



**aes** applied ergonomics society presents

*The 22nd Annual*

# appliedergonomics

CONFERENCE 2019

*Optimize business through applied ergonomics*

**March 25-28, 2019**

**Hyatt Regency New Orleans • New Orleans, Louisiana**

**... Featuring the internationally renowned Ergo Cup® competition!**



**ON-SITE BROCHURE**

[www.iise.org/AEC](http://www.iise.org/AEC)

[#AppliedErgo2019](https://twitter.com/AppliedErgo2019)

# Industrial Physical Capability Services



*Minimizing Cost and Maximizing Health*

*IPCS offers physical strength evaluations allowing employers to evaluate their workforce and lower healthcare cost. These evaluations determine if a candidate's physical capability meets the essential functions of the job for new hire, return to work, and incumbent employees.*



**Visit us at booth #221**

# WELCOME

**aes** applied ergonomics society presents

The 22nd Annual

## applied@ergonomics CONFERENCE 2019

*Optimize business through applied ergonomics*

We are excited to welcome you to another stimulating year of the Applied Ergonomics Conference! You are joined by ergonomics professionals from industry, education, training, research, academia, healthcare and more for four days packed full with the latest insights and best practices from the field. We hope you walk away from AEC2019 with an invigorated perspective, fresh ideas and new friends that will continue to influence your work in the years to come.

Don't miss these exciting features at the AEC 2019:

- A keynote presentation by William S. Marras, Ph.D., CPE, the Honda Chair in the Department of Integrated Systems Engineering at The Ohio State University and director of the university's Spine Research Institute.
- AEC Aspire Talks, a keynote presentation format featuring short-form presentations of compelling messages from some of the brightest minds in ergonomics.
- Educational sessions that range from manufacturing applications to office ergonomics to everything in between.
- Roundtable and master track discussions about some of the most pressing issues in ergonomics.
- Diverse vendors presenting their latest solutions, tools and resources in the Exhibit Hall to solve your organization's challenges.
- Real-world ergonomics solutions and applications from industry-leading Ergo Cup® competitors.
- Hours of valuable networking opportunities, including Ergo Speed Networking, the AEC Trivia Game and a Mississippi River dinner/jazz cruise.
- Pre-conference workshops designed to give you tangible skills to take back to your organization.
- Dozens of presentations from the experts, sharing their success stories, lessons learned and measurable impact.
- Awards presentation for the Creativeness in Ergonomics Practitioner and Student of the Year.

Thank you for joining us for the 22nd Annual Applied Ergonomics Conference – we hope you enjoy your time with us in New Orleans!

### Save the date for 2020!

Applied Ergonomics Conference 2020  
March 16 – 19, 2020  
Kentucky International Convention Center  
Louisville, Kentucky

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*Video recording by participants and other attendees during any portion of the Applied Ergonomics Conference presentations is not allowed without prior written permission from the AEC administration.*

*Attendance at or participation during the Applied Ergonomics Conference constitutes consent to the use and distribution by AEC of the attendee's image or voice for publicity, promotional and/or reporting purposes in print or electronic communications media.*

# CONFERENCE COMMITTEE

Meet the 22nd Annual Applied Ergonomics Conference Committee.

## CONFERENCE CHAIR

Julia Abate, SAS Institute Inc.

## CONFERENCE CO-CHAIRS

Brian Roberts, CNA Insurance

Monica Matlis, Axendia Inc.

## AWARDS & RECOGNITION

**Chair:** Wayne Maynard, Liberty Mutual Insurance

## ERGO CUP®

**Chair:** Jeffrey Hoyle, The Ergonomics Center of North Carolina

**Vice-Chair:** Lisa Brooks, ORCHSE Strategies LLC

**Vice-Chair:** Monica Matlis, Axendia Inc.

Gary Allread, The Ohio State University

Brock Anderson, Ergo-Ology

Joe Balderrama, Balderrama Ergonomics & Risk Management (BERMN)

David Balderrama, The Boeing Company

Elise Condie, BSI Group

Andrew Dawson, CNA Insurance

Dan Gottesman, The Boeing Company

Kelly Hogan, Sandalwood

Winnie Ip, Humantech

Camille Major, Chevron

Wayne Maynard, Liberty Mutual Insurance

Moon Mukkar-Poyser, Cargill

Kay Parker-Paul, Liberty Mutual Insurance

Barbara Scheib, Electricities

Karl Siegfried, MEMIC

Holly Wick, 3M Center

## FACILITY TOURS

**Chair:** Paul Schwab, Texas Instruments

## INTERNATIONAL OUTREACH

**Chair:** Marise Carroll, Ergonomics Consultant

**Vice-Chair:** Lucy Hart, Global Furniture Group

Giles Balbinotti, Unisociesc & Anima

Ines Fernandes, Novility

Katharine Metters, Posturite

Isabel Nunes, UNINOVA

Rodrigo Marçal Pereira, Abrafit

Paul Schwab, Texas Instruments

## KEYNOTE

**Chair:** Gary Orr, OSHA

**Vice-Chair:** Depeesh Desai, Humantech Inc.

## NETWORKING

**Chair:** Holly Duhamel, FCA - TMP

**Vice-Chair:** Paul Adams, 3M

Kevin Barefield, Gulfstream Aerospace

Jordan Gladman, Cintas

Davana Pilczuk, Cintas

## PRE-CONFERENCE WORKSHOPS

**Chair:** Catherine Rae, Sandalwood

**Vice-Chair:** Holly Wick, 3M

## PROGRAMS

**Chair:** Ben Zavitz, ErgoHP

**Vice-Chair:** Nancy Laurie, Wegmans Food Markets, Inc.

**Vice-Chair:** Tina Minter, Chubb Limited

## Posters

**Chair:** Mark Benden, Texas A&M University

## Master Tracks and Round Tables

Amanda Kauder, Heatcraft RPD

Joe Wallace, CNA Insurance

Paul Adams, 3M Company

Lauren Brizendine, Fit For Work

Jim Galante, Southworth Products.com

Gregory Garrett – The Boeing Company

Gregory Griffith, CNA Insurance

Jessica Hardy, Caterpillar, Inc.

Ranjana Mehta, Texas A & M University

Mirtha Perazza, The Ergonomics Center of NC

Tim Pottorff, QP3 ErgoSystems

Abraham Robledo-Gallegos, Dover Food Retail

Julie Thompson, Liberty Mutual Insurance

David Wood, Raytheon

## SOCIAL MEDIA

**Chair:** Brock Anderson, ergo-ology

## STRATEGIC PLANNING

**Chair:** Sandra Woolley, Mayo Clinic

Elise Condie, BSI Group

Jim Galante, Southworth Products

Gregory Griffith, CNA Insurance

Jeffrey Hoyle, The Ergonomics Center of North Carolina

James Stafford, The Hartford

Robert Thomas, Auburn University

## STUDENT/NEW PROFESSIONAL

**Chair:** Chris Grieshaber, Illinois State University

Justin Artman, Illinois State University

## WEBINARS

**Chair:** Carrie Scheel, Concordia University

**Vice-Chair:** Amy Blueter, Kinetic Technologies

## AEC LEADERSHIP TEAM

Julia Abate, SAS Institute Inc.

Don Greene, IISE

Doug Long, IISE

Monica Matlis, Axendia Inc.

Brian Roberts, CNA Insurance

Sandra Woolley, Mayo Clinic

# CONFERENCE CHAIRS



**Conference Chair**  
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SAS Institute Inc.



**Conference Co-Chair**  
Brian Roberts  
CNA Insurance



**Conference Co-Chair**  
Monica Matlis  
Axendia Inc.



**Awards & Recognition Chair**  
Wayne Maynard  
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**Ergo Cup® Chair**  
Jeffrey Hoyle  
The Ergonomics Center  
of North Carolina



**Ergo Cup® Vice-Chair**  
Lisa Brooks  
ORCHSE Strategies LLC



**Ergo Cup® Vice-Chair**  
Monica Matlis  
Axendia Inc.



**Facility Tours Chair**  
Paul Schwab  
Texas Instruments



**International Outreach Chair**  
Marise Carroll  
Ergonomics Consultant



**International Outreach Vice-Chair**  
Lucy Hart  
Global Furniture Group



**Keynote Chair**  
Gary Orr  
OSHA



**Keynote Vice-Chair**  
Depeesh Desai  
Humantech Inc.



**Networking Chair**  
Holly Duhamel  
FCA - TMP



**Networking Vice-Chair**  
Paul Adams  
3M



**Pre-Conference Workshops Chair**  
Catherine Rae  
Sandalwood



**Pre-Conference Workshops Vice-Chair**  
Holly Wick  
3M



**Programs Chair**  
Ben Zavitz  
ErgoHP



**Programs Vice-Chair**  
Nancy Laurie  
Wegmans Food  
Markets Inc.



**Programs Vice-Chair**  
Tina Minter  
Chubb Limited



**Posters Chair**  
Mark Benden  
Texas A&M University



**Social Media Chair**  
Brock Anderson  
ergo-ology



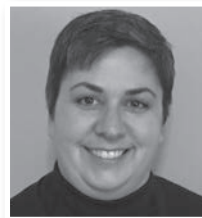
**Strategic Planning Chair**  
Sandra Woolley  
Mayo Clinic



**Student/New Professional Chair**  
Chris Grieshaber  
Illinois State University



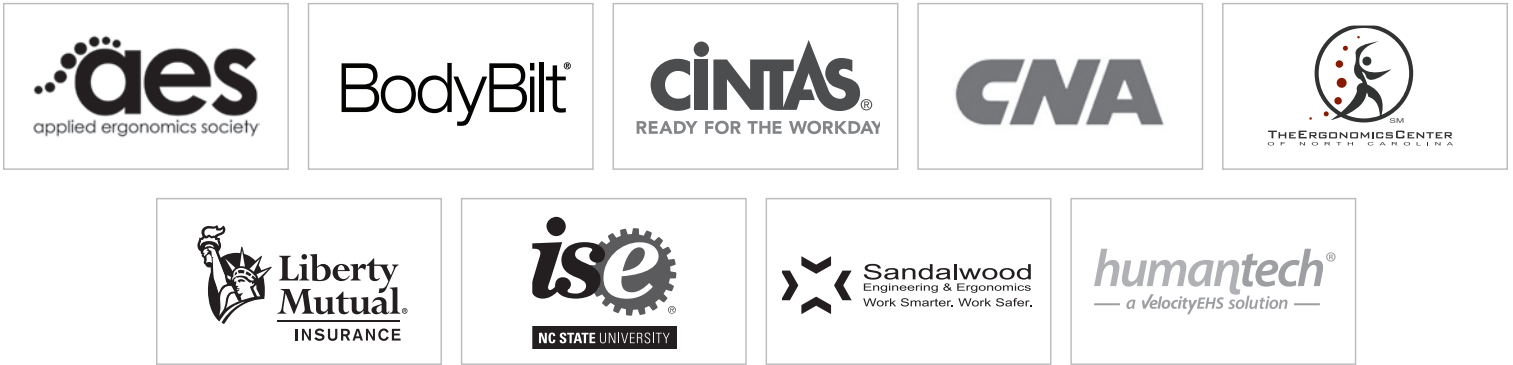
**Webinars Chair**  
Carrie Scheel  
Concordia University



**Webinars Vice-Chair**  
Amy Blueter  
Kinetic Technologies

# THANK YOU TO OUR SPONSORS

## SPONSORS



## ALLIANCE PARTNERS



## INTERNATIONAL ALLIANCE PARTNERS

ABRAFIT - The Brazilian Occupational Physical Therapy Association  
Brazilian Association of Consulting Companies in Health and Safety at Work - ABRESST  
The Ergo Center of Brazil  
The British Safety Industry Federation  
The Centre for Research in Occupational Safety and Health  
Chartered Institute of Ergonomics & Human Factors (UK)  
The Ergonomics Society of South Africa  
Fanshawe College  
Federation of the European Ergonomics Societies  
The Hong Kong Ergonomics Society  
Human Factors and Ergonomics Society Malaysia  
The IEDUV - Instituto Educacional Veronesi  
imk automotive  
The Indian Society of Ergonomics  
The Latvian Ergonomics Society  
The Polish Ergonomics Society  
Pontifícia Universidade Católica do Paraná (Pontifical Catholic University of Parana)  
The Portuguese Ergonomics Association  
The Portuguese Society of Occupational Safety and Hygiene  
The Inter-Regional (Russian) Ergonomics Association  
The Asociacion Española de Ergonomia/Spanish Ergonomics Society

# KEYNOTE SPEAKERS

**Tuesday, March 26 | 9:45 a.m.-10:45 a.m.**

*Elite Hall - first floor*



## **WILLIAM S. MARRAS, PH.D., CPE**

*The Ohio State University*

William S. Marras holds the Honda Chair in the Department of Integrated Systems Engineering at The Ohio State University. As director of the university's Spine Research Institute, he also holds joint academic appointments in the Department of Orthopaedic Surgery, the Department of Neurosurgery and the Department of Physical Medicine & Rehabilitation.

His research is centered on understanding multidimensional causal pathways for spine disorders through quantitative epidemiologic evaluations, laboratory biomechanical studies, personalized mathematical modeling, and clinical studies of the lumbar and cervical spine. His findings have been published in over 250 peer-reviewed journal articles, hundreds of refereed proceedings, and numerous books and book chapters, including a book *The Working Back: A Systems View*. A former editor-in-chief of *Human Factors*, Marras is currently deputy editor of *Spine*. He has also recorded a TEDx talk "Back Pain and your Brain," and was featured on NPR's "All Things Considered."

With Fellow status in six professional societies including the American Society for the Advancement of Science, Marras has been widely recognized for his contributions through numerous national and international awards, including two Volvo Awards for Low Back Pain Research and an honorary Sc.D. degree. He has served on over a dozen boards and committees in the National Research Council, including chair of the Board on Human Systems Integration for multiple terms. Marras is past president of the Human Factors and Ergonomics Society and is an elected member of the National Academy of Engineering.

**Wednesday, March 27 | 9:45 a.m.-10:45 a.m.**

*Elite Hall - first floor*

Join us for two presentations from influential leaders in ergonomics at Wednesday's keynote presentation, AEC Aspire Talks. In their second year at the Applied Ergonomics Conference, AEC Aspire Talks are designed to share learnings, achievements and innovational aspects of ergonomic programs in powerful 25-minute segments. AEC Aspire Talks are inspired by the popular TED Talks, geared toward audiences staying engaged while retaining relevant information. Your presenters are:



## **SANGHYUN LEE, PH.D.**

*University of Michigan*

As professor and John L. Tishman Faculty Scholar at the University of Michigan, SangHyun Lee leads the Dynamic Project Management Group. He is also founder of Kinetica Labs that provides markerless motion capture for ergonomic risk assessment. His research aims to improve occupational safety and health through sensing, data analytics and computer simulation.

Lee, who holds an M.Sc. and Ph.D. from MIT, served on the board of governors for the American Society of Civil Engineers (ASCE) Construction Institute, chaired the ASCE Construction Research Council and the ASCE Visualization, Information Modeling and Simulation Committee and held five editorship positions in leading journals.

His accolades include the Tom Waters Award, the ASCE Daniel W. Halpin Award for Scholarship in Construction, the ASCE Thomas Fitch Rowland Prize, the FIATECH Outstanding Early Career Researcher Award, the Construction Industry Institute Distinguished Professor Award, and the Henry Russel Award - the highest honor the University of Michigan bestows upon junior faculty - as well as eight best paper awards from leading journals and conferences. He has over 180 peer-reviewed articles, two patents, two books and one startup company.



## **DONALD R. PETERSON, PH.D.**

*Northern Illinois University*

Donald R. Peterson is the current chair of the ASTM (American Society for Testing and Materials) Committee F48 on Exoskeletons and Exosuits. A tenured professor of mechanical engineering and the dean of the College of Engineering and Engineering Technology at Northern Illinois University, Peterson is also a joint professor in the Department of Biomedical Engineering at Texas A&M University in College Station and a fellow of

the American Institute for Medical and Biological Engineering.

With a master's in mechanical engineering and a Ph.D. in biomedical engineering from the University of Connecticut, Peterson has over 25 years of experience in biomechanical engineering and medical research with a focus on measuring and modeling injury biomechanics and human, organ, and/or cell performance, including exposures to various physical stimuli and the subsequent biological responses. His research on the investigation of injury mechanisms and human-device interaction has led to the generation of new technologies and systems, such as personal protection technologies, occupational exoskeleton systems, robotic assist devices for hemiplegic rehabilitation, long-duration biosensor monitoring and reporting systems, novel surgical and dental devices and instruments, smart medical devices for home patient care and biotechnology systems.

His research also involves hand-arm vibration exposures and he serves as a U.S. delegate on the International Standards Organization Technical Committee (ISO/TC) 108/SC4 on Human Exposure to Mechanical Vibration and Shock. Peterson has published over 115 peer-reviewed scholarly works and is the editor-in-chief of *The Biomedical Engineering Handbook*, published by CRC Press, and the journal *Bioengineered*, published by Taylor and Francis.

# SCHEDULE AT-A-GLANCE

## Monday, March 25

7 a.m. – 5 p.m.	Registration Desk Open	Elite Hall Foyer – 1st floor
8 a.m. – 5 p.m.	Pre-Conference Workshop	See matrix for room location
8 a.m. – Noon	Pre-Conference Workshops	See matrix for room location
9 a.m. – 4 p.m.	Exhibitors and Ergo Cup® Set-up	Elite Hall – 1st floor
1 – 5 p.m.	Pre-Conference Workshops	See matrix for room location
1:30 – 4 p.m.	New Orleans City Tour	Departs from the Hyatt Regency Lobby
5 – 5:30 p.m.	Student Welcome at the Welcome Reception	Exhibit Hall
5 – 7:30 p.m.	Welcome Reception in the Exhibit Hall	Elite Hall – 1st floor

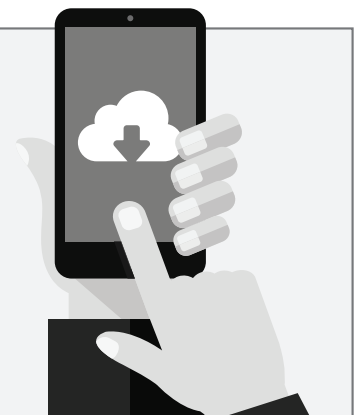
## Tuesday, March 26

7 a.m. – 5 p.m.	Registration Desk Open	Elite Hall Foyer – 1st floor
7 a.m.	Coffee Service	Strand Foyer – 2nd floor
7 – 7:30 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions	Foster 2 – 2nd floor
7:15 – 7:45 a.m.	First Time Attendee Orientation	Elite Hall – 1st floor
8 – 9:30 a.m.	Concurrent Sessions	See matrix for room location
9:45 – 10:45 a.m.	Keynote Presentation – William S. Marras, Ph.D., CPE, The Ohio State University	Elite Hall – 1st floor
10:45 a.m.	Refreshment Break	Exhibit Hall - Elite Hall – 1st floor
10:45 a.m. – 3 p.m.	Exhibits and Ergo Cup® in the Exhibit Hall (dedicated time)	Elite Hall – 1st floor
10:45 a.m. – 5 p.m.	Exhibits and Ergo Cup® in the Exhibit Hall	Elite Hall – 1st floor
11 a.m. – 11:20 a.m.	Caster Connection – Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
11 a.m. – 11:30 a.m.	Speaker/Moderator Check-in and Briefing for 3 p.m. Sessions	Foster 2 – 2nd floor
11:30 – 11:50 a.m.	Flexpipe – Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
Noon – 1 p.m.	International Attendee Meet-n-Greet – International table in the Exhibit area	Elite Hall – 1st floor
Noon – 1:15 p.m.	Lunch in the Exhibit Hall	Elite Hall – 1st floor
1 – 1:20 p.m.	Backapp - Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
1 – 2 p.m.	Poster Session – Authors will be at their posters to answer your questions	Elite Hall – 1st floor
1:30 – 3 p.m.	Dessert Reception in the Exhibit Hall	Elite Hall – 1st floor
2 – 3 p.m.	AEC Trivia Game	Elite Hall – 1st floor
3 – 5 p.m.	Concurrent Sessions	See matrix for room location
5:15 – 6:15 p.m.	Speed Networking Event	Elite Hall Foyer – 1st floor
6-9 p.m.	Off-site Networking Event - New Orleans Dinner Jazz Cruise	Departs from the Hyatt Regency Lobby

## DOWNLOAD THE CONFERENCE APP!

You can view the schedule by downloading the conference app,  
**Applied Ergonomics Conference 2019**,  
 at the Google Play Store or at the Apple Store.

Any changes will be reflected in the Conference App.





**Wednesday, March 27**

7 a.m. – 5 p.m.	Registration Desk Open	Elite Hall Foyer – 1st floor
7 a.m.	Coffee Service	Strand Foyer - 2nd floor
7 – 7:20 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions	Foster 2 – 2nd floor
7 – 7:20 a.m.	Wednesday Morning AEC Walk	Departs from the Hyatt Regency Lobby
8 – 9:30 a.m.	Concurrent Sessions	See matrix for room location
9:45 – 10:45 a.m.	Keynote Presentation - AEC Aspire Talks - SangHyun Lee, Ph.D., University of Michigan and Donald R. Peterson, Ph.D., Northern Illinois University	Elite Hall – 1st floor
10:45 a.m.	Refreshment Break	Exhibit Hall - Elite Hall – 1st floor
10:45 a.m. – 2 p.m.	Exhibits and Ergo Cup® in Exhibit Hall	Elite Hall – 1st floor
11 a.m. – 11:20 a.m.	Xsens – Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
11 – 11:30 a.m.	Speaker/Moderator Check-in and Briefing for 1:30 p.m. Sessions	Foster 2 – 2nd floor
11:30 a.m. – 11:50 a.m.	Backapp – Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
11:30 a.m. – Noon	Speaker/Moderator Check-in and Briefing for 3:30 p.m. Sessions	Foster 2 – 2nd floor
11:30 a.m. – 12:30 p.m.	Poster Session – Authors will be at their posters to answer your questions	Elite Hall – 1st floor
Noon – 1:30 p.m.	Lunch in the Exhibit Hall	Elite Hall – 1st floor
1 – 1:20 p.m.	MyAbilities – Exhibitor Presentation	AEC Theater, Exhibit Hall (Elite Hall – 1st floor)
1:30 – 3 p.m.	Concurrent Sessions	See matrix for room location
3 – 3:30 p.m.	Break	Strand Foyer - 2nd floor
3:30 – 5 p.m.	Concurrent Sessions	See matrix for room location

**Thursday, March 28**

7 a.m. – 1:30 p.m.	Registration Desk Open	Elite Hall Foyer – 1st floor
7 a.m.	Coffee Service	Strand Foyer - 2nd floor
7 – 7:20 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions	Foster 2 – 2nd floor
7 – 7:20 a.m.	Thursday Morning AEC Walk	Departs from the Hyatt Regency Lobby
7:30 – 7:50 a.m.	Speaker – Moderator Check-in and Briefing for 10 a.m. Sessions	Foster 2 – 2nd floor
8 – 9:30 a.m.	Concurrent Sessions	See matrix for room location
9:30 – 10 a.m.	Break	Strand Foyer - 2nd floor
10 – 11:30 a.m.	Concurrent Sessions	See matrix for room location
11:45 a.m. – 1:30 p.m.	Lunch & Awards Ceremony (additional fee required) – Ergo Cup® Competition, Practitioner and Student Awards	Elite Hall – 1st floor
2 – 4:30 p.m.	Industrial Safety & Rehabilitation Institute (ISR) Inc. Facility Tour	Departs from the Hyatt Regency Lobby

\*Schedule subject to change

# NETWORKING EVENTS

Monday, March 25

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## STUDENT WELCOME AT THE WELCOME RECEPTION

5 - 5:30 p.m.  
Exhibit Hall

## WELCOME RECEPTION

5 - 7:30 p.m.  
Elite Hall - 1st floor

Tuesday, March 26

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## FIRST TIMER'S ORIENTATION

7:15 - 7:45 a.m.  
Elite Hall - 1st floor

The First Timer's Orientation assists conference attendees in navigating the conference program and activities to make the best of their time at the meeting. While it's geared toward those new to the conference, it is open to all attendees.

## INTERNATIONAL ATTENDEE MEET-N-GREET

Noon - 1 p.m.  
Elite Hall - 1st floor

Visit the International table in the Exhibit area to meet fellow international attendees.

## DESSERT NETWORKING RECEPTION

1:15 - 3 p.m.  
Exhibit Hall - Elite Hall - 1st floor

## AEC TRIVIA GAME

2 - 3 p.m.  
Elite Hall - 1st floor

The AEC Trivia Game has been reformatted to provide a more inclusive and exciting challenge for those interested in testing their knowledge of ergonomic facts, fiction and folklore. A new scramble format has participants meeting and collaborating with new colleagues each round, providing a fun, fast-paced way to make new connections. Everyone plays and even novices could win an ErgoPrize®. Please be present at the beginning of the Game to have the greatest chance of winning.

## ERGO SPEED NETWORKING

5:15 - 6:15 p.m.  
Elite Hall Foyer - 1st floor  
(Limited space - advance sign-up required)

One of the greatest perks of AEC is having the opportunity to network with some of the best ergo minds in the business. Speed networking is a way to increase your opportunities to quickly create business contacts that can help you with your program. This year, the AEC Committee is introducing a new and exciting opportunity for interaction between AEC attendees and some of the top universities and companies in the ergo world. In a fast, round-robin style interaction, you will meet representatives from numerous organizations that will broaden your connections, increase your exposure, and cultivate new partnerships with top-notch individuals and organizations. Come join us for refreshments and a great time networking like you've never experienced!

## NETWORKING EVENT - NEW ORLEANS DINNER JAZZ CRUISE (OFF-SITE)

6 - 9 p.m.  
Event fee (advance sign-up required): \$75  
Departs from the Hyatt Regency lobby at 6 p.m.

When night falls, the Paddlewheeler Creole Queen rises to the occasion. Step on board and cruise with us into the night where the sleepless activity of America's busiest port buzzes. The sounds of a lively jazz band fill the air as you enjoy a lavish Creole buffet in elegantly appointed dining rooms.

The Creole Queen features outer decks with authentically patterned wrought iron trims inviting guests to stroll back in time as they settle into the mood of a bygone era. The interiors are richly appointed with plush Victorian style draperies, soft period lighting, wooden parquet dance floors and Louisiana Cypress bars accented with brass railing for a warm and welcoming setting.

After dinner, enjoy your favorite cocktails and sweet Mississippi River breezes on the promenade deck as the city skyline slips by under a canopy of stars. This Dinner Jazz Cruise is pure New Orleans, pure pleasure! The Creole Queen is powered by a 24-foot diameter paddlewheel.

Support for the event has been provided by ErgoGenesis.

BodyBilt®

# AWARDS

## CREATIVENESS IN ERGONOMICS PRACTITIONER OF THE YEAR AWARD

Sponsored by Liberty Mutual Insurance Co., this award recognizes professional career achievements in the creative application of ergonomics principles, including process improvement, education, applied research (research that has been translated into practice), applied instrumentation and product development.

The award will be presented at the conference awards luncheon on Thursday, March 28.



## CREATIVENESS IN ERGONOMICS STUDENT OF THE YEAR AWARD

Sponsored by CNA Insurance, this award recognizes achievements in ergonomics application or research, including process improvement, education, applied instrumentation and product development as submitted for presentation in a poster or oral presentation at the Applied Ergonomics Conference.

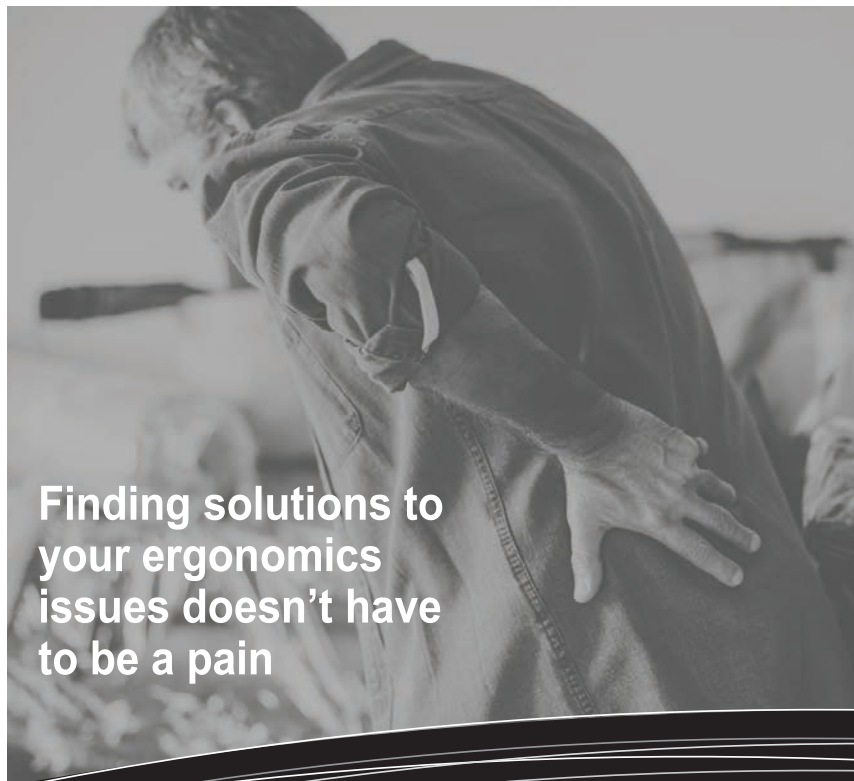
The award will be presented at the conference awards luncheon on Thursday, March 28.



## THE TOM WATERS AWARD

Sponsored by Liberty Mutual in recognition of the Best Manual Handling Presentation at the 2019 Applied Ergonomics Conference.

The award will be presented at the conference awards luncheon on Thursday, March 28.



Finding solutions to your ergonomics issues doesn't have to be a pain

**SRI•Ergonomics**

Phone: 614.292.4565 Email: [ergonomics@osu.edu](mailto:ergonomics@osu.edu) Web: <https://ergonomics.osu.edu/>

## Let our Team of Certified Professional Ergonomists do the "Heavy Lifting"



### CONSULTING

- Ergonomics assessments using quantitative tools and methods



### ERGONOMICS TRAINING

- Courses teaching a systematic approach to integrating ergo within an organization, offered both at OSU and on-site



### APPLIED RESEARCH

- In-depth investigations using sophisticated analysis techniques



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# AEC THEATER

## EXHIBITOR PRESENTATIONS & STUDENT TRACK

Presentations by exhibitors will be held in the AEC Theater in a special area of the Exhibit Hall (Elite Hall – 1st floor).

If you've been sourcing vendors for a special project, process improvement, training or new product development, be sure to make time to attend.

The presentations will provide the opportunity to get all your questions answered, which will shorten your decision-making process.

The Student Track Sessions will reveal how ergonomics is applied across all industries with Camille Major and a panel of industry experts. Honda will explain how they are participating in the Ergo Cup® and why it is important. Take this opportunity to network with other students and professionals.

**Check the conference app – Applied Ergonomics Conference 2019 – for updates.**

Tuesday, March 26

11-11:20 a.m. | Caster Connection

### **THE NEW "BIG EASY": MEASURING AND COMMUNICATING PUSH/PULL FORCE**

*Gary Allread, PhD, CPE, Program Director SRI-Ergonomics for The Ohio State University's Spine Research Institute; Joe Lyden, President, Caster Connection; Eric Hassen, Director of Business Development, Caster Connection*

We will discuss how Caster Connection and The Ohio State University Spine Research Institute will collaborate throughout 2019 to develop a repeatable, consistent process to capture accurate ergonomic push/pull data.

11:30-11:50 a.m. | Flexpipe

### **LEARN HOW TO DESIGN AN ERGONOMIC MODULAR MATERIAL HANDLING CART.**

*Sylvain (Sly) Lejour, Sales Chief Officer/Co-founder, Flexpipe*

Learn how to design an ergonomic cart in 15 minutes, one that will be efficient and adjustable for employees of all shapes and sizes.

1-1:20 p.m. | Backapp

### **WILL SITTING IN AN ELEVATED NEUTRAL SPINE POSITION HELP ALLEVIATE MUSCLE-SKELETAL AND RELATED ISSUES IN OFFICE, LABORATORY AND ASSEMBLY PRODUCTION WORKERS?**

*Sverre Martinsen, Area Manager – North America, Backapp Europe AB*

The 90-degree position (upper to lower body angle) has never been scientifically proven "healthy" and causes stress and imbalances. Opening the hip angle to 120 degrees and adding movement ("active sitting") allows a neutral spine position.

2 – 2:40 p.m.

### **BCPE OVERVIEW SESSION**

*Bill Boyd, IISE*

### **STUDENT SESSIONS IN THE AEC THEATRE IN THE EXHIBIT HALL**

*Sponsored in part by Sandalwood Engineering & Ergonomics*

3 – 3:30 p.m.

#### **Get to Know Honda and the Ergo Cup®**

*Jose Banaag - Honda of America MFG. Inc.*

3:30 – 4 p.m.

#### **Evolution of an Ergonomist with Camille Majors**

*Camille Majors - Chevron*

4 – 5 p.m.

#### **Panel Discussion with Industry Leaders**

*Panel Members: Catherine Rae, Sandalwood Engineering & Ergonomics; Camille Majors, Chevron; Bobbie Watts, Michelin North America; Mark Benden, Texas A&M Ergonomics Center EOH Dept. School of Public Health; Bill Boyd, IISE*

Wednesday, March 27

11-11:20 a.m. | Xsens

### **INERTIAL SENSORS IN ERGONOMICS**

*Aristo Wong, Applications Engineer at Xsens Technologies Inc.*

A detailed introduction to inertial motion units (IMUs) and how they can be used within the industry. We will discuss the advantages & disadvantages of an IMU system and the work of Xsens to cope with current challenges in motion capture technologies.

11:30 a.m.-11:50 a.m. | Backapp

### **WILL SITTING IN AN ELEVATED NEUTRAL SPINE POSITION HELP ALLEVIATE MUSCLE-SKELETAL AND RELATED ISSUES IN OFFICE, LABORATORY AND ASSEMBLY PRODUCTION WORKERS?**

*Sverre Martinsen, Area Manager – North America, Backapp Europe AB*

The 90-degree position (upper to lower body angle) has never been scientifically proven "healthy" and causes stress and imbalances. Opening the hip angle to 120 degrees and adding movement ("active sitting") allows a Neutral Spine position.

1-1:20 p.m. | MyAbilities

### **MYABILITIES DIGITAL JOB PROFILES – A COMPREHENSIVE RETURN TO WORK SOLUTION**

*Dr. Michael Sonne, Vice President of Innovations and Research, MyAbilities Technologies Inc.*

From the collection of job data to the provision of light or modified duties, the practices involved in return to work have been largely unchanged.

MyAbilities aims to change those paradigms by automating and improving every aspect of the return to work practice.

# CITY AND FACILITY TOURS

The city tour offers a great way to see the sights on New Orleans! The facility tour offers an in-depth, behind-the-scenes look at ergonomics in action.

Additional fees and registration required.

Monday, March 25

## NEW ORLEANS CITY TOUR

1:30-4 p.m.

Experience the history, culture and charm of neighborhoods like the French Quarter, Esplanade Cemetery, City Park and Garden District. Learn about our unique local burial practices and see tombs of rich granite and marble along with stunning sculpt. Explore the splendor and elegance of the Garden District - one of New Orleans' most sophisticated, historic and elegant neighborhoods.

Departs from the Hyatt Regency Lobby.

Thursday, March 28

## INDUSTRIAL SAFETY & REHABILITATION INSTITUTE (ISR) INC. FACILITY TOUR

2-4:30 p.m.

No one in the nation has more expertise in the area of job-specific functional testing or has a better proven record of effectiveness than the WorkSaver(sm) team at ISR Institute. ISR Institute validates job physical demands, develops detailed functional job descriptions and designs job-specific functional testing protocols. It is a turn-key operation that includes the provision of policies and procedures to clients, the highest level of quality assurance reviews, HIPAA compliant electronic report retrieval systems, annual testing outcome reports and 24/7 administrative support.

Departs from the Hyatt Regency Lobby.



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[umcohse-programs.org](http://umcohse-programs.org)  
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## COURSES

ERGONOMICS PRINCIPLES FOR WORKPLACE  
ASSESSMENT & DESIGN

USING THE 3D STATIC STRENGTH PREDICTION  
PROGRAM

COMPREHENSIVE INDUSTRIAL HYGIENE REVIEW

WARREN COOK HEALTH & SAFETY  
DISCUSSIONAL

OCCUPATIONAL HEALTH NURSING PROGRAMS

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3dsspp.org**



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# PRE-CONFERENCE WORKSHOPS

All workshops require advanced registration.

A.M. Workshops, Monday, March 25, 8 a.m. – Noon

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## **HUMAN AUGMENTATION: PERSPECTIVES ON HOW EXOSKELETONS ARE POSITIONED TO REVOLUTIONIZE THE INDUSTRIAL WORKER**

*Strand 12A – 2nd floor*

*Kadon Kyte and Maureen Shea, The Boeing Company*

*Basic level*

This preconference workshop will provide you with insights on the industrial exoskeleton market. In addition, you will hear from Boeing representatives on how the Boeing Company is researching and integrating various exoskeleton systems throughout the Boeing Company. You will learn about current standards being developed; exoskeleton organizations; suppliers active within the medical, industrial, and military space; key learnings from industry; and ways in which you can get involved in exoskeletons.

## **ERGO 101: ERGONOMICS BASICS**

*Strand 12B – 2nd floor*

*Kimberly Monroe, KM Ergonomics, LLC; Madina Joshi, Raytheon Corporate Ergonomics*

*Basic level*

This workshop is intended to help the participant understand the fundamentals of ergonomics, but more importantly to discover new ways to integrate the concepts and principles of ergonomics into engineering design, process improvement, and continuous improvement efforts. Whether you are brand new to ergonomics or are simply in a new role as an ergonomics lead or team member, you will want to attend this workshop to learn strategies for managing a comprehensive approach to problem identification and solution design in industrial environments. The course covers a brief historical background of ergonomics followed by an overview of risk identification, quantification, intervention and control, and documentation. Many hands on experiences are planned to demonstrate concepts covered during the course. This workshop is well suited for individuals of all educational and professional backgrounds to take home and implement right away.

## **A DEEP DIVE INTO OFFICE ERGONOMIC STANDARDS AND GUIDELINES**

*Strand 13A – 2nd floor*

*Teresa A. Bellingar, Haworth, Inc.*

*Basic level*

Beginning with an overview of North American office ergonomics standards and guidelines (BIFMA, HFES, CSA and CGSB), get ready to roll up your sleeves and learn about recent updates to these important documents and how they compare to each other. Discuss the trends on obesity and how this is impacting the standards and how it is affecting furniture design – specifically seating. Learn about potential seating dimensional recommendations that BIFMA may propose for individuals between 300 and 400 pounds (136 to 181 kg) and discuss the dimensional requirements for bariatric seating in FS 058:2017 (a Europe based standard). Additionally, spend some time discussing office ergonomic standards from Europe and Asia/Pacific; such as where to purchase them and a high-level overview of similarities/differences to North American office ergonomic standards and guidelines (i.e., can a chair meet all global ergonomic standards?). Participate in case studies related to using standards to purchase furniture. Come keen to learn, leave knowledge-rich and motivated to get these standards and guidelines working for you.

## **APPLYING FATIGUE MODELING RESEARCH TO PRACTICE**

*Strand 3 – 2nd floor*

*Mike Sonne, My Abilities*

*Advanced level*

Muscle fatigue modeling has been a well-researched topic in recent years, examining the close relationship that exists between a loss in muscle force and injury. This presentation aims to cover the research in the field and provide ways that these fatigue models could be used in the workplace. You will learn how research has been conducted to study muscle fatigue, what studies are the most relevant for applying to the workplace, how to interpret the outputs of popular muscle fatigue models and how you can use muscle fatigue models in your workplace to understand the impact of interventions.

# PRE-CONFERENCE WORKSHOPS

P.M. Workshops, Monday, March 25, 1-5 p.m.

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## **ERGO 102: HOW TO BUILD A PROGRAM**

*Strand 12B – 2nd floor*

*Davana Pilczuk, Cintas; Kevin Barefield, Gulfstream Aerospace*

*Basic level*

Welcome to the class that will help you build and develop your ergonomics program. Whether you are starting from scratch or wanting to improve your existing program, we will help you create the program that fits your company and its culture. Attendees will learn about the four key components necessary for all programs and how to create each one. We will teach you how to start ergo teams and how to keep them focused on getting results. We will also review the various risk assessment tools and software in order to help you decide which is a best fit for your company's needs. Training and education will also be discussed and we will show you some tricks on how to spice up your lessons so people enjoy and remember them. All experience levels are welcome to attend and we guarantee whatever your role is in your company, you will walk away with some fresh, new ways to make your program a financial success.

## **STRATEGIC APPROACH TO DEVELOPMENT OF ERGONOMICS DESIGN STANDARDS ENABLING IMPLEMENTATION**

*Strand 13A – 2nd floor*

*Patty Racco, Ford, and Kelly Hogan, Sandalwood*

*Advanced level*

Developing ergonomic standards for engineering is recognized as a successful method to ensure consistency and drive ergonomic principles to those making the decisions. The workshop will outline the need for standards, pros and cons of the type of standards, gathering data to ensure robustness, the presentation of data (written vs. visual), identifying the key stakeholders and how to ensure success by working collaboratively. The workshop will share published examples developed by a collaborative cross-company team. Participants will walk through a step-by-step approach on the selection, development and publication of a standard that will stand up to scrutiny, backed by ergonomic guidelines and assessment tools. There will be an interactive / hands-on portion where participants can 'practice' or fine-tune standard writing in small and large group discussion. We encourage all participants to bring in a standard proposal, in any level of development from concept to final editing, to apply the concepts touched on in the workshop and share with the larger group. An example will be taken through the steps with the group that will demonstrate how ergonomic tools have been applied, which ones were used and how they have been incorporated into standards. The objective is for the participants to successfully implement the approach and leave with ability to write standards for their workplace.

## **ERGONOMIC ASSESSMENTS FOR AN UPPER BODY EXOSKELETON USING ELECTROMYOGRAPHY (EMG)**

*Strand 3 – 2nd floor*

*Jason C. Gillette, Iowa State University*

*Intermediate/ Advanced level*

Upper body exoskeletons have the potential to be a practical intervention for shoulder injury reduction, but testing is needed to document benefits and drawbacks of these assistive devices. The purpose of this workshop is to describe EMG-based ergonomic assessments for a passive upper body exoskeleton used by workers at manufacturing facilities. We have collected on-site data at John Deere and Toyota, along with a lab-based study of common postures used on assembly lines. During the on-site studies, wireless EMG sensors were used to measure activation for muscles of the arm, shoulder, and lower back during job tasks with and without an exoskeleton. EMG data were then compared to threshold limit values (TLVs) as a predictor of upper body fatigue and potential injury risk. We will discuss how we have interpreted our experimental data and how the results may be used to make decisions about exoskeleton usage.

Full-Day Workshop, Monday, March 25, 8 a.m.-5 p.m.

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## **ERGONOMICS CERTIFICATION REVIEW – DETERMINING WHAT YOU DO AND DO NOT KNOW**

*Strand 2 – 2nd floor*

*Robert J. Smillie, Foundation for Professional Ergonomics*

*Basic/Intermediate*

Participants will learn what certification means and what are the basic steps to become certified. To become certified, participants will learn about the core competencies and of what topics they will need to have some knowledge and understanding. Overall reviews of key competency areas will be provided.



# MATRIX

## MONDAY, MARCH 25

**Pre-conference Workshops:** Take advantage of the opportunity to enhance your skills and boost your learning by participating in a pre-conference workshop. Learn from experienced practitioners who will address your concerns about ergonomics. They are open to all registered conference attendees and require a separate fee.

7 a.m. – 5 p.m. Registration Desk Open – Elite Hall Foyer – 1st floor					
Room	Strand 12A – 2nd floor	Strand 12B – 2nd floor	Strand 13A – 2nd floor	Strand 3 – 2nd floor	Strand 2 – 2nd floor
8 a.m. – Noon	<i>Human Augmentation: Perspectives on How Exoskeletons are Positioned to Revolutionize the Industrial Worker</i> Kadon Kyte and Maureen Shea, The Boeing Company Basic level	<i>Ergo 101: Ergonomics Basics</i> Kimberly Monroe, KM Ergonomics, LLC Madina Joshi, Raytheon Corporate Ergonomics Basic level	<i>A Deep Dive into Office Ergonomic Standards and Guidelines</i> Teresa A. Bellingar, Haworth, Inc. Basic level	<i>Applying Fatigue Modeling Research to Practice</i> Mike Sonne, My Abilities Advanced level	
8 a.m. – 5 p.m.					<b>8 a.m. – 5 p.m.</b> <i>Ergonomics Certification Review – Determining What You Do and Do Not Know</i> Robert J. Smillie, Foundation for Professional Ergonomics
9 a.m. – 4 p.m. Exhibitors, Ergo Cup® and Poster Presenters Set-up – Elite Hall – 1st floor					
1 – 5 p.m.	<i>Process Manufacturing Industries &amp; Control Rooms – Collaboration, IOT, and Health-Conscious Workers Drive Ergonomic Advancements</i> Benjamin Poskie, Emerson Process Management, Bruce Johnson, Evosite Control Rooms Intermediate level	<i>Ergo 102: How to Build a Program</i> Davana Pilczuk, Cintas, Kevin Barefield, Gulfstream Aerospace Basic level	<i>Strategic Approach to Development of Ergonomics Design Standards Enabling Implementation</i> Patty Racco, Ford, Kelly Hogan, Sandalwood Advanced level	<i>Ergonomic Assessments for an Upper Body Exoskeleton using Electromyography (EMG)</i> Jason C. Gillette Iowa State University Intermediate/ Advanced level	
1:30 – 4 p.m.	New Orleans City Tour – Additional fee applies – Departs from the Hyatt Regency Lobby				
5 – 7:30 p.m.	Welcome Reception in the Exhibit Hall – Elite Hall – 1st floor				

# MATRIX

## TUESDAY, MARCH 26

7 a.m. – 5 p.m.	Registration Desk Open – Elite Hall Foyer – 1st floor				
7:15 – 7:45 a.m.	First Timer's Orientation – Elite Hall Foyer – 1st floor				
7 – 7:30 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions – Foster 2 – 2nd floor				
7 – 8 a.m.	Coffee Service – Strand Foyer – 2nd floor				
Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Ergonomics in Health, Safety and the Environment (HSE)	Master
Room	Strand 10 – 2nd floor	Strand 11 – 2nd floor	Strand 12 – 2nd floor	Strand 13 – 2nd floor	Strand 7 – 2nd floor
Moderators	Miriam Joffe and Steven Jablon	Jose Morales and Craig Halpern	Kristy Schultz and Glenn Harrington	Donna Bartlett and Whitney Mantooth	
8 – 9:30 a.m.	<p><i>Effectively Leveraging Virtual Reality to Enhance Ergonomics Integration</i> Darin Bolthouse and Christian Kennett, Lockheed Martin Corporation Space, Anthony Banks, Lockheed Martin Corporation All Levels</p> <p><i>Field Assessment of an Arm-Support Exoskeleton: Preliminary Results</i> Maury Nussbaum and Sunwook Kim, Virginia Tech; Marty Smets, Ford Motor Company; Intermediate level</p>	<p><i>Democratize Ergonomics: How to Involve Everyone in Improving the Workplace</i> Kent Hatcher, Humantech, Inc. All Levels</p> <p><i>The Impact of Training and Feedback on Lifting Technique</i> Soma Chengalur, Nancy Laurie and James Schoeneman, Wegmans Food Markets Inc. Basic level</p>	<p><i>Too Big, Too Fast, Too Often: Addressing Ergonomic Challenges in an Incentive Based Environment at La-Z-Boy</i> Sarah Sunderman, Sandalwood Engineering and Ergonomics; Dennis Poland, La-Z-Boy, Inc. Basic level</p> <p><i>Tesla's 3P Approach to Ergonomics: People, Product and Process</i> Michael Kirschner, Tesla Motors All Levels</p>	<p><i>Introduction to Human &amp; Organizational Performance</i> Lisa Brooks, ORCHSE Strategies, LLC All Levels</p> <p><i>Considering Ergonomics in Workplace Incident Investigations</i> Paul Adams, 3M Intermediate level</p>	<p><i>Is Your Workforce Suffering from Cumulative Fatigue?</i> Jim Potvin, Potvin Biomechanics Inc., Ranjana Mehta, Texas A&amp;M Mike Sonne, MyAbilities Technologies Inc.</p>
8 – 9:30 a.m.	<p><b>Session Coordinator:</b> Ranjana Mehta</p>				
9:45 – 10:45 a.m.	Keynote Presentation – William S. Marras, Ph.D., CPE, The Ohio State University - Elite Hall – 1st floor				
10:45 – 11:15 a.m.	Refreshment Break in the Exhibit Hall - Elite Hall – 1st floor				
10:45 a.m. – 3 p.m.	Exhibits and Ergo Cup® in the Exhibit Hall – Dedicated Time – Elite Hall – 1st floor				
10:45 a.m. – 5 p.m.	Exhibit Hall Open – Elite Hall – 1st floor				
11 – 11:30 a.m.	Speaker/Moderator Check-in and Briefing for 3 p.m. Sessions – Foster 2 – 2nd floor				
Noon – 1 p.m.	International Attendee Meet-N-Greet – Elite Hall - 1st floor				
Noon – 1:15 p.m.	Lunch in the Exhibit Hall – Elite Hall – 1st floor				
1:15 – 3 p.m.	Dessert Networking Reception in the Exhibit Hall – Elite Hall – 1st floor				
1 – 2 p.m.	Poster Session – Elite Hall – 1st floor				
2 – 3 p.m.	AEC Trivia Game – Elite Hall – 1st floor				

**TUESDAY, MARCH 26**

Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Ergonomics in Health, Safety and the Environment (HSE)	Master
Room	Strand 10 – 2nd floor	Strand 11 – 2nd floor	Strand 12 – 2nd floor	Strand 13 – 2nd floor	Strand 7 – 2nd floor
Moderators	Mahiyar Nasarwanji and Karen Harrington	Sarah Spiker and Amy Blueter	Thorsten Kuebler and Raymond Higgs	Zach Collins and Adam Pickens	
3 – 5 p.m.  <b>Session Coordinator:</b> Lauren Brizendine	<i>Exoskeletons and Ergonomic Risk</i> Terry Butler, Lean Steps Consulting Inc. Jason Gillette, Iowa State University All Levels	<i>A Practical Guide to the Design of Manually-Powered Carts for Ergonomists</i> Thomas Albin and Lui Dilauro, Darcor Ltd All Levels	<i>Featured Speaker: Cintas Ergo Journey</i> Stephen Jenkins, Cintas All levels	<i>ISO 45001 - What Does it Mean for Ergonomic Practitioners?</i> Paula Lewis, Bureau Veritas Intermediate level	<i>Effects of Prolonged Use of Mixed Reality Systems in Occupational Settings</i> Shawn Doherty, Embry Riddle Aeronautical University, Maureen Shea and Kadon Kyte, The Boeing Company, Michael Jenkins, Charles River Analytics  Intermediate/Advanced
	<i>Evaluating the Effectiveness of Exoskeleton Technology to Improve Employee Health and Reduce Task Workload</i> Ross Davis, Briotix Advanced level	<i>Did You Remember to Plug in Your Casters? Powered Drive Units for Carts</i> Rob Jordan, Blickle USA Wheels and Casters, Inc. All Levels		<i>Is It Hot in Here or Is It Just Me? – A Review of the Proposed CA/OSHA Indoor Heat Standard</i> Thomas Neale, Chubb Risk Engineering Basic level	
	<i>Qualitative Analysis of an Upper Limbs Exoskeleton Application on a Car Assembly Line in Southern Brazil</i> Marcio Salatiel and Ademir Salles, Renault Brazil; Giles Balbinotti, Renault-Curitiba; Maria Lucia Okimoto, Rodney Wenke and João Antonio Palma Setti, UTFPR All Levels	<i>How Your Work Station Crane Selection Impacts the Ergonomics of Your Lift Assist Device</i> Lee Bailey, Schmalz Inc. Intermediate level	<i>Ice Cream and Ergonomics – The Wells Story</i> William Davis, Wells Enterprises Basic level	<i>CalOSHA's MIPP for Hospitality... A Case Study for Us All</i> Craig Halpern, IMA, Inc. Intermediate level	
	<i>Motion Capturing as an Ergonomic Assessment Tool to Design Ergonomic and Productive Work</i> Peter Kuhlang, Deutsche MTM-Vereinigung e.V. MTM-Institut All Levels	<i>Properly Positioning Product: Tools and Considerations to Improve Industrial Ergonomics</i> Kevin Kuhn, Kinetic Technologies Intermediate level	<i>What You Need to Know for a World Class Ergonomics Program</i> Christine Jay, Club Car, LLC. Intermediate/Advanced level	<i>A Comparison of Field Hand-Arm Vibration Exposure Measurements to Manufacturers' Published Data for Commercial Grounds Keeping Equipment</i> Steven Chervak, U.S. Army Public Health Center Intermediate level	
5:15 – 6:15 p.m.	Speed Networking Event (limited space – advance sign-up required) - Elite Hall Foyer – 1st floor				
6 – 9 p.m.	Off-site Networking Event - New Orleans Dinner Jazz Cruise (additional fee required) - Departs from the Hyatt Regency Lobby – Support for the event has been provided by ErgoGenesis				

# MATRIX

## WEDNESDAY, MARCH 27

7 a.m. – 5 p.m.	Registration Desk Open – Elite Hall Foyer – 1st floor				
7 – 7:20 a.m.	Wednesday Morning AEC Walk – Departs from the Hyatt Regency Lobby				
7 – 7:30 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions – Foster 2 – 2nd floor				
7 – 8 a.m.	Coffee Service – Strand Foyer – 2nd floor				
Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Office Ergonomics	Roundtable Discussion
Room	Strand 10 – 2nd floor	Strand 11 – 2nd floor	Strand 12 – 2nd floor	Strand 13 – 2nd floor	Strand 7 – 2nd floor
<i>Moderators</i>	Adam Pickens and Karen Harrington	Phil Hollins and Gary Bishop	Crystal Schottler and Chris Griesnaber	Wendy Lee and Ruby Antonio	
8 – 9:30 a.m.	<p><i>Grip Sensor Technology: A Comparative Analysis</i> Deborah Lechner, ErgoScience, Inc. Intermediate level</p>	<p><i>Pushing and Pulling – What is Safe?</i> Dave Lippert, Hamilton Caster &amp; Mfg. Co. Basic level</p>	<p><i>How Behavior-based Safety Led to a New and Improved Ergonomics Program</i> Samuel Cantu, Samsung Austin Semiconductor Intermediate/ Advanced level</p>	<p><i>Ergonomics as the Rule Rather than the Exception: Incorporating Ergonomics into Furniture Standards</i> Kristin Amlie, UCSF All Levels</p>	<p><i>Prioritizing Ergonomics in the HSE Field</i> Keith White, Lennox International Inc. Stephen Jenkins, Cintas Holly Wick, 3M Jose Banaeg, Honda of America MFG Inc.</p>
<b>Session Coordinator:</b> Abraham Robledo	<p><i>Hands Off My Luggage: Biomechanical, Physiological and Productivity Evaluation of a Baggage Lift Assist Device</i> Ben Zavitz, Ergo Human Performance LLC Advanced level</p>	<p><i>Evaluation of Push Pull Exposures at Metalworker, Wholesale Distributor, Order Fulfillment Center – A Case Study</i> Gregg Kloss, Nationwide Insurance Basic level</p>	<p><i>In it for the Long Haul: How Six Years Focused on Electrical Connectors Improved Ergonomics at GE Appliances</i> Michala Baete, Sandalwood Engineering &amp; Ergonomics; Mary Humphrey, GEA; Stephen DeScioli, TE Connectivity All Levels</p>	<p><i>A Case for Virtual Ergonomics – How Three Companies Saved Time and Money Through Digital Office Ergo Solutions</i> Allison Coffman and Donna Hoctor, Briotix Intermediate level</p>	
9:45 – 10: 45 a.m.	Keynote Presentation - AEC Aspire Talks - SangHyun Lee, Ph.D., University of Michigan and Donald R. Peterson, Ph.D., Northern Illinois University - Elite Hall – 1st floor				
10:45 – 11:15 a.m.	Refreshment Break in the Exhibit Hall - Elite Hall – 1st floor				
11 – 11:30 a.m.	Speaker/Moderator Check-in and Briefing for 1:30 pm Sessions – Foster 2 – 2nd floor				
11:30 a.m. - Noon	Speaker/Moderator Check-in and Briefing for 3:30 pm Sessions – Foster 2 – 2nd floor				
11:30 a.m. – 12:30 p.m.	Poster Session – Elite Hall – 1st floor				
Noon – 1:15 p.m.	Lunch in the Exhibit Hall – Elite Hall – 1st floor				

**WEDNESDAY, MARCH 27**

Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Office Ergonomics	Master
Room	Strand 10 – 2nd floor	Strand 11 – 2nd floor	Strand 12 – 2nd floor	Strand 13 – 2nd floor	Strand 7 – 2nd floor
Moderators	Sandi Herring and Alison Heller-Ono	Jaclyn Divine and Jonisha Pollard	Thomas Rowell and Shaheen Ahmed	Gary Bishop and Steve Morrissey	
<p>1:30 – 3 p.m.</p> <p><b>Session Coordinator:</b> Tina Minter</p>	<p><i>Comfort Analysis of Using Smart Glasses During “Picking” and “Putting” Tasks</i> Eboni Smith, Reuben Burch and Lesley Strawderman, Mississippi State University Basic level</p>	<p><i>Motion Is Money</i> Andrew Dossett, CNA Financial All Levels</p>	<p><i>How Behavior-based Safety Led to a New and Improved Ergonomics Program</i> Samuel Cantu, Samsung Austin Semiconductor Intermediate/ Advanced level</p>	<p><i>Ergonomics as the Rule Rather than the Exception: Incorporating Ergonomics into Furniture Standards</i> Kristin Amlie, UCSF All Levels</p>	<p><i>Exoskeletons – Are they Worth it?</i> Joseph Zawaideh, Levitate Technologies Inc. Brian Roberts, CNA Insurance Robbie Schram, Toyota</p>
	<p><i>Push-Pull Guidelines Based on Biomechanical Tolerances and Use of Its New Web Tool</i> Gary Allread, SRI-Ergonomics – The Ohio State University Basic Level</p>	<p><i>Push-Pull Guidelines Based on Biomechanical Tolerances and Use of Its New Web Tool</i> Gary Allread, SRI-Ergonomics – The Ohio State University Basic Level</p>	<p><i>Industrial vs. Sport Athletes</i> Brock Anderson, ergo-ology All Levels</p>	<p>The Challenges in a Changing World of Sit/ Stand Options: A Practitioner’s Point of View Patricia Holdaway and Julia Abate, SAS Institute Inc. Basic/Intermediate level</p>	
	<p><i>Ergonomic Technology: Apps for the Practicing Ergonomist</i> Carrie Scheel, Concordia University Wisconsin and Synergistic Solutions, LLC Basic level</p>	<p><i>Designing the Ergonomic Solution with Ergonomic Principles</i> Allison Stephens, Fanshawe College; Dan Burseth, Eckhart USA All Levels</p>	<p><i>Fully Diagnose the Problem Before you Prescribe the Cure</i> James Galante, EASE Council Basic/Intermediate</p>	<p><i>Goldilocks and the Accelerometer: Using Objective Measures to Fit the Injured Client</i> John Fitzsimmons, Ergonomics First Intermediate/Advanced level</p>	

# MATRIX

WEDNESDAY, MARCH 27

Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Office Ergonomics	Master
Room	Strand 10 – 2nd floor	Strand 11 – 2nd floor	Strand 12 – 2nd floor	Strand 13 – 2nd floor	Strand 7 – 2nd floor
<i>Moderators</i>	Thomas Neale and Giles Balbinotti	Catherine Rae and Crystal Mitchell	Jaclyn Divine and Derrick Palma	Cindy Callahan and Shawn Egan	
3:30 – 5 p.m.  <b>Session Coordinator:</b> Julia Abate	<i>Digital Human Modeling to Support Human-Centric Design</i> Thorsten Kuebler, Human Solutions	<i>Evidence-Based Onsite Injury Prevention: Leveraging a Threefold Approach for Sustainable, Effective Change</i> James Rethaber and Kyle Mahlum, Fit For Work All Levels	<i>Anatomy, Pathology and Healing Process of Ergonomics Injuries</i> Ronald Porter, The Back School Basic level	<i>Resolving Complex Office Ergo Evaluations</i> Gene Kay, VelocityEHS Intermediate level	<i>How to Effectively Communicate with the C-Suite</i> Phillip Hollins, CNA Insurance Brock Anderson, ergo-ology Matthew Pierce, EMCOR Group, Inc James Galante, Southworth Products Corp.
	<i>Embracing Wearables to Ensure Ergonomics, Safety and Wellness in the Workplace</i> Ashleigh Giliberto, MEGAComfort Intermediate level	<i>It's as Easy as PIES – Reducing Employee Lost Work Days with a Comprehensive Onsite Ergonomic Solution</i> Ross Davis, Briotix Intermediate level	<i>Featured Speaker: Hiring a Healthier and More Fit Worker: Wouldn't It Be Nice Not to Hire the Claim!</i> Thomas B. Gilliam, Industrial Physical Capability Services (IPCS)	<i>An Exploration of Workplace Lighting</i> Zachery Collins, Bureau Veritas Basic/ Intermediate level	
	<i>Smart Wearables to Automate Risk Assessment and Detect Fatigue</i> Jason Guss, Fnu Apoorva and Pankaj Singh Iterate Labs (formerly OrthoFit Inc) All Levels	<i>Ergonomic Worksite Analysis: The Critical Link in Stay at Work/ Return to Work</i> Alison Heller-Ono, Worksite International, Inc. Intermediate level		<i>Can Ergonomics and Productivity be Impacted by Indoor Air Quality in Employees Working in Home Offices Full-time?</i> Kamrie Sarnosky, Mark Benden and Leslie Cizmas, Texas A&M University Basic/ Intermediate level	

**THURSDAY, MARCH 28**

7 a.m. – 1:30 p.m.	Registration Desk Open – Elite Hall Foyer – 1st floor				
7 – 7:20 a.m.	Thursday Morning AEC Walk – Departs from the Hyatt Regency Lobby				
7 – 7:20 a.m.	Speaker – Moderator Check-in and Briefing for 8 a.m. Sessions – Foster 2 – 2nd floor				
7:30 – 7:50 a.m.	Speaker – Moderator Check-in and Briefing for 10 a.m. Sessions – Foster 2 – 2nd floor				
7 – 8 a.m.	Coffee Service – Strand Foyer – 2nd floor				
<b>Track</b>	<b>Advancements in Ergonomics</b>	<b>Ergonomics in Action</b>	<b>Ergonomics Programs</b>	<b>Multi-skilled Ergonomics Practitioners</b>	<b>Roundtable Discussion</b>
<b>Room</b>	<b>Strand 10 – 2nd floor</b>	<b>Strand 11 – 2nd floor</b>	<b>Strand 12 – 2nd floor</b>	<b>Strand 13 – 2nd floor</b>	<b>Strand 7 – 2nd floor</b>
<i>Moderators</i>	Carrie Scheel and Ed Eisbrenner	Gary Orr and Will Muiru	Sandra Woolley and Craig Karasack	Jonelle Dubois and Chris Grieshaber	
8 – 9:30 a.m.  <b>Session Coordinator:</b> Jessica Hardy	<i>Extrasensory Perspective: Foresight Gained from Pairing Wearables to Advanced Analytic Software to Reduce MSD in the Workplace</i> Bryan Statham, LifeBooster Inc. All Levels	<i>Digging into Macro-Ergonomics using the NIOSH Generic Job Stress Questionnaire to Uncover Psychosocial Factors</i> Jessica Chandler, ATI Worksite Solutions Basic/ Intermediate level	<i>It's a Win, a Reflection on Being a Mentor of an Ergonomics Student</i> Wendy Lee and Marc Lieder, Union Gas; Allison Stephens, Fanshawe College Basic level	<i>Gemba, Blitz, Kaizen and Kaikaku - What Will Help My Ergo Program?</i> Jeffrey Smagacz, Marsh Risk Consulting Intermediate/ Advanced level	<i>Building Office Ergonomics Programs</i> Tricia Griggs, Aflac Gloria Paz, Chevron
	<i>Safety Voice for Ergonomics: Text Message Reminders to Reinforce Learning</i> Jennifer Hess and Laurel Kincl, University of Oregon, Dan Anton, Eastern Washington University and Douglas L. Weeks, Inland Northwest Health Services All levels	<i>Ergonomics on Demand</i> Jordan Gladman, Cintas Basic level	<i>Featured Speaker: Training "Generation Z" Students and Employees: It Can Be Done!</i> Robert Thomas and Richard Seseck, Auburn University Intermediate level	<i>Integrating Ergonomics into Lean Manufacturing</i> Elisha Lemoire, Options Incorporated Intermediate/ Advanced level	
	<i>Useful Family of MAE-based Equations</i> Murray Gibson, Saturn Ergonomics Consulting; Connor Lusk, Saturn Ergonomics / Auburn University All Levels	<i>What it Takes to Have a Successful Internal Ergo</i> Fiona Quinn and Glenn Flood, Cintas Basic level		<i>The Ergonomics Design Glass Ceiling: Real or Imagined</i> Madina Joshi, Raytheon All Levels	
9:30 – 10 a.m.	Refreshment Break - Strand Foyer – 2nd floor				

# MATRIX

THURSDAY, MARCH 28

Track	Advancements in Ergonomics	Ergonomics in Action	Ergonomics Programs	Multi-skilled Ergonomics Practitioners	Master Track
Room	Strand 10 - 2nd floor	Strand 11 - 2nd floor	Strand 12 - 2nd floor	Strand 13 - 2nd floor	Strand 7 - 2nd floor
<i>Moderators</i>	Celeste Sage-Beevers and John Pentikis	Daphe Boston and Carrie Scheel	Jeff Smagacz and Steve Chervak	Steven Jablon and Jessica Chandler	
10 - 11:30 a.m.  <b>Session Coordinator:</b> Greg Griffith	<i>Using Ergonomic Design Guidelines and a Risk Priority Score to Ratify New Hand Tools</i> Wendy Lee, Union Gas Basic level	<i>Improving Productivity and Quality Through Ergonomics: A Case Study</i> Lauren Brizendine, Fit For Work All Levels	<i>Identifying Nasty Jobs: Lessons Learned</i> Sandra Woolley, Mayo Clinic All Levels	<i>A Day in The Life of An Ergonomist</i> Bobbie Watts, Michelin North America; Lashawn Nevins, Lockheed Martin Basic level	<i>Bridging the Gap Between Educational Research and Industry</i> George Brogmus, Liberty
	<i>A Population Strength Database for You and Me</i> Murray Gibson, Saturn Ergonomics Consulting; Ashwini Sharath, Auburn University Intermediate/Advanced level	<i>Quality and Ergonomics in Assembly Manufacturing - What's the Connection?</i> Elisha Lemoire, Options Incorporated Basic/ Intermediate level	<i>Safe Patient Handling Compliance to Insure Highly Reliable Outcomes</i> Kent Wilson, HoverTech International Intermediate/Advanced level	<i>One Ergonomist's Journey: Skeletons, Spaghetti Diagrams, Social Media, and Stuffed Animals</i> Sandra Sellers, Walt Disney World Basic level	
	<i>Size North America - The New North American Anthropometric Survey</i> Thorsten Kuebler, Human Solutions All levels	<i>"Super-Ergonomics-Mind": Big Data Delivers Better Information and Smarter Solutions</i> Jeff Sanford and Winnie Ip, Humantech Basic level	<i>Ergonomics and Your Parents: Musculoskeletal Challenges of Home Health Care for a Loved One</i> John Pentikis and Kelsey McCoskey, US Army Public Health Center Basic/Intermediate level	<i>So, You're Thinking About Becoming an Expert Witness in Ergonomics?</i> Julia Abate, SAS Institute Inc.; Paul Adams, 3M; Ben Zavitz, ErgoHP Intermediate/Advanced level	
11:45 a.m. - 1:30 p.m.	Lunch & Awards Ceremony - Ergo Cup® Competition, Practitioner and Student Awards - Elite Hall - 1st floor (additional fee applies)				
2 - 4:30 p.m.	Industrial Safety & Rehabilitation Institute (ISR) Inc. Facility Tour - Departs from AEC Conference Registration Desk - 1st floor (additional fee applies)				



# POSTER SESSIONS

Posters will be on display in the Elite Hall - 1st Floor (Exhibit Hall).

Information on a variety of topics will be displayed in poster format in the Exhibit Hall through the duration of the conference. Presenters from the poster sessions will provide attendees with an overview of their topic in a one-on-one conversation. Attendees can walk to each poster presentation on their own schedule. Authors will be at their posters the following times to answer your questions:

Tuesday, March 26 from 1 – 2 p.m.

Wednesday, March 27 from 11:30 a.m. – 12:30 p.m.

## Poster #2018

Occupational Health and Safety Approach in the Evaluation of Stress and Depression in the Workplace

*Authors: Rodrigo Pereira and Ximena Valis, Ergo Center, Melina Peixoto, Marcos Fassarella, Enilene Lovatte and Marisa Coser, Instituto Federal do Espirito Santo*

## Poster # 2043

Cognitive Ergonomics and Constraints and Difficulties in Relationship with Brazilian Government Institutions

*Authors: Adriano Varasquin, PUCPR, Giles Balbinotti, Renault-Curitiba, Leandro Vieira, Renault, Alessandro Diogo Vieira*

## Poster # 2048

Understanding How Experience Plays a Role in the Physician's Ability to Manage High Acuity Events in the Emergency Department: A Comparative Study of Residents vs. Attending

*Authors: Paul Rosenberger, Dotan Shvorin and Harrison Albo, Clemson University*

## Poster # 2050

Understanding Emergency Medicine Physicians' Physiological Response to Distractions During Emergency Department Clinical Care

*Authors: Daniel Ross and Dotan Shvorin, Clemson University*

## Poster # 2056

Successful Sit Stand Workstation Deployment in Ethicon Neuchâtel CH

*Author: Yves Huguenin, Ethicon - Johnson & Johnson*

## Poster # 2061

Reducing Slips, Trips, and Falls in the Mining Industry: The Need for a Multifaceted Approach

*Author: Mahiyar Nasarwanji, NIOSH*

## Poster # 2076

Redesign of the Process of Packaging and Transport of a Water Bottling Plant to Reduce the Risk of Accidents by Forklift

*Authors: Isabella Domínguez Obando, Marcela Sánchez, Luis Guerrero Millan, Estefany Rey-Becerra and Juan Camilo Paz Roa, Pontificia Universidad Javeriana Cali, Dafna Katherin Quintero El Halaby, Pontificia Universidad Javeriana*

## Poster # 2084

Improvement of Working Conditions Through the Redesign of the Production System of Paints and Stuccos

*Authors: Daniela Salazar Buitrago, Jessica Jansasoy, Camilo Patiño and Estefany Rey-Becerra, Pontificia Universidad Javeriana Cali, Luis A. Saavedra-Robinson, Pontificia Universidad Javeriana Bogota*

## Poster # 2089

Assessing Classroom Ergonomics: A Macro-Ergonomic Analysis of the Undergraduate University Learning Environment

*Authors: Mina Mohebbi, Middle Tennessee State University, Joshua Freeman, AECOM*

## Poster # 2102

A Comparative Study of Interaction Performance in Head Mounted Display and Stereoscopic Wide Screen Display

*Authors: Betsha Tizazu Abreham and Chiuhsiang Joe Lin, National Taiwan University of Science and Technology*

## Poster # 2103

Road Surface Roughness and Urban Bus Ride Quality in Edinburgh: "An EEG Approach"

*Author: Benjamin Oladele Afuye, Edinburgh Napier University*

## Poster # 2114

Identify Ergonomic Hazards in the Inspection Job in a Metallurgical Plant, Using Biomechanