



**46th Annual Conference of the  
Association of Canadian  
Ergonomists**

**Ergofest: Celebrating our  
achievements in research and  
applied ergonomics**

**October 6 - 8, 2015  
Waterloo Inn Conference Centre,  
Waterloo, Ontario  
[www.ace-ergocanada.ca](http://www.ace-ergocanada.ca)**

**Workshops  
October 5, 2015**

**Conference Proper  
October 6-8, 2015**

**Exhibitor Showcase  
October 6-7, 2015**

# PRELIMINARY PROGRAM



Continuing Education Credits have  
been applied for, or are eligible for:

ABIH  
BCRSP  
CCPE  
BCAK



**Association of Canadian Ergonomists  
Association Canadienne d'Ergonomie**

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Association of Canadian Ergonomists  
Association Canadienne d'Ergonomie

We are pleased to announce the 46th annual conference of the Association of Canadian Ergonomists (ACE). The theme, "Ergofest: Celebrating our achievements in research and applied ergonomics" recognizes that ergonomics and human factors theory, evaluation, and design principles, not only have had a positive impact on health and safety, but that they have and will continue to contribute to the optimization of products, systems, and environmental designs. The ACE 2015 National Conference hopes to commemorate the many ways in which researchers, ergonomists and human factors professionals have used their skills to better society.

ACE 2015 will be of interest to ergonomists, human factors professionals, researchers and students, as well as members of allied professions, including: safety, health, rehabilitation, industrial hygiene, industrial design, human resources, psychology, engineering, usability, user experience and facility planning. Internationally renowned speakers, practicing ergonomists, researchers and students will present their most recent work in oral or poster presentations, panel discussions, workshops, and symposia sessions.

The annual conference will also provide ample opportunities for professional networking. The **technical program** (October 6-8th) will include, research, applied studies, and panel discussions on a range of topics spanning the physical, cognitive, behavioral, psychosocial, and organisational aspects of human factors and ergonomics. **Pre-conference workshops** (October 5th) will offer professional development opportunities.

Waterloo is a city well-known for its technical innovations, with Blackberry, Google, OpenText, the Centre for International Governance Innovation, and the Universities of Waterloo and Wilfred Laurier, all located within its boundaries! However, Waterloo also has a playful side, with the largest annual Bavarian celebration outside of Germany, known to many as **Oktoberfest!** This festival actually starts immediately following our conference (October 9-17, 2015). So come to learn, but then plan to stay and play! For more information on what to see and do in [Waterloo/Kitchener/Cambridge](http://www.explorewaterlooregion.com) area, check out <http://www.explorewaterlooregion.com>.

**Please join us this October in Waterloo, Ontario!**

**Karen Hoodless Conference Chair**

## Organizing Committee

### Organizing Committee

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## Conference Sponsors

**We would like to thank all sponsors very much for their interest and support in the 2015 conference.**

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Register on-line at [www.ace-ergocanada.ca](http://www.ace-ergocanada.ca) For information, call 1-888-432-2223 or 416-477-0914

## Keynote Speaker - Tuesday, October 6, 2015

### YOUR KEYNOTE SPEAKERS!

The organising committee for the 2015 ACE conference is excited to introduce this year's keynotes. We believe that they truly embody our 46th ACE Conference theme, "Ergofest: Celebrating our achievements in research and applied ergonomics".

You'll hear about the past, present and future of ergonomics and human factors in Canada, and learn how Waterloo's tech sector incorporates ergonomics and human factors into their business practices. Keynotes will be speaking and answering questions each morning between 9:00-10:00 am, immediately following opening remarks by the conference committee (starting at 8:30 am).



**Dr. Alison Smiley**

**Dr. Alison Smiley is President of Human Factors North Inc.,** a Toronto-based human factors engineering consulting company founded in 1982. She holds a PhD in Systems Design Engineering, specializing in Human Factors and is an adjunct professor in the Department of Mechanical and Industrial Engineering at the University of Toronto.

She is an emeritus member and past chair of the TRB Committee on Vehicle User Characteristics and serves on the Editorial Board of Accident Analysis and Prevention. In 1999 she became the founding chair of the Canadian College for the Certification of Professional Ergonomists. She has contributed advice on driver vision, information processing, workload and expectancy in numerous road design, reconstruction and signing projects.

She has acted as an expert witness in several hundred legal cases involving car, truck, and train accidents and given evidence in court 20 times. She has written on human factors issues for the 2015 edition of the Institute of Traffic Engineering Manual, for the 2010 U.S. Highway Safety Manual, and for several chapters of the Ontario Traffic Manual.

## Keynote Speaker - Tuesday, October 6, 2015



**Dr. Ian Noy**

**Dr. Ian Noy is Vice President, Liberty Mutual Group and Director,** Liberty Mutual Research Institute for Safety. He holds a doctorate degree in Industrial Engineering from the University of Toronto, specializing in human factors. He is a Board certified professional ergonomist (CPE) with over 40 years of professional research and practice experience.

Dr. Noy's R&D experience covers a broad range of areas, including traffic safety, workplace ergonomics, human-machine interface design and evaluation, human performance and training, and behavioral research. He has published over 150 scientific and technical reports, and conference and journal articles. He is a sought after keynote speaker at scientific meetings. His applied research experience spans applications in the air, on the ground, and underwater, including military R&D.

Dr. Noy is a Past President of the International Ergonomics Association (IEA). He is a Fellow of the Human Factors and Ergonomics Society (HFES), and a past president and Honorary Fellow of the Human Factors Association of Canada/Association canadienne d'ergonomie (HFAC/ACE).

Dr. Noy is a recipient of several awards, including the U.S. National Highway Traffic Safety Administration's Award for Engineering Excellence, the International Ergonomics Association Distinguished Service Award, and the Human Factors and Ergonomics Society's Distinguished International Colleague Award.

### Conference Proceedings on CD

All full conference and full day conference delegates will receive one complimentary copy of the conference proceedings on CD. Individuals who are unable to attend the conference or are attending only the workshops or for a half day of the conference, or delegates wishing an additional copy, may purchase the proceedings for a fee of \$40.00 per copy.

## Keynote Speaker - Wednesday, October 7, 2015



### **Alison Phillips - Blackberry Design Team**

After earning her degree in Industrial Design at Ottawa's Carleton University, Alison Phillips began her career on the Design Agency side in Toronto before joining Club Monaco in 1995. Working under renowned brand creator Joe Mimran, Phillips was a founding member of Club Monaco's home division, Caban, a ground breaking lifestyle retail concept across Canada, which was acquired by Ralph Lauren.

Ultimately she oversaw Design, Product Development and Merchandising for all Hard lines. In 2007, Phillips joined Vancouver based fashion brand Aritzia as Head of Merchandising, during rapid expansion across Canada and a strategic US store launch. In 2010, Phillips joined the BlackBerry Design team, with an initial focus on Accessories Design, then overseeing Colours, Materials & Finishes.

In 2013, Phillips became Managing Director & Global Head of Industrial Design for all devices and accessories. Her work has been recognized in several publications, and has received a Clio Award, 3 iF Design Awards, and 5 Red Dot Awards, including 2015 "The Best of the Best" award.



Association of Canadian Ergonomists  
Association Canadienne d'Ergonomie

**ACE 2016 Annual Conference**  
Ontario - Fall 2016

## Keynote Speakers - Thursday, October 8, 2015



### John Baker

John Baker founded **Desire2Learn** (D2L) in 1999 at the age of twenty-two while attending the University of Waterloo. He saw that online digital tools could open the door to entirely new and more effective models of education and create learning experiences that are personal, engaging, and inspiring. John's vision for D2L is to transform the way the world learns, improving outcomes for learners everywhere.

He was recognized in 2013 as an EY Entrepreneur of the Year within Ontario, received the Young Alumni Achievement Medal from the University of Waterloo in 2010, and was inducted into the Waterloo Region Hall of Fame as an Intrepid Entrepreneur in 2009.

A strong believer in community involvement, John devotes both his personal and business efforts to supporting young entrepreneurs who are developing and applying technology to improve society worldwide. John was appointed to the Governing Council of the Social Sciences and Humanities Research Council of Canada, is Chair of the Board of Communitech and is a board member of Canada's National Ballet School, among other organizations.

John graduated from the University of Waterloo with an Honours B.A.Sc. in Systems Design Engineering, with Fir

## Keynote Speakers - Thursday, October 8, 2015



**Paul Baker**

Paul Baker is a learning design professional with over 10 years of experience at **Desire2Learn**. Part of the work includes managing a team to create simulated learning experiences, online courses, researching future systems, and user interface design. Working with a team of solution designers, multimedia developers, graphic designers and instructional designers we adapt our solutions to fit the learning experience desired by our clients and their learners.

