering tools can be adapted to include ergonomics (such as failure mode effects analysis, and design for assembly)
- Provide ergonomic design guidelines and other information to engineers in a format that is most effective for their use

The organizing committee of the 50th Annual Conference of the Association of Canadian Ergonomists (ACE) invites you to join us at the Delta St. John's Hotel and Conference Centre in St. John's, NL, on August 12 – 15, 2019.

Visit www.ace-ergocanada.ca to obtain additional conference details.



Association of Canadian Ergonomists
Association Canadienne d'Ergonomie



ACE



NEW HORIZONS • NOUVEAUX HORIZONS

Le comité organisateur du 50e congrès annuel de l'Association canadienne d'ergonomie (ACE) vous invite à nous rejoindre au Delta St. John's Hotel and Conference Centre le 12 au 15 août 2019, à St. John's, Terre-Neuve-et-Labrador.

Pour en savoir plus sur le congrès, consultez www.ace-ergocanada.ca.

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TIME			
DAY 1 – Oct 15th			
9:00 - 4:30	Pre-Conference Workshop: How to Integrate Ergonomics into the Engineering Design Process GEORGIAN B		
DAY 2 – Oct 16th			
8:30 AM	Opening Remarks GEORGIAN DE		
9:00 – 10:15	Keynote Lecture: “Human Factors for the Future Workforce” Prof. Neil Mansfield GEORGIAN DE		
10:15 – 10:30	Break SOLARIUM		
10:30 – 11:30	Paper Session 1: Physiology GEORGIAN DE	Interactive Panel: Wearable Technology GEORGIAN B	Paper Session 2: Manual Materials Handling GEORGIAN A
11:30 – 1:00	Lunch and ACE Annual General Meeting GEORGIAN DE		
1:00 – 2:15	Keynote Speaker: “Prévention équitable de l’incapacité de travail auprès des adolescentes et adolescents faiblement qualifié.es par la conception d’environnements capacitants d’apprentissage” Dr. Marie Laberge GEORGIAN DE		
2:15 – 2:45	Break SOLARIUM		
2:45 – 4:15	Paper Session 3: Office Ergonomics GEORGIAN DE	Workshop: CCCPE GEORGIAN A	Paper Session 4: Applied Case Studies GEORGIAN C
5:00-6:30PM	Exhibitor Showcase and Reception SOLARIUM		
DAY 3 – Oct 17th			
8:30 AM	Announcements GEORGIAN DE		
8:45 – 10:00	Keynote Speaker: “What is Situational Awareness and why does it matter?” Dr. Richard Gasaway GEORGIAN DE		
10:00 – 10:15	Break SOLARIUM		
10:15 – 12:00	Interactive Panel: Field to Lab to Field Approach Paper Session 5: Ergonomics in Healthcare GEORGIAN A	Paper Session 6: Undergraduate and Masters Award Finalists GEORGIAN B	Workshop: Health and Safety Training and Education GEORGIAN C

TIME			
12:00 – 1:15	Lunch GEORGIAN DE		
1:15 – 2:45	Interactive Lecture: Flawed Situational Awareness Dr. Gasaway GEORGIAN DE	Paper Session 7: Mobile Equipment GEORGIAN A	Paper Session 8: Doctoral Award Finalists GEORGIAN B
2:45 – 3:15	Break		
3:15 – 4:45	Interactive Lecture: continued GEORGIAN DE	Workshop: Office Ergonomics GEORGIAN A	Paper Session 9: General Ergonomics GEORGIAN B
6:00PM	Social Event SCIENCE NORTH		
DAY 4 – Oct 18th			
8:45 AM	Announcements GEORGIAN DE		
9:00 – 10:15	Keynote Speaker: “Reaping what we sow- Engaging Workers and Stakeholders in Agricultural Health Research” Dr. Catherine Trask GEORGIAN DE		
10:15 – 10:30	Break		
10:30 – 12:00	Paper Session 10: General Ergonomics GEORGIAN A	Paper Session 11: Ergonomics in Healthcare GEORGIAN C	Workshop: New MSD Prevention Guide for Ontario GEORGIAN B
12:00 – 1:00	Lunch – Presentation of Student Awards & Closing Remarks GEORGIAN DE		
1:00 – 2:30	Workshop: Measuring Force (Instrumentation) GEORGIAN A	Workshop: Office Ergonomics GEORGIAN C	Workshop: MSDs cont. GEORGIAN B

TIME	
DAY 1 – Oct 15th	
9:00-4:30	<p>Workshop: <i>“How to Integrate Ergonomics into the Engineering Design Process”</i> Georgian B</p> <p>Facilitators: Dr. Judy Village¹ and Dr. Patrick Neumann²</p> <p>¹School of Population and Public Health UBC, Vancouver, BC, Canada</p> <p>²Department of Mechanical and Industrial Engineering, Ryerson University, Toronto, Ontario</p>
DAY 2 – Oct 16th	
7:00	<p>Registration Opens</p> <p><i>**Denotes simultaneous translation offered during this session</i></p>
8:30-9:00	<p>Opening Remarks and Welcome** Georgian DE</p>
9:00-10:15	<p>Keynote Lecture: <i>“Human Factors for the Future Workforce”</i>**</p> <p>Prof. Neil Mansfield, PhD</p> <p>Head of Engineering, Nottingham Trent University</p> <p>President, Chartered Institute of Ergonomics and Human Factors</p> <p>Georgian DE</p>
10:15 – 10:30	<p>Health Break Solarium</p>

**Indicates session that offers simultaneous translation

CONCURRENT SESSIONS

10:30-11:30	Paper Session 1: Physiology**	Interactive Panel: The evolution of wearable assessment devices in ergonomics	Paper Session 2: Manual Materials Handling
	Georgian DE	Georgian B	Georgian A
	<p>Igor Zovilé Évaluation des contraintes physiologiques associées au port d'un appareil de protection respiratoire de type P100 dans différentes conditions d'humidité relative</p> <p>Samuel Charbonneau Contraintes physiologiques et physiques associées au port d'un appareil de protection respiratoire de type P100 selon l'intensité physique et la température ambiante</p> <p>Alexie Dennie The Relationship Between the Physical Working Environment and Self-Reports of Sleep Quality and Quantity in the Mining Industry</p>	<p>Chair: Michele Oliver Panelists: Erika Ziraldo, Karen Gordon & Andrew Hamilton-Wright</p>	<p>Harrison Kloke Balanced joint loading – a new recommended lifting strategy</p> <p>Alison McDonald The effects of task and ladder on shoulder and low back demands during common ladder handling tasks</p> <p>Tianna Beharriell Physiological responses to acute lifting tasks of varied frequency and magnitude</p>
11:30-1:00	Lunch and ACE Annual General Membership Meeting** Georgian DE		
1:00-2:15	<p>Keynote Lecture: “Prévention équitable de l’incapacité de travail auprès des adolescentes et adolescents faiblement qualifié.es par la conception d’environnements capacitants d’apprentissage”**</p> <p>Dr. Marie Laberge, PhD Professeure agrégée, École de réadaptation de l’Université de Montréal Chercheuse régulière CINBIOSE CHU Ste-Justine</p> <p>Georgian DE</p>		
2:15-2:45	Health Break & Exhibitor Session Solarium		

CONCURRENT SESSIONS

2:45-4:15	Paper Session 3: Office Ergonomics**	Workshop:	Paper Session 4: Applied Case Studies
	Georgian DE	Georgian A	Georgian C
	<p>Nancy Black Challenges of controlled measures in real office environments: impact of workstation stand-sit height variations</p> <p>Daniel Viggiani Automated prediction of sit-stand desk use from low-cost distance and temperature sensors</p> <p>Nancy Black Matching postural state sequences with fatigue and pain experienced to distinguish low and high risk at sitting and sit-stand workstations</p> <p>Kayla Fewster An evaluation of office chair backrest height on muscular demands</p>	<p>Facilitator: Tanya Morose</p> <p>Applying for certification with CCCPE and maintaining certification</p>	<p>Kim Meszaros Investigating the application of assistive exoskeletons for overhead assembly work</p> <p>Allison Stephens Do I need a Digital Human Model (DHM) to do Ergonomics?</p> <p>Kristina Zucchiatti One conveyor, prolonged standing, many workers: is a chair the answer?</p> <p>Nicholas Patrick Developing physical demands descriptions from job simulations</p>
5:00-6:30	Exhibitor Showcase and Reception Solarium		
DAY 3 – Oct 17TH, 2018			
8:00	Registration Opens		
8:30-8:45	Announcements Georgian DE		
8:45-10:00	<p>Keynote Lecture: <i>“What is Situational Awareness and why does it matter?”</i></p> <p>Dr. Richard Gasaway, PhD President & Principal Consultant, Gasaway Consulting Group, LLC Chief Scientist, Situational Awareness Matters Resident Instructor, Executive Fire Officer Program, National Fire Academy</p> <p>Georgian DE</p>		
10:00-10:15	Health Break Solarium		

CONCURRENT SESSIONS

10:15-12:00	Interactive Panel:	Workshop:	Student Award Finalists:
	Georgian A	Georgian C	Georgian B
	<p>Chair: Sandra Dorman</p> <p>Panelists: Mallorie Leduc, Sandra Dorman, Alison Godwin, Brandon Vance</p> <p>Applied Field Research using Field-Lab-Field (F2L2F) Approach</p>	<p>Facilitator: Vance McPherson</p> <p>Applying adult learning principles: ensuring success to your health and safety education and training sessions</p>	<p>CROSH Undergraduate Student Award Finalists:</p> <p>Jacqueline Toner The impact of different handle orientations on external pushing force and muscle activity of a 4-child stroller</p> <p>Erika Ziraldo Design and validation of a prototype wearable device for automating low back injury risk factor quantification during manual materials handling</p> <p>Courtney Nickel Eliminating the learning effect for mining simulator research</p>
<p>Paper Session 5: Ergonomics in Healthcare</p> <p>Carolynn Kallitsis Estimated action limits and postural ranges for care providers with pediatric populations: an applied case study</p> <p>Jim Potvin Caregiver loads during sit-to-stand patient lifting: A simulation study of three clinical devices</p>		<p>JM Christensen Masters Award Finalists:</p> <p>Matthew Barrett Can seat pan design mitigate lower limb swelling and back pain?</p> <p>Sara Sayed Career firefighters' real-time physiological response to firefighting tasks over 6 months: implications for injury prevention</p>	
12:00-1:15	Lunch Georgian DE		

CONCURRENT SESSIONS

1:15-2:45	Interactive Session:	Paper Session 7: Mobile Equipment	Paper Session 8: Founders Award Finalists: PhD and Post-Doctoral Fellows
	Georgian DE	Georgian A	Georgian B
	<p>Facilitator: Dr. Richard Gasaway Flawed Situational Awareness: A stealth killer in the workplace</p>	<p>Kevin Gillespie Forensic Ergonomics: Line of sight and visibility assessment in critical injury and fatality 'struck-by' investigations; a case study</p> <p>Heather Kahle Efficacy of broadband alarms: use, perception and safety</p> <p>Brandon Vance Documenting construction worker knowledge and attitude around reversing aids and visibility policies</p> <p>Amandeep Singh Investigation of occupational ride comfort in cultivation operation by Taguchi's method</p>	<p>Michal Glinka Chair design challenges for accommodating postures between traditional sitting and standing</p> <p>Katie Goggins Anatomical locations for capturing magnitude differences in foot-transmitted vibration exposure</p> <p>Colin McKinnon The influence of hand location on lumbar spine axial twist and flexion postures during simulated industrial reaching tasks</p>
2:45-3:15	Health Break Solarium		

CONCURRENT SESSIONS

3:15-4:45	Interactive Session: Flawed Situational Awareness continued...	Workshop:	Paper Session 9: General Ergonomics
	Georgian DE	Georgian A	Georgian B
		Facilitator: Lucy Hart Office ergonomics 2018: unpacking the new CSAz412 standard	Catherine Trask Egress technique in agricultural machinery and the risk of falls Mallorie Leduc Vibration Toolkit: Evaluation of an educational intervention Corey Bouwmeester The effect of underground mining footwear on lower limb gait characteristics and comfort
6:00	Social Event Science North: Join us for an exciting evening at Science North on Ramsey Lake, including interactive exhibits, a cash bar, and appetizers!		
DAY 4 – Oct 18TH, 2018			
8:00	Registration Opens		
8:45-9:00	Announcements Georgian DE		
9:00-10:15	Keynote Lecture: <i>“Reaping what we sow- Engaging Workers and Stakeholders in Agricultural Health Research”</i> Dr. Catherine Trask, PhD Canada Research Chair in Ergonomics and Musculoskeletal Health Associate Professor, Canadian Centre for Health and Safety in Agriculture University of Saskatchewan Georgian DE		
10:15-10:30	Health Break Solarium		

CONCURRENT SESSIONS

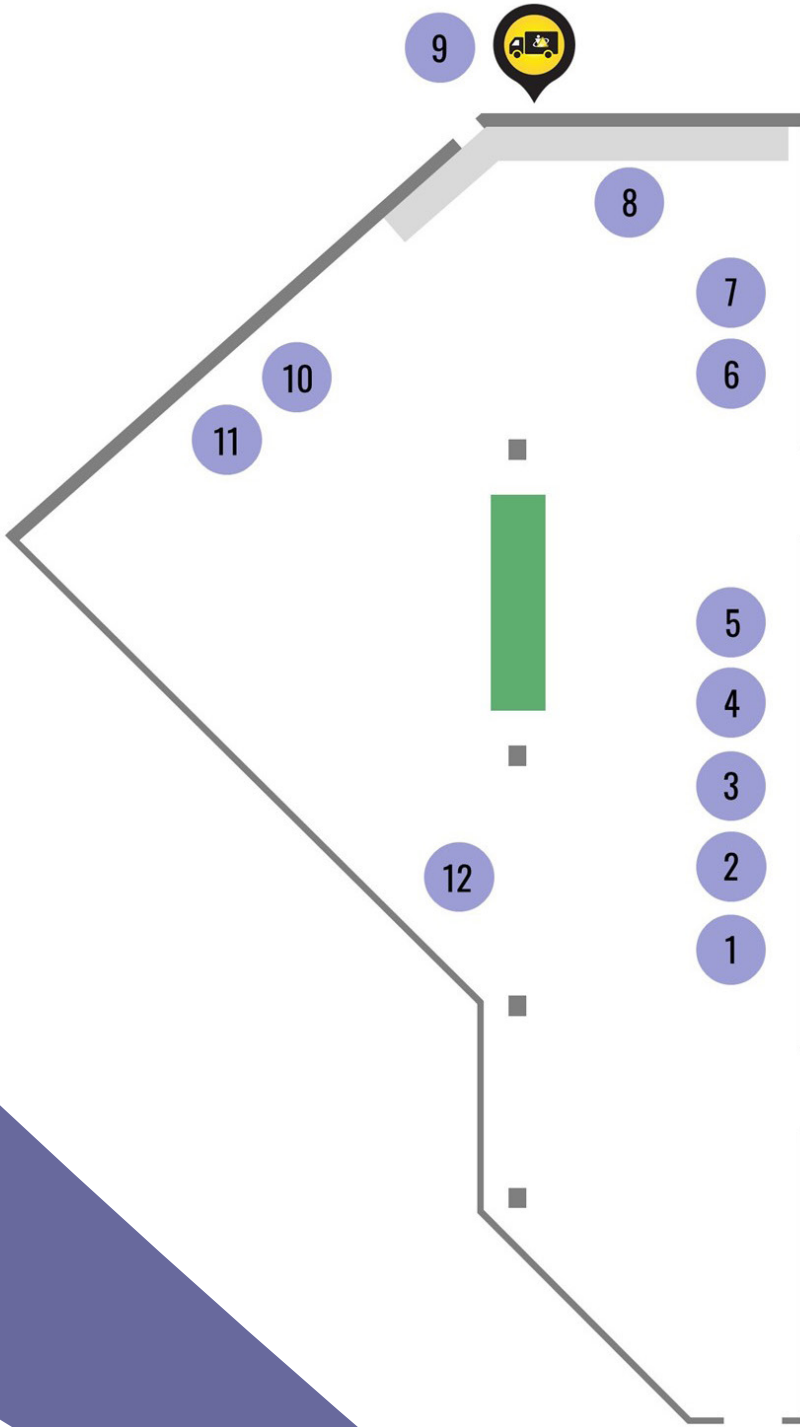
10:30-12:00	Paper Session 10: General Ergonomics	Paper Session 11: Ergonomics in Healthcare	Workshop:
	Georgian A	Georgian C	Georgian B
	<p>Peg Scherzinger Ergonomics assessment methods and guidelines used in the investigation of a critical injury and a fatality due to falls from ladders</p> <p>Heather Kahle 'What goes right' Using appreciative action research to understand work performance and promote system-level resilience in the silviculture industry</p> <p>Ornwipa Thamsuwan Field-based electromyography to assess shoulder muscle activity during repetitive tasks: an application in apple orchards</p> <p>Cyrus Lee Evaluation of smartphone sound level meter applications for spectral analysis by comparing internal and external microphones</p>	<p>Amy Doan Medical device user interfaces and blame: use and user error perceptions</p> <p>Nicholas La Delfa Quantifying upper extremity muscle exposures during manual pill crushing</p> <p>Josie Blake The fundamentals of ergonomics win again: adjusting the patient (work) to the nurse (worker)</p> <p>Ryan Smiley Case study: BCEHS patient handling equipment implementation</p>	<p>Facilitator: Amin Yazdani</p> <p>Development of a new MSD Prevention Guide for Ontario</p>

12:00-1:00

Lunch | Presentation of Student Awards & Closing Remarks | **Georgian DE**

CONCURRENT SESSIONS

	Applied Workshop:	Workshop:	Workshop:
1:00-2:30	Georgian A	Georgian C	Georgian B
	<p>Facilitator: Allison Stephens</p> <p>Moving from Lab to Industry: How to measure force and assess it for acceptability</p>	<p>Facilitator: Trevor Schell</p> <p>Can ergonomists do more harm than good? How to avoid costly mistakes for your clients</p>	<p>Facilitator: Amin Yazdani</p> <p>Development of a new MSD Prevention Guide for Ontario Continued</p>



- 1 TAWI
- 2 FANSHAWE COLLEGE
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- 5 GLOBAL
- 6 TEA
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EXHIBITORS



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TEA (Tech Ergo Applications) specializes in the development, supply and implementation of wireless measurement devices for Motion, Physical activity on the Workplace, Head and Face motion, as well as Eye, Eyelid and Gaze tracking. Applications are numerous in a large variety of fields: ergonomics (conception, HMI, software, workplace analysis), automotive, aerospace, transportation, driving assistance, human factors, biomechanics, robotics, medical research (neurology, disability, psychology, children), sports, and health Monitoring.



With a degree in Kinesiology specializing in sports medicine, CoreChair CEO and Founder Patrick Harrison has a passion for understanding what the human body needs. The design of the CoreChair optimizes sitting posture and encourages movement in all directions and to 14 degrees; enhancing joint mobilization of the hips, pelvis, and spine; increasing blood flow and circulation and calorie expenditure. It has been research Validated as well as NEAT and BIFMA-ANSI certified.



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The Centre for Research in Occupational Safety and Health (CROSH) is a research centre at Laurentian University in Sudbury, Ontario that envisions a northern Ontario where workplaces partner to ensure every worker gets home safe and healthy every day. We seek to be an agent for innovation and discovery to solve relevant and critical problems facing northern industries so they can eliminate occupational injury and disease from their workplaces. To learn more about CROSH visit: www.crosh.ca.



Like you, we believe ergonomics is an integral part of a successful work place

- Educating the architect and design community about the importance of integrating ergonomics into work place design
- Continuing to support ACE as the longest standing Corporate Member
- Leadership in the development of ergonomic standards and guidelines for the work place

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Founded in 2008, SantosHuman Inc. (SHI) provides virtual human-in-the-loop simulation solutions to some of the most globally recognizable companies in the World.

SHI's solutions include both software and services which leverage an extensive body of Digital Human Modeling (DHM) and simulation research (\$50M+ and counting) that continues since 2003.

These technologies, now commonly referred to as Santos®, represent the only existing comprehensive approach to predicting human physical behavior and performance that can consider human strength, fatigue, flexibility, external forces, environmental conditions, balance, avoidance of collision, and the need to see.



Fanshawe College offers Advanced Ergonomic Studies which is a full-time program that leverages an undergraduate education with the discipline- specific knowledge, skills and experience required to prepare graduates to enter the workforce as ergonomists. Graduates are well-positioned to pursue the Associate Ergonomist (AE) designation from the Canadian College for the Certification of Professional Ergonomists (CCCPE). The first of its kind in Canada, this intensive program is delivered at Fanshawe’s London campus in two 15-week semesters followed by an 8-week field placement. www.fanshawec.ca

We focus on developing complete ergonomic solutions to reduce and assist manual lifting. Our products save backs, knees and shoulders and help create a more effective handling of goods. We offer a wide selection of lifting solutions for everything from food manufacturing to automotive industry.

Our lifting equipment handles everything from boxes and sacks, to cheese and windshields. We can turn, tilt and rotate heavy barrels, large panels and much more. Our solutions include vacuum lifters, hoists, crane systems and mobile lifters. This means that TAWI equipment cover all your lifting needs. Experience the benefits of using one complete supplier.



Take your passion and interests to the limit.

Graduate Studies

MASTER’S DEGREES

Architecture (M.Arch.)	E*
Biology (M.Sc.)	E*
Business Administration (MBA)	E
Business Administration – Online (MBA)	E
Chemical Sciences (M.Sc.)	E*
Computational Sciences (M.Sc.)	E
Engineering – fast track (M.Eng.) ^o	E
Environmental Solutions (M.Env.) ^o	E
Forensic Sciences (M.Sc. Forensic Sciences) ^o	E
Geology (M.Sc.)	E
History (MA)	E/F
Interdisciplinary Health (MA, M.Sc.)	E/F
Health Administration (MHA)	E/F
Human Kinetics (MHK)	E/F
Humanities (MA)	E*
Indigenous Relations (MIR)	E
Medical Studies (M.Sc.) ^o	E
Natural Resources Engineering (M.A.Sc., M.Eng.) ..	E
Nursing (MScN)	E
Orthophonie (M.Sc.S.)	F
Physics (M.Sc.)	E
Primary Care Nurse Practitioner (M.Sc.N.)	E
Psychology – Applied & Experimental (MA)	E/F
Science Communication (M.Sc.Com.)	E
Sciences infirmières (M.Sc.Inf.)	F
Service Social (M.S.S.)	F
Social Work (MSW)	E
Sociology (MA)	E/F

GRADUATE DIPLOMAS

Science Communication	E
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DOCTORAL DEGREES

Boreal Ecology (PhD)	E
Biomolecular Sciences (PhD)	E
Human Kinetics ^o	E
Human Studies (PhD)	E/F
Materials Science (PhD)	E
Mineral Deposits and Precambrian Geology (PhD) ..	E
Natural Resources Engineering (PhD)	E
Rural and Northern Health (PhD)	E

E = offered in English
 F = offered in French
 * = some courses available in French
 ◊ = pending approval



For program details, consult our website at laurentian.ca.



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