Part of the work at D2L includes leading the Health and Safety Committee at D2L. A degree in Kinesiology from the University of Waterloo and ergonomic experience at Kellogg's and Cooper Standard Automotive honed the acumen necessary for creating programs, policies, and influencing safety practices at a large company like D2L.



### **Ergonomics Canada magazine**

Watch for issue 8 of Ergonomics Canada, ACE's annual magazine for the public. Available in both hard copy and electronically, Ergonomics Canada, provides timely information on various aspects of ergonomics and human factors. The electronic issue is available via the ACE website ([www.ace-ergocanada.ca](http://www.ace-ergocanada.ca)). You can also download copies of past issues.



## Schedule at a Glance (subject to change)

Time	Monday October 5	Tuesday October 6	Wednesday October 7	Thursday October 8
7:30	<b>Registration</b> (TBD-Desk in Front Lobby?)	<b>Registration</b> (Desk outside Salon/Regent?) <b>Exhibitor Showcase</b> (Regent)	<b>Registration</b> (Desk outside Salon/Regent?) <b>Exhibitor Showcase</b> (Regent)	<b>Registration</b> (Desk in Front Lobby)
8:00	<b>Workshops</b>	<b>Welcoming &amp; Keynote Address</b> Alison Smiley (Human Factors North) & Ian Noy (Liberty Mutual) (Salons AB)	<b>Welcoming &amp; Keynote Address -</b> Alison Phillips (Blackberry) (Salons AB)	<b>Welcoming &amp; Keynote Address -</b> John & Paul Baker (Desire2Learn) (Salons AB)
8:30	Full day - Add some Statistics to your consulting work; Current Ergo Issues Half day (AM) - From the Classroom to the Shop Floor; Sustainable Office Design;			
9:00				
9:30				
10:00	<b>A.M. Break</b> (Convention Lobby)	<b>A.M. Break &amp; Exhibitor Showcase</b> (Regent)	<b>A.M. Break &amp; Exhibitor Showcase</b> (Regent)	<b>A.M. Break</b>
10:30	<b>Workshops</b> Half day (AM cont'd) - Using heuristic evaluations to evaluate interface design	<b>Concurrent Paper Sessions 1, 2 &amp; 3</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	<b>Concurrent Paper Sessions 10, 11 &amp; 12</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	<b>Concurrent Paper Sessions 19, 20, &amp; 21</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)
11:00				
11:30				
12:00	<b>Lunch</b> (Wagner B)	<b>Lunch / ACE AGM</b> (Salons ABC) <b>Exhibitor Showcase</b>  (Regent)	<b>Lunch</b> (Salons ABC) <b>Exhibitor Showcase</b>  (Regent)	<b>Lunch, Student Awards, Closing Address</b> (Salons ABC)
12:30				
13:00	<b>Workshops</b> Half day (PM) - Assessing HF Capability in Organisations: identifying new opportunities to benefit from ergonomics; Office ergonomics : where are we, and where should we be; Using heuristic evaluations to evaluate interface design (in French)	<b>Concurrent Paper Sessions 4, 5 &amp; 6</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	<b>Concurrent Paper Sessions 13, 14 &amp; 15</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	<b>Technical Tour: Toyota Manufacturing</b> 13:15 (bus leaves from conference hotel), tour 14:00-15:00
13:30				
14:00				
14:30				
14:45				
15:00	<b>P.M. Break</b> (Convention Lobby)	<b>P.M. Break &amp; Exhibitor Showcase</b> (Regent)	<b>P.M. Break &amp; Exhibitor Showcase</b> (Regent; tradeshow teardown after break)	
15:15				
15:30	<b>Workshops</b> Workshop rooms - Rosedale, Bloomingdale, Heidelberg, St. Jacobs, and Heritage	<b>Concurrent Paper Sessions 7, 8 &amp; 9</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	<b>Concurrent Paper Sessions 16, 17 &amp; 18</b> (Salon A-Strauss, Salon B-Wagner, Salon C-Schubert)	
16:00				
16:30				
17:00	<b>Informal social &amp; early registration</b> <b>7 pm - 10 pm</b> (social -Traders Lounge; registration - front lobby)	<b>Opening Reception &amp; Exhibitor Showcase</b> <b>6-9 PM</b> (Regent)	<b>Delegate Social</b> <b>6-11 PM</b> Lion's Brewery Huether Hotel	
17:30				
18:00				
18:30				
19:00				
19:30				
21:00				
23:00				

## Pre-conference Workshops - Monday, October 5, 2015

The workshops are offered for different levels of experience (Novice, Intermediate, Advanced) and are a full day or a half day in duration. Training is offered for both the general public (e.g. health and safety representatives and committee members, union delegates, engineers, supervisors, foremen, human resource professionals, etc.) and for ergonomists and other health and safety professionals.

You may register for the workshops even if you are not attending the conference. ACE reserves the right to cancel any workshop if there is insufficient registrations. If a workshop is cancelled for any reason, The Association of Canadian Ergonomists assumes liability limited to a refund of the workshop fee only. Please note that workshop fees are not included in the full conference registration fee.

**N.B The workshops are described in the language in which they are presented.**

### Workshop Schedule

Room	08:00 - 12:00	13:00 - 17:00
TBA	<b>1 - Add some Statistics to Your Consulting Work - introduction to the R language for ergonomists. Stephen Bao, PhD, CCPE, CPE</b>	
TBA	<b>2 - Current Ergonomic Issues - with a Focus on Stairway Usability and Safety - Highlighted in Needed Revisions to Canadian Building Codes in an International Context of Research Applied to Codes and Standards. Jake Pauls, CPE</b>	
TBA	<b>3 - From the Classroom to the Shop Floor - Developing Effective Ergonomic Controls, Elisha Lemoire, CCPE &amp; Amii Pereira, CCPE</b>	<b>6 - Assessing HF Capability in Organisations: Identifying new opportunities to benefit from ergonomics, Patrick Neumann, PhD, Michael Greig, PhD Student, Don Patton, CCPE</b>
TBA	<b>4 - Sustainable Office Design, Mary O'Reilly, PhD, CIH, CPE</b>	<b>7 - Office ergonomics - where are we, and where should we be? Facilitator: Nancy Black, PhD</b>
TBA	<b>5 - Using heuristic evaluations to evaluate interface design, Therese Migan</b>	<b>8 - Initiation par la pratique à l'évaluation des interfaces, Thérèse Migan</b>

# Workshop Descriptions

**N.B. Workshops are described in the language in which they are presented**

## **1 - Add some Statistics to Your Consulting Work – introduction to the R language for ergonomists**

**Date and Length:** October 5, 2015, 1 day

**Level:** Intermediate to Advanced:

**Language:** English

### **Outline:**

**Many of us probably have encountered one or more situations as described below in our consulting work.**

- You work with a large corporation client. They have well maintained MSD injury data base for many years. The company wants you to tell them (1) whether their injury rates have gone up or down for the last 5 years; and (2) which departments have higher injuries and you should do some intervention work with these departments first.
- A company implemented some solutions that you recommended in one of their problematic jobs. The company wants you to help them to perform an evaluation to see whether the solution is effective.
- The EHS manager of a company that you help with wants to put together a presentation to their top management on their MSD injury and intervention efforts. She hopes that you may help her with some really professional looking charts.

You know these assignments involve some STATISTICS that you studied back in college. However, you probably have not used any serious statistics for many years partly because you do not have access to those fancy statistics software. Those statistics software packages are usually very expensive to many of our ergonomics consultants!

Thanks to the free and powerful software R, all of us are able to perform all the tasks described above easily! Of course, you need to have taken a basic statistics course in the college, although you do not need to have prior experience in programming.

This workshop is designed for ergonomics practitioners who want to have the capacity to analyze injury data, perform evaluation tests before and after intervention, and produce professional looking charts for presentations. This workshop is also beneficial to students who plan to use statistics after they leave universities.

This workshop will provide hands-on knowledge to the attendees on some statistical analyses and charting methods using R. We will review some basic statistical knowledge on descriptive statistical calculations and significance tests (e.g. student t-test, ANOVA,  $\chi^2$  tests) that you studied back in school and use R to accomplish these tasks. It will also teach you how you can make professional looking charts and add various bells and whistles according to your needs. At the end of the workshop, you will be able to provide your clients more value-added services and also show they how smart you actually are!

All attendees should bring their own laptops and have R downloaded onto their computers before coming to the workshop. The statistical package is available for download from <http://cran.r-project.org/> on Windows, Mac and Linux platforms.

**Target Audience:** Ergonomists, occupational safety and health practitioners, and students (all attendees need to have had basic statistics course previously, even they may not remember much of it now).

### **Facilitator:**

Stephen Bao, Ph.D., CCPE, CPE, Washington State Department of Labor and Industries, Olympia, WA, USA

## Workshop Descriptions continued...

### **2 - Current Ergonomic Issues—with a Focus on Stairway Usability and Safety - Highlighted in Needed Revisions to Canadian Building Codes in an International Context of Research Applied to Codes and Standards**

**Date and Duration:** October 5, 2015, 1 day

**Level:** Suitable for all levels of participant expertise. Ergonomics skills are valuable, but not essential.

**Language:** English

#### **Outline:**

**Primary Goals:** increased sensitivity and knowledge directly applicable to wide range of roles including research, education, practice (with responsibilities for built environments design, construction, regulation, facility management; public health responses including nursing and EMS; etc.) and injury incident investigation plus related expert services in forensics.

The workshop comes at a crucial time in Canada as, after decades of delays in updating the National Building Code of Canada (NBCC) requirements for home stairways, changes (based on Jake Pauls' formal proposals in 1992) are being adopted for the 2015 edition of the NBCC which, over a period of one to several years, will be adopted across Canada in Provincial and Territorial building codes. While breathtaking, relative to decades of effort, the changes must go further in future NBCC revisions not only on home stairways, but other features commonly found and extensively used in homes, e.g., grab bars for baths and showers. These two common facilities, built into homes, account for the number one and number three-ranked injury sites in terms of societal injury cost, totally on the order of 2 million dollars per hour in Canada. (Floors are number 2 in the cost ranking.) The workshop addresses how risks of such built-environment-related injuries—which should not be referred to as “accidents,” as they are largely predictable and preventable—can be reduced by one of more orders of magnitude through improved, ergonomics-based design and construction. For this aspect of ergonomics and economics, use is made of (1) papers presented at the IEA-sponsored, International Conference on Fall Prevention and Protection 2014, and (2) a two-hour Webinar which had a large Canadian and US audience in Sept. 2015 and a focus on proposed changes to the National Building Code of Canada on home stair step dimensions.

This is among the latest of a long series of one-day and half-day workshops around the world, over the last four decades, organized (and/or presented) by Jake Pauls, for a wide range of disciplinary contexts including ergonomics, public health, fire safety, architecture, engineering, and building regulation. In 2015, sponsoring/hosting organizations include the IEA, Canadian Public Health Association and the American Public Health Association. Over the last decade alone, such workshops have been held in Canada, USA, Japan, New Zealand, Australia, United Arab Emirates and Germany with shorter form (paper) presentations in these countries and others, notably the UK (e.g., at conferences of the CIEHF, earlier the Ergonomics Society). The workshop draws significantly on expert discussions at a special meeting on emerging methods in stairway usability and safety in May 2014 and at the International Symposium on Stairway Usability and Safety in June 2011, both held in Toronto, with lead organization and chairing efforts of Jake Pauls. (Records of these meetings' expert-level presentations and discussions, including videos, are freely accessible at [www.stairusabilityandsafety.com](http://www.stairusabilityandsafety.com) and [www.bldguse.com](http://www.bldguse.com).)

#### **Facilitator:**

Jake Pauls is a Certified Professional Ergonomist, a member of HFES and CIEHF plus many other professional and technical organizations, member of about 15 national codes and standards committees, and author of many publications in peer reviewed and other contexts including trade publications. He has over 50 years of international technical and professional experience in research, consulting and public health advocacy focused on built environment issues. To advance and recognize work by others in built environment codes and standards development, he initiated a new funding program and award at the Canadian Public Health Assn. in 2015. In 2014, after 26 years in the US following 20 years at NRC Canada, he set up his main office in Toronto. His work continues on an international scale, but with a renewed focus on Canada.

## Workshop Descriptions continued...

### 3 - From the Classroom to the Shop Floor - Developing Effective Ergonomic Controls

**Date and Time:** October 5, 2015, 1/2 Day, 8am - 12pm

**Level:** Beginner to Intermediate

**Language:** English

#### **Workshop Outline:**

The completion of an ergonomic risk assessment often includes recommendations to support the mitigation or elimination of risk. The implementation of effective controls can not only have an impact on injury reduction, but can also benefit task efficiency and product quality. As an ergonomist, developing effective countermeasures is a skill that comes with experience and can often be difficult for new graduates and training ergonomists. As such, the goal of this workshop is to provide a toolbox for ergonomists in training to utilize when generating controls to support the reduction or elimination of ergonomic hazards in the workplace.

This session will be guided by two CCPE designated ergonomists and will focus on the use of real life examples and scenarios to guide participants through four modules. Attendees will be required to participate in interactive discussions and case studies.

#### **Module Overview**

- 1) Ergonomic Hazard Identification and Risk Assessment: A review of available resources and common references to assist in risk identification and assessment will be discussed. The importance of choosing appropriate tools in order to promote target setting and control justification will be examined.
- 2) Appropriate Control Generation: Participants will be guided through the importance of root cause analysis to generate appropriate controls. A review of the hierarchy of controls and importance of containment and elimination interventions will be touched upon. A discussion on engaging workers and understanding the potential scope for change will also be explored. Instructors will share their experiences of what has, and has not, worked in the field when providing recommendations to clients.
- 3) Effective Control Implementation: Considerations when implementing controls will be discussed through the use of real life case studies. Topics such as key players and resource requirements, trial coordination, and communication with workers will be discussed.
- 4) Evaluation of Controls: Attendees will be encouraged to share methods in which they can, or have, evaluated the success of interventions within their workplaces. Discussions regarding methods to show impact of the change, such as return on investment, influence on lagging and leading indicators, and organizational/safety culture will be encouraged.

**Target Audience:** Recent graduates and/or training ergonomists

**Facilitators:** Amii Pereira (CCPE) and Elisha Lemoire (CCPE)

## Workshop Descriptions continued...

### 4 - Sustainable Office Design

**Date and Time:** October 5, 2015, 1/2 Day, 8am - 12pm

**Level:** Beginner to intermediate

**Language:** English

#### **Workshop Outline:**

**Goal:** Incorporate principles of environmental sustainability into ergonomic office design

#### **Learning Outcomes:**

- Discuss supply chain/life cycle stages of extraction, manufacturing, delivery, use and end-of-life and why they are important
- Understand the human capabilities and limitations, both individual and supply chain, that provide the basis for office ergonomics
- Evaluate the human factor stressors associated with each of the life cycle stages and why this is important to practicing industrial hygienists
- Integrate ergonomics, sustainability and economics (financial drivers) in the design and re-design of computer workstations (Class Exercise )

#### **Description:**

##### **Course Outline:**

##### **I. Environmental Principles**

Sustainability: its social and economic roots  
Tragedy of the commons  
Carbon footprint  
Socio-scientific approaches (United Nations Environmental Program)  
Socio-economic approaches  
Life Cycle Stages and their Assessment  
Office furniture  
Electronics  
Ergonomic impact of the supply chain

##### **II. Sustainability and social awareness**

Developing the cost/benefit equation  
Social values  
Financial drivers  
Investor influence and expectations  
Environmental costs are human costs  
Supply chain costs/benefits  
Electronic equipment  
Office furniture  
Class Exercise I: Explore how sustainability considerations change the choice and cost of designing and/or re-designing computer workstations.

Use of computers to communicate and conduct business is essential in the modern world. Control of ergonomic risk factors while using computers often requires using properly designed equipment and furniture. In the global community industrial/occupational hygienists not only need to recognize, evaluate and control ergonomic and environmental risks in their own organization but also need to be aware and concerned with working conditions in the supply chain as well as the disposal process. Each stage of the life cycle of computer workstations involves the human limitations and capabilities of the workers as well as specific costs to the environment. The message of this PDC is that it is no longer sufficient to know how to reduce ergonomic risk factors in individual workplaces but that business leaders must also know the ergonomic risk factors and environmental costs associated with the products they use. This workshop will enable practitioners to choose products that help both their immediate clients as well as those working to make, transport and dispose of those products. This approach is closely related to Corporate Social Responsibility and Sustainability practices and policies, particularly for those within an organizational leadership role, regardless of company size, industrial sector or business objectives. This area is driven by customer demands, community influence and investor expectations in addition to internal policies. This workshop will serve as an excellent introduction to key concepts and applications of both computer ergonomics and sustainability both for immediate application and throughout the supply chain.

**Facilitated by:** Mary V. O'Reilly, PhD, CIH, CPE, Adjunct Professor, SUNY School of Public Health, University at Albany, Environmental Health and Toxicology

## Workshop Descriptions continued...

### 5 - Using heuristic evaluations to evaluate interface design

**Date and Duration:** October 5, 2015, 1/2 day, 8am - 12pm

**Level:** Beginner

**Language:** English

**Outline:**

These days, there are many work situations in which one finds digital interfaces. If the ergonomist is not specialized in human-machine interaction (HMI), he/she may have difficulty evaluating these systems and propose recommendations. With this practical workshop, you will discover how to evaluate interfaces through expert auditing, also called heuristic evaluation. Ergonomic criteria will be presented (Bastien / Scapin) and practical cases will be used to show interface evaluation with grid of criteria and proposed recommendations.

**Facilitator:** Therese Migan

**Target Audience:** Ergonomists and those interested in human-machine interaction

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### 6 - Assessing HF Capability in Organisations: Identifying new opportunities to benefit from ergonomics

**Date and Time:** October 5, 2015, 1/2 Day, 1pm - 5pm

**Level:** Intermediate, Advanced

**Language:** English

**Workshop Outline:**

This half-day workshop focuses on improving the ability of attendees to assess the extent to which an organisation is capitalising on ergonomics in their routines (routine operations?). Participants will learn the principles and application of a novel organizational assessment method: the Human Factors Integration Tool (HFIT). The method allows companies to quantitatively assess their organization for its level of World Class maturity of HF capability and integration. It can open new doors for applying ergonomics in organisations and help monitor progress as companies improve their ergonomics related processes across the firm. The reasoning behind the method and the approach itself will be presented and discussed. Participants will be invited to exchange insights on how evaluations at the organisational level can help them achieve deeper implementation of HF in their organisations, and find new ways to help ergonomics contribute to organisation success in terms of both improved employee wellbeing and better work system performance. Attendees will be encouraged to discuss the pros and cons of their experience with HF audits. The session will highlight the importance of measuring the level of HF integration, the potential impact of HF beyond health and wellbeing and demonstrate how HF can impact other functions in an organization.

**Target Audience:** Ergonomists, Engineers, Managers, OHS Personnel.

**Facilitated by:** Patrick Neumann, Ph.D., Michael Grieg, PhD Candidate, Don Patton, CCPE

## Workshop Descriptions continued...

### 7 - Office ergonomics - where are we, and where should we be?

**Date and Time:** October 5, 2015, 1/2 Day, 1pm - 5pm

**Level:** Beginner

**Language:** English

**Workshop Outline:**

The goal of this workshop is to encourage critical thinking of office furnishing products which are currently available, and to discuss best future practices.

**This half-day workshop will be divided into two sections.**

1. First there will be a review of the principal contents of office ergonomics' guidelines and commonly used sources. We'll discuss the evolution of these guidelines in light of today's changing technology. The commonly used engineering design model, including defining objectives, criteria and constraints will be presented to focus the discussion of currently available tools.
2. During the second half of the workshop, current styles of sitting, standing and sit-stand platforms will be presented and their strengths and limitations discussed. Then, in small groups we'll discuss future directions for office furnishing designs that are truly centred on the user..

**Target Audience:** Beginner - Intermediate. Participants should have some exposure to office work environments.

**Facilitated by:** Nancy Black, PhD

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### 8 - Initiation par la pratique à l'évaluation des interfaces

**Date and Time:** October 5, 2015, 1/2 day, 1pm - 5pm

**Niveau:** Débutant

**Langue:** Français

**Résumé:**

De nos jours, nombreuses sont les situations de travail où l'on retrouve des interfaces numériques. Mais en tant qu'ergonome, lorsqu'on n'est pas spécialisé dans les interactions homme-machine (IHM), on est souvent démuni au moment d'évaluer ces systèmes et d'en proposer des recommandations.

Avec cette initiation par la pratique, vous découvrirez comment évaluer des interfaces sans les utilisateurs grâce à l'audit experte appelée aussi l'évaluation heuristique :

- présentation des critères ergonomiques illustrés (Bastien/Scapin)
- cas pratique : évaluation d'une interface avec grille de critères et proposition de recommandations

**Formateur:** Thérèse Migan



# Conference Sessions

## TIME

## DAY 1 – TUESDAY, OCTOBER 6, 2015

8:30 AM - 9:00 AM  
9:00 AM - 10:00 AM

WELCOME and Exhibitor 60 second challenge  
PLENARY  
Alison Smiley, PhD, CCPE, President – Human Factors North  
Ian Noy, PhD, CPE, VP Liberty Mutual Group; Director, Liberty Mutual Research Institute for Safety

10:00 AM – 10:30 AM

### BREAK & EXHIBITOR SHOWCASE

10:30 AM - 12:00 PM

PANEL: Making ergonomics training programs stick: How do we create training programs that make an impact? [Panelists: Trevor King, Michelle Robertson, Ben Amick III, Brian McInnes]

PAPERS – Mind & Body  
Take your mind off of work: an investigation of the effects of mental fatigue during rest breaks on end point variability [Michael Sonne, Nicholas La Delfa, Jeffrey Graham, Steven Bray, Jim Potvin]  
The effects of motion environments on operator vigilance and postural control [Nicole Bishop, Carolyn Duncan, Jeanette Byne, Scott MacKinnon]  
Laboratory Evaluation of WBVPOD to estimate whole-body vibration exposure [Wesley Killen, James Dickey]

HIGHLIGHTS - Biomechanics  
Exploring interactions between force postures and repetition of low back injury pathways: implications for prevention [Chad Gooyers, Jack Callaghan]  
Effect of prolonged sitting on active lumbar flexion range: can walking breaks help? [Diana De Carvalla, Jack Callaghan]  
Does proactive cyclic movement during prolonged standing prevent the development of low-back pain when imposed early? [Maureen Riddell, Kayla Fewster, Kaitlin Gallagher, Jack Callaghan]  
Lumbar spine postures are altered with fatigue in males who develop low back pain during standing. [Daniel Viggiani, Jack Callaghan]  
Comparison of deep flexion postures for work tasks. [Helen Chong, Lianna Tennant, Stacey Ackers]  
Assessing the accessibility of accumulated task demands using joint strength demands and duty cycles [Mohammad Abdoli-Eramaki, Tolga Turgol, Zainab Mirza, Negari Ashtari]

12:00 PM—1:00 PM

### LUNCH & ACE ANNUAL GENERAL MEETING EXHIBITOR SHOWCASE

# Conference Sessions cont'd,

TIME	DAY 1 – TUESDAY, OCTOBER 6, 2015 cont'd		
1:00 PM - 3:00 PM	<p>PAPERS – Physical Demands Physical demands of manual scaling on the shoulders and neck of dental hygienists. [Nicholas La Delfa, Diane Grondin, Jocelyn Cox, Jim Potvin &amp; Samuel Howarth]</p> <p>Causes de TMS á la hanche chez les hygienists dentaires. [Rose-Ange Proteau, Denis Marchaud]</p> <p>Work boot wear changes knee mechanics during static kneeling. [Lianna Tennant, David Kingston, Helen Chong, Stacey Acker]</p> <p>Comparing sitting and backward leaning (standing) workstations during computer data entry tasks [Nancy Black, Martha Samson, Maxine Lecanellier, Annie Pier Fortin]</p>	<p>PAPERS – Ergonomics &amp; MSDs Is there a market for ergonomics in Ontario? [Ben Amick III, Colette Severin, Dwayne Van Eerd, Sheila Hogg-Johnson, Selahadin Ibrahim]</p> <p>Shifting trajectories: comparing employment status musculoskeletal discomfort and total physical activity among active older Albertans in 2009 and 2015. [Jon Doan, Jennifer Copeland, Dustin McCubbing]</p> <p>Levelling up gaps in MSD prevention/safety management system. [Elisha Lemoire, Kristy McAuley]</p> <p>Musculoskeletal disorders and patient falls: an inter-professional approach [Anita Jorgia, Cathy Litwin, Riman Hasan, Rachel Twohey, Monique Pendergast, Jane Cox, Mike Berta, Robin Patterson, Jason Gole]</p>	<p>PAPERS – Workstations The effect of workstation configuration on productivity, energy expenditure and discomfort during lab-simulated light assembly work. [Kristina Grevski, Samantha Ehmke, Jack Callaghan]</p> <p>What are the effects of workstation configurations, devices, and occupational tasks on neck and trunk postures? [Mamiko Noguchi, Alan Cudip, Colin MacKinnon, Clark Dickerson, Jack Callaghan]</p> <p>Investigation of accommodations required when transitioning from sitting to standing at office workstations. [Surabhi Kadam, Maureen Riddell, Jack Callaghan]</p> <p>The impact of progressive sit-stand rotation on low-back posture, muscle activation, and pain [Colin MacKinnon, Dan Martel, Jack Callaghan]</p>
3:00 PM -3:30 PM	BREAK & EXHIBITOR SHOWCASE		
3:30 PM—5:00 PM	<p>SYMPOSIUM – Ergonomics and Quality Empirical evidence of the impact of human fatigue on product quality. [Ahmet Kolus, Patrick Neumann, Marcus Yung &amp; Richard Wells]</p> <p>Quantifying HF capabilities in an organisation – a macro-ergonomic tool for identifying new avenues for applying human factors. [Michael Greig, Patrick Neumann &amp; Don Patton]</p> <p>Quality and ergonomics. [Elisha Lemoire]</p>	<p>PAPERS – Low Back Pain The effect of standing aides on low-back postures and muscle activation patterns. [Kayla Fewster, Kaitlin Gallagher, Jack Callaghan]</p> <p>The use of intermittent trunk flexion to alleviate low back pain during prolonged standing. [Danielle Stewart, Diane Gregory]</p> <p>Does a passive interface at the feet alter pelvic and lumbar posture during standing? [Taylor Winberg, Mamiko Noguchi, Jack Callaghan]</p>	<p>HIGHLIGHTS A new physical demands description handbook. [Curtis Vander Griendt, Steve Fischer, Brandon Coffey]</p> <p>Assessing people's ability to recognize lifting risk factors for low-back pain and the impact of educational training. [Binh Ngo]</p> <p>Streamlining NIOSH Lifting criteria: validating a 5kg threshold. [Laura Veldhuyzen]</p> <p>Assessment of bricklaying concrete masonry units using one handed technique. [Tiffany McKinley, Wayne Albert, Usha Kuriganti]</p> <p>Ergonomic evaluation for right angle power tools: direct current physical demands comparison – a focus on muscle activity. [Danielle Devries, Joel Cort]</p> <p>Kinematic comparison of three direct-current right-angle power tool tightening strategies. [Christian Steingraber, Joel Cort.]</p>

# Conference Sessions cont'd,

TIME	DAY 2 – WEDNESDAY, OCTOBER 7, 2015		
8:30 AM – 9:00 AM 9:00 AM - 10:00 AM	ANNOUNCEMENTS PLENARY Alison Phillips, Managing Director & Global Head of Industrial Design, BlackBerry		
10:00 AM – 10:30 AM	BREAK & EXHIBITOR SHOWCASE		
10:30 AM - 12:00 PM	<p>SYMPOSIUM: Faster, Easier, Cheaper: New Tools for Ergonomic Assessment and Training</p> <ul style="list-style-type: none"> <li>- The landscape of motion capture tools for ergonomic application. [Emily King<sup>1</sup>, Ahmed Mezil, Tara Kajaks, Tilak Dutta]</li> <li>- Microsoft Kinect as a tool for field-based optical motion capture. [Tilak Dutta, Mohammad Parahoo<sup>1</sup>, Rowa Abachi]</li> <li>- PostureCoach: A wearable posture coaching biofeedback system [Tara Kajaks, Mark Semple, Justin Weel, Felipe Orozco, Amanda Longfield, Emily King, Paul Holyoke, Tilak Dutta]</li> <li>- SafeBack: An App for estimating compressive loading on the back. [Amanda Longfield<sup>1</sup>, Tara Kajaks, Felipe Orozco, Paul Holyoke, Tilak Dutta]</li> </ul>	<p>PAPERS – Biomechanics</p> <ul style="list-style-type: none"> <li>The effects of neck posture and load on the distal upper extremities. [Ebram Ibrahim, Jim Potvin]</li> <li>Muscle fatigue accumulation during repetitive tasks with similar duty cycles but different presentations of rest within a cycle. [Rachel Whittaker, Michael Sonne, Jim Potvin]</li> <li>Quantifying upper extremity postures and muscle activity during IV pole use. [Victoria Brietner, Donna Murczek, Michael Holmes.]</li> </ul>	<p>HIGHLIGHTS</p> <ul style="list-style-type: none"> <li>Sit/stand configuration and computing equipment alter localised body discomfort in office tasks. [Alan Cupip, Jack Callaghan, Clark Dickerson]</li> <li>Characterization of cashier shoulder and low back muscle loading strategies. [Jacquelyn Macinkiewicz, Angelica Lang, Megan Vidt, Sylvain Grenient, Clark Dickerson.]</li> <li>Lessons from participatory ergonomics study aimed to reduce musculoskeletal pain among nursing staff. [Deborah Alperovitch-Najenson, Dvora Sheffer, David Ezra, Leonid Kalichman]</li> <li>Development of medical placement process through the use of digital human model simulation. [Robert Ward, Joseph Baiardo, Allison Stephens, David Andrews, Joel Cort.]</li> <li>Back to basics: we can't assume skills but need to validate them. [Janice Jaskola, Kristy MacAuley]</li> </ul>
12:00 PM - 1:00 PM	LUNCH & EXHIBITOR SHOWCASE		

# Conference Sessions cont'd,

TIME	DAY 2 – WEDNESDAY, OCTOBER 7, 2015 cont'd,		
1:00 PM - 3:00 PM	<p><b>SYMPOSIUM</b>  <b>Understanding the impact of fatigue from a multi-disciplinary lens in occupational safety.</b>  <i>Presenters: Sandra Dorman (physical exertion), Tammy Eger (chronic vibration exposure), Caleb Leduc (mental health &amp; job stress), Alison Goodwin (cognitive functioning).</i></p>	<p><b>PAPERS – Upper Extremities</b>            The relationship between manual arm strength and resultant shoulder moment. <i>[Nicholas La Delfa, Jim Potvin]</i>            Right angle power tool use and associated postures in Canadian automotive assembly plants. <i>[Jeffrey Lidstone, Stephanie Balek, Joel Cort]</i>            Biomechanical evaluation of commonly used tools for removing chamber lids at a utility company. <i>[Mohammad Abdoli-Eramaki, Cole Templeton, Yass Sotoudehnia]</i>            Developing best practices for wrenching in variable work environments. <i>[Carrie Taylor, Wendy Lee]</i></p>	<p><b>HIGHLIGHTS</b>            Occupational health and safety knowledge: user perspectives on research use. <i>[Dwayne Van Eerd, Trevor King, Siobhan Cardoso, Ram Saunders, Sara Macdonald, Emma Irwin]</i>            Integrating ergonomics upstream into design. <i>[Kim Meszaros, Janice Jaskolha]</i>            Working with suppliers to implement ergonomic guidelines. <i>[Claire Brisland]</i>            Ergonomic risk reduction working with an aging population. <i>[Claire Brisland]</i>            The Ergonomist's modern toolbox. <i>[Rachel Mitchell]</i></p>
3:00 PM - 3:30 PM	BREAK & EXHIBITOR SHOWCASE		
3:30 PM - 5:00 PM	<p><b>PANEL &amp; DISCUSSION – Ergonomics &amp; Quality Issues</b>  <i>Co-ordinator: Margo Fraser</i></p>	<p><b>PAPERS – Tools/UX/Usability</b>            Integration of mobile office equipment into the Rapid Office Strain Assessment (ROSA). <i>[Michael Sonne, Robert Ward, Cory Thuy, David Andrews]</i>            UX meets physical ergonomics: designing a work-related pain app. <i>[Curtis Vander Griendt]</i>            Usability testing of an adjustable interactive tabletop display. <i>[Cleyton Vierra de Vargas, Carolyn MacGregor]</i>            A user interface based on human vision and information processing. <i>[Russ Brown]</i></p>	<p><b>PAPERS – Lifting</b>            Rejected solutions on the way to a reject conveyor solution. <i>[Josie Blake, Karen Hoodless]</i>            Accuracy of a digital human model for the estimation of joint net moments during patient lifting tasks. <i>[Nadia Rego Monteuil, Steve Fischer]</i>            Perceived affordances and kinematics for occupational lifting of children. <i>[Jon Doan, Olu Awosaga, Trishell Provost]</i>            Manual material handling demands of disposal workers. <i>[Fred Fulton, Michelle Rae, Wayne Albert]</i></p>

# Conference Sessions

TIME	DAY 3 – THURSDAY, OCTOBER 8, 2015		
8:30 AM – 9:00 AM	ANNOUNCEMENTS		
9:00 AM - 10:00 AM	PLENARY John Baker (founder) and Paul Baker, D2L (Desire2Learn)		
10:00 AM – 10:30 AM	BREAK		
10:30 AM—12:00 PM	<b>SYMPOSIUM</b> <b>Is sitting the new smoking?</b> <i>Presenters: Nicholas Niforos, Brenda Mallat, Amy DuBreuil</i>	<b>PANEL</b> <b>Ergonomics education – where should it be headed? [A conversation cafe]</b> Coordinator: Carolyn MacGregor	<b>HIGHLIGHTS</b> Effects of driving and whole-body vibration and reaction times in truck drivers (pilot study). <i>[Bronson Du, Pete Johnson, Philip Bigelow]</i> Whole-body vibration exposure: an investigation of driving method effect. <i>[Steve Fleming, George Page, Greg Weames]</i> Back-up alarms: user, perception, and safety – are they effective? <i>[Heather Kahle, Sasha Brown]</i> Linking head posture to line of sight measures for different helmet styles. <i>[Alison Goodwin, Tammy Eger, Alexandria Tsimiklis]</i> An investigation of predictive factors for posture selection during fire-fighting tasks. <i>[Tara Kajaks, Joy MacDermid]</i>
12:00 PM - 1:00 PM	LUNCH – Student Awards and Conference Closing		

## ACE Corporate Membership

ACE aims to promote ergonomics and to raise the standards of practice in ergonomics. Through our Corporate member program, we are building stronger links between ACE and private and public enterprise in pursuit of this mission.

Corporate members will be recognized as supporters of ergonomics in Canada. They will help ACE to achieve its goals and ACE will reciprocate with special Corporate member benefits. The program is a great step for both ACE and the field of ergonomics in Canada and we welcome the partnership opportunities it will provide!

### **Some of the advantages associated with Corporate membership include:**

- Recognition as a supporter of ergonomics in Canada
- Visibility on the ACE Web site
- Access to the network of Canadian Ergonomists including professional consultants and researchers
- Access to national and regional conferences and workshops
- Member advertising rates for *Ergonomics Canada* magazine

For more information about Corporate membership, please contact the ACE National Office at 1-888-432-2223

## CCPE Certification Application Question & Answer session

A special question and answer session on the professional certification (CCPE) application process will be held during lunch on Wednesday October 7, 2015 (12:15 pm to 1:15 pm). A separate table will be available for applicants to meet and have lunch with one or more CCCPE board members.

This session will allow potential applicants to ask questions about the specifics of the process and requirements, to assist them in completing their applications. Participants are encouraged to preview the application information available through the [www.cccpe.ca](http://www.cccpe.ca) web site in advance and to submit their questions ahead of time to [info@cccpe.ca](mailto:info@cccpe.ca).

**Cost:** No Charge

**Facilitators:** CCCPE Board Members

# Visit Waterloo!

## COME TO LEARN, BUT STAY TO PLAY!

The Kitchener-Waterloo-Cambridge area provides a wealth of activities for our delegates and their families to do outside conference hours (<http://www.explorewaterlooregion.com>). Our committee has highlighted a few places below that you must check out!

### 1. St. Jacobs Farmers' Market

Experience Canada's largest year-round farmer's market! Every week, 100s of vendors bring you Ontario's farm-fresh foods, crafts, imported goods and amazing ready-to-eat foods. Come to support our local farmers ranging from cheese to woodworking you'll be sure to find something to capture your interest. Open: Thursday and Saturday: 7 am - 3:30 pm. More information can be found at: <http://www.stjacobs.com/farmers-market>

### 2. St. Jacobs Outlets & the Village of St. Jacobs

Outlet stores near the market allow you to shop for brand names at a fraction of the cost. The outlet stores are open year-round until 9 p.m.

While in the area, also visit the quaint historical Village of St. Jacobs. Nestled next to the Conestoga River, the village provides opportunities to shop for original arts, crafts, home décor, jewellery, toys, etc. <http://www.stjacobs.com>

### 3. Victoria Park is a breath of fresh air in the heart of downtown Kitchener.

Providing a tranquil walk and environment, visitors can explore its many features. Get your daily exercise with the basketball courts or fill your belly with the Boathouse restaurant. More information about Victoria Park can be found at: <http://www.kitchener.ca/en/livinginkitchener/VictoriaPark.asp>

### 4. Ergofest meets Oktoberfest!

Kitchener is known for its involvement in a variety of Oktoberfest Events and festivities. Hosting 49 events, Kitchener Oktoberfest has something to please everyone! Stay in city for some of the festivities! <http://www.oktoberfest.ca>

### 5. Cambridge Butterfly Conservatory.

Check out the thousands of butterflies, insects and birds in their indoor tropical garden, complete with waterfalls and streams! Café available onsite. Open daily from 10 am to 5 pm. <http://www.cambridgebutterfly.com>

**6. The Canadian Clay & Glass Gallery exhibits a variety of beautiful silica, ceramic, glass, and enamel artwork.** In addition, the gift shop allows you to purchase from some of the Canadian artists featured in the gallery. Hours: Monday-Friday: 11 am to 6 pm, Saturday: 10 am to 5 pm, and Sunday: 1 to 5 pm <http://www.theclayandglass.ca>

## Hotel Information

A block of rooms has been booked at the conference venue, **The Waterloo Inn**, at a discounted rate for all conference delegates until September 5, 2015.

**The reference group code name is ACE 2015.**

**Location:**

Waterloo Inn  
475 King Street North  
Waterloo, ON  
N2J 2Z5

<http://www.waterlooinn.com>

**Reservations:** 1-800-361-4708 or 519-884-0220

**Contact:** [schilder@waterlooinn.com](mailto:schilder@waterlooinn.com)

**Room Details**

Single/Double occupancy

**Rates**

\$139.00 + tax

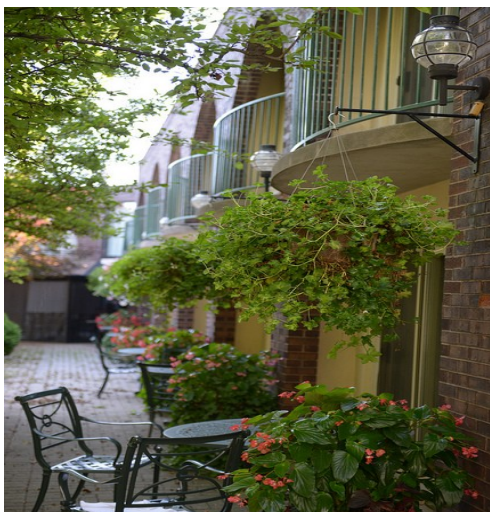
**Notes:**

- Children under 16 years and sharing parent's accommodation are complimentary.
- Additional person (i.e. 3rd person) sharing is an additional \$15.00/night.

**Check in time:** 3 p.m.

**Check out time:** 12:00 p.m.

A valid major credit card is required at the time of reservation.





## Hotel Information continued...

### Directions & Travel Information

#### Travel by air:

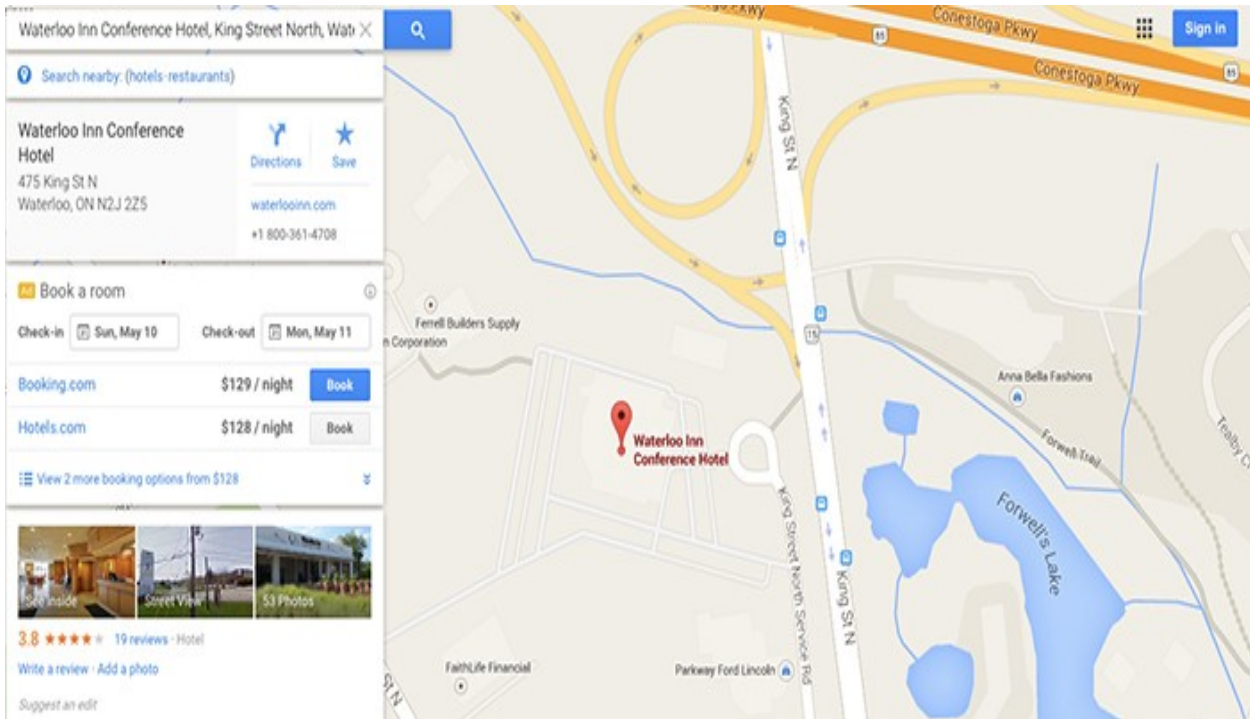
[Waterloo International Airport \(YKF\)](#) has regular flights into Waterloo, Ontario. Other nearby airports include [London International Airport \(YXU\)](#) and [Toronto Pearson Airport \(YYZ\)](#).

#### Travel by train:

Waterloo is also accessible via [train](#), which is accessible from various locations across Canada and Ontario.

#### Travel by car:

See the map below



## Delegate Social Events & Technical Tours

Although this conference will provide ergonomists and human factor professionals excellent educational and training opportunities, it will also offer many fun networking opportunities. We hope that you will be able to join us for the following:

### ACE 2015 CONFERENCE WELCOME

**Monday, October 5th from 7-10 pm**

Planning on attending our workshops or arriving early for the conference? Please join us in the **Trader's Exchange Lounge, at the Waterloo Inn**, for an informal get together. It's a great time to catch up with old friends and colleagues, and to make new acquaintances! Early registration for the conference will also be available at that time. Cash bar available.

### OPENING RECEPTION AND EXHIBITOR SHOWCASE

**Tuesday, October 6th from 6-9 pm**

After a great first day of conferencing and networking, relax and chat with our vendors in the **Regent room** (lower floor of the conference centre). This event, hosted by our vendors, includes appetizers and one free drink ticket for full conference delegates. Other participants may purchase a reception ticket via the conference registration page.

### DELEGATE SOCIAL

**Wednesday, October 7th from 6-11 pm**

Join us at one of Waterloo's local micro-breweries for an evening of fun and networking. Located in the heart of uptown Waterloo, settle down at the **Lion Brewery (Huether Hotel)** with some food, friends, and one of 16 unique brews in a casual atmosphere featuring 5 Boston style pool tables and some retro gaming machines.

**Cost:** \$30 per person (includes use of pool tables and gaming machines, a wide selection of food, and transportation between the Waterloo Inn and the brewery). Tickets for this event can be purchased when you register online for the conference or at the registration desk during the conference.



## Delegate Social Events & Technical Tours continued...

### **TECHNICAL TOUR - Toyota Motor Manufacturing, Thursday October 8th, 2pm**

We are pleased to announce that we have secured a tour of the Cambridge Toyota Motor Manufacturing Canada (TMMC) facility for 2:00 p.m. on Thursday October 8, 2015, for our conference delegates!

The tour is approximately one hour in length and starts at the Visitor Centre and involves a motorized tram tour through South Weld and North Assembly, two of the most visually impressive shops. Our tour will be customized to include a focus on ergonomics, health and safety in the visitor centre prior to commencing the plant tour.

The tour can accommodate 48 people, so register early. Ticket registration will be available when you register early for the conference or during the conference for a cost of only \$5.00, which includes transportation between the Waterloo Inn and the Toyota Manufacturing facility.

#### **Location:**

<https://www.google.ca/maps/place/Toyota+Motor+Manufacturing/@43.4199876,-80.3669859,16z/data=!4m2!3m1!1s0x882c18ddc434adf1:0xc01e7a4b9c946391?hl=en>

#### **Safety Rules:**

Toyota Motor Manufacturing Canada is an active manufacturing facility. The safety of all those who enter the plant is the first priority. Along the tour, the trams will enter the Welding shop, where occasional welding sparks are present. While these sparks are not harmful, some fabrics are more easily flammable.

As a result, the following safety rules must be followed by all groups:

- No hats or scarves.
- No cameras.
- No cell phones, pagers, communication devices or mp3 players (IPods).

Only natural fibres may be worn in the plant (wool, cotton, silk, linen etc.)

- No Polyester
- No Rayon
- No Acrylic
- No Synthetic fibre (micro fibre)
- 

No shorts, skirts, tear-away pants, nylon pants or tops. All purses, bags, knapsacks must be left in Visitor Centre under lock & key. Safety glasses must be worn at all times. Arms and legs must be kept inside the tram at all times. No food or drinks allowed during the tour.

## Exhibitor Showcase

### Join our exhibitor showcase!

ACE 2015 brings together a diverse and influential group of professionals from throughout North America whose common goal is to enhance the safety and effectiveness of people at work and at play. Involvement with this event provides high profile exposure for your people, your products and your organization. Contact [info@ace-ergocanada.ca](mailto:info@ace-ergocanada.ca) for more information!

The logo for ergoCentric, featuring the word "ergoCentric" in a blue, sans-serif font. The "C" in "Centric" is significantly larger and more prominent than the other letters.

#### **ergoCentric**

ergoCentric Seating Systems is a Privately Owned Canadian Company, with over 25 years in quality seating manufacturing. Our main focus is on health and productivity, while producing unique and modular chair designs and features. Working closely with ergonomists and health practitioners to continuously improve and refine our chair designs, ergoCentric Seating Systems offers a wide range of aesthetically pleasing task, executive, guest and stackable seating for the office environment.

[www.ergocentric.com](http://www.ergocentric.com)

ACE Corporate Member

Platinum Conference Sponsor



#### **The Global Group**

We believe ergonomics is an integral part of a successful workplace.

- Designing products that fit.
- Educating the architect and design community about the importance of sound ergonomics in the work place.
- Service ACE members as an ergonomic resource.
- Continuing to support ACE as the longest standing Corporate Member.
- Leadership in the development of office-related standards and guidelines.

[www.globaltotaloffice.com](http://www.globaltotaloffice.com)

ACE Corporate Member

Silver Conference Sponsor

The logo for SYNETIK, featuring a stylized blue and white graphic element resembling a square with a diagonal line, followed by the word "SYNETIK" in a bold, sans-serif font. Below it, the tagline "THE ERGONOMIC SOLUTION" is written in a smaller, all-caps, sans-serif font.

#### **Synetik**

Founded in 2004 in Joliette, Synetik specializes in design of ergonomic equipment such as industrial and welding stools as well as industrial mat. In addition, our multi-disciplinary team is at your disposal to create your custom projects. Thanks to our innovative solutions, your workers' health and productivity will be an asset to your business.

[www.synetik-di.com](http://www.synetik-di.com)

The logo for contour, featuring the word "contour" in a lowercase, sans-serif font, followed by a red square icon containing a white stylized shape that resembles a mouse or a hand.

#### **Contour Designs**

Contour Design has specialized in manufacturing ergonomic input devices since 1995. Our core philosophy is to continue to provide evolutionary products that allow computer users to work on their computers for extended periods of time without the risk of physical pain or injury. Our RollerMouse products help eliminate the need to grip, or reach for, the mouse. Visit our booth to experience unrivaled comfort, control, and pinpoint accuracy with RollerMouse Red; an innovative, ergonomic mouse that sits in front of the keyboard allowing users to stay in the optimal work zone with relaxed hands and a neutral wrist posture.

[www.contourdesign.com](http://www.contourdesign.com)

## Exhibitor Showcase cont...



### **Matta Products**

Matta Products North America, Inc. has built a solid reputation based on our unique, and award winning "Compression Column" design. This, combined with a manufacturing process using recycled plastic that was destined for landfill sites, produced a high quality ergonomic and environmentally friendly product. WorkMatta is a modular tile system that offers a variety of surface options which address safety and comfort concerns in today's workplace. From welding applications or oily areas, to static sensitive environments, WorkMatta provides a remedy that can be configured to meet your specific needs while delivering years of wear.

Matta Products has also partnered with Synetik Design to provide the very best in ergonomic seating solutions for use within industrial and commercial settings.



### **Posiflex Design**

Posiflex Design is an innovative company dedicated in the creation of ergonomic solutions and the prevention of musculoskeletal disorders for a majority of workers in many fields such as; laboratories, dental, beauty and industrial. Since 2002, supported by the science of ergonomics, innovation and development are still what drive us to create products like a Sit/Stand stool, specialty chairs and Free Motion elbow supports for all precision work including our new antistatic (ESD) version for the electronic field. While developing new products and business opportunities for our partners our goal remain: To reduce stress, increase productivity and safety for workers.

[www.posiflexdesign.com](http://www.posiflexdesign.com)



### **Vitality Depot**

The Canadian owned Vitality Depot has become a leading provider to healthcare professionals across Canada by introducing truly innovative products like the Posture Medic and ErgoBack. We are committed to providing everyday reliable value while still offering unsurpassed customer service. Vitality Depot is dedicated to partnering with you today for a better tomorrow.

[www.vitalitydepot.ca](http://www.vitalitydepot.ca)



### **uWaterloo Center for Career Action**

Recruit skilled talent to meet your unique business needs. University of Waterloo co-op and graduating students and alumni from over 140 programs are equipped with experience to contribute to your organization's success. Waterloo is one of Canada's leading comprehensive universities, with over 35,000 students in undergraduate, masters, and doctoral programs.

[www.uwaterloo.ca/ceca](http://www.uwaterloo.ca/ceca)



### **Ergo Advantage**

Ergo Advantage modular matting has the best warranty on the market. The 20 year warranty protects against wear, edges curling and connections staying together. The leg structure found on the underside of the mat distributes your weight evenly throughout the tile decreasing the fatigue of carrying your own body weight. This leg structure also allows you to run cords, wires and air hose through the underside of the mat, eliminating trip hazards while providing an anti-fatigue flooring system. The color options and modularity will enhance your 5S and 6S programs. The ESD and grit tiles will keep your employees safe from slips, and shocks while protecting your equipment and decreasing maintenance. If you are purchasing matting for your facility, this is a product that deserves consideration

[www.ergoconceptsinc.com](http://www.ergoconceptsinc.com)

# ACE 201 Registration Form (page 1 of 3)

On-line registration on our conference web site at [www.ace-ergocanada.ca](http://www.ace-ergocanada.ca) is the fastest way to complete your registration. However, if you prefer, you may fax or mail this form with your registration information.

**Personal Information**

Mr.  Mrs.  Ms.  Dr.  Prof

Name \_\_\_\_\_  
 Job Title \_\_\_\_\_  
 Company \_\_\_\_\_  
 Mailing Address \_\_\_\_\_  
 City \_\_\_\_\_ Prov/State \_\_\_\_\_ Postal Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_ (all updates and confirmations will be communicated via e-mail)

I require special services and have attached a list of my needs

**CONFERENCE REGISTRATION**

**Full Conference - Oct 6 - 8, 2015**

(Includes lunch each conference day, conference program and conference proceedings on CD-ROM)

All rates in \$CDN	ACE Member	Non-Member & ACE Affiliate Members	Student
Early (by Sept 4, 2015)	575.00	675.00	125.00
Late (after Sept 4, 2015)	675.00	775.00	175.00

**Day Rate - Full Day**

(Includes lunch, conference program and proceedings on CD)

All rates in \$CDN	ACE Member	Non-Member & ACE Affiliate Members	Student
Early (by Sept 4, 2015)	290.00	350.00	70.00
Late (after Sept 4, 2015)	335.00	395.00	85.00

**Select date(s) of attendance:**

Oct 6  Oct 7  Oct 8

**1/2 Day Rate**

(Includes lunch, and conference program)

All rates in \$CDN	ACE Member	Non-Member & ACE Affiliate Members	Student
Early (by Sept 4, 2015)	190.00	225.00	50.00
Late (after Sept 4, 2015)	220.00	255.00	60.00

**Select date(s) of attendance:**

Oct 6 am  Oct 6 pm  Oct 7 am  Oct 7 pm  Oct 8 am

**Conference registration subtotal:** \$ \_\_\_\_\_

Continued on next page...

## ACE 2015 Registration Form (page 2 of 3)

### Pre-Conference Workshop Registration

Pre-Conference Workshops Workshop registration is not included in the Conference Registration Fee. If you wish to attend a workshop(s) please check your choice(s) below.

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#### Full Day Workshops

- 1. Stephen Bao - Add some Statistics to Your Consulting Work – introduction to the R language for ergonomists
- 2. Jake Pauls—Current Ergonomic Issues - with a Focus on Stairway Usability and Safety - Highlighted in Needed Revisions to Canadian Building Codes in an International Context of Research Applied to Codes and Standards.

#### 8:00 am Half Day Workshops

- 3. Elisha Lemoire, CCPE & Amii Pereira, CCPE—From the Classroom to the Shop Floor - Developing Effective Ergonomic Controls
- 4. Mary O'Reilly, - Sustainable Office Design
- 5. Therese Migan - Using heuristic evaluations to evaluate interface design

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#### 1:00 pm Half day Workshops

- 6. Patrick Neumann, Michael Greig, Don Patton—Assessing HF Capability in Organisations: Identifying new opportunities to benefit from ergonomics
- 7. Nancy Black—Office ergonomics - where are we, and where should we be? Facilitator
- 8. Thérèse Migan—Initiation par la pratique à l'évaluation des interfaces

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#### CCPE Certification Question and Answer session

(1:00pm—2:00 pm Oct 7) No charge

- I plan on attending

#### Pre-Conference Workshop Rates

##### Full Day Workshop or Two Half Day Workshops

Note: all workshops include lunch served from 12pm to 1pm

All rates in \$CDN	ACE Members	Non-members and ACE Affiliate Members	Students
Early (by Sept 4, 2015)	255.00	299.00	150.00
Later (after Sept 4, 2015)	285.00	340.00	175.00

#### 1/2 Day Workshop

All rates in \$CDN	ACE Members	Non-members and ACE Affiliate Members	Students
Early (by Sept 4, 2015)	175.00	199.00	100.00
Later (after Sept 4, 2015)	190.00	240.00	115.00

**Note:** Early rates in effect until September 4, 2015. ACE Affiliates pay Non-member rates. Workshops that do not meet the minimum number of registrations by Sept. 4, 2015 will be cancelled. Please ensure that you register as soon as possible.

**Pre- & Post-Workshop Registration Subtotal:** \$ \_\_\_\_\_

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# ACE 2015 Registration Form (page 3 of 3)

## EXTRAS

### Opening Reception and Exhibitor Showcase: Tuesday, October 6, 2015

(Full conference delegates receive one complimentary ticket)

Number of Guests \_\_\_\_\_ x 40.00 \$ = \_\_\_\_\_\$

### Delegate Social at Lion Brewery : Wednesday, October 7, 2015

Number of Guests \_\_\_\_\_ x 30.00 \$ = \_\_\_\_\_\$

(Includes transportation, food and gaming)

### Additional Conference Proceedings saved as PDF

(Full conference and full day delegates receive one complimentary copy)

Number of PDF: \_\_\_\_\_ x \$40.00 = \$\_\_\_\_\_

### Technical Tour—Toyota Motor Manufacturing

Number of Guests \_\_\_\_\_ x \$5.00 = \$\_\_\_\_\_

(Includes transportation)

**Extras Subtotal:** \$\_\_\_\_\_

## TOTAL PURCHASE

\$\_\_\_\_\_ Conference Registration Subtotal

\$\_\_\_\_\_ Workshop Registration Subtotal

\$\_\_\_\_\_ Extras Subtotal

\$\_\_\_\_\_ Subtotal

\$\_\_\_\_\_ HST (13%)\*\*

\$\_\_\_\_\_ **TOTAL**

\*\*All delegates must pay HST regardless of country or province of origin unless their organization is GST exempt. HST Exempt organizations must provide a letter of certification stating exempt status and that the registration is being paid by said organization.

## Method of Payment

A cheque or money order in the amount of \$ \_\_\_\_\_ (CDN) and payable to ACE is enclosed. Please charge \$ \_\_\_\_\_ (\$CDN) to my  MasterCard or  Visa

Credit Card Number: \_\_\_\_\_ Expiry: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Name of Cardholder: \_\_\_\_\_

**Cancellation Policy:** Requests for refunds must be sent in writing to ACE. A refund minus a \$50.00 processing fee is available if the request is received by September 4, 2015. A refund minus a 100.00 processing fee is available if the request is received after September 4, 2015.

No refunds will be made for cancellations received after September 18, 2015. Substitutions, from the same company only, may be made at any time and must be submitted in writing. The appropriate member/non-member rate will apply for substitutions. A full conference registration can only be used for a single individual.

**Fax to:** (416) 929-5256 or **Mail to:** ACE, Suite 202 - 720 Spadina Ave, Toronto, ON, M5S 2T9  
GST#: 10242 3761 RT0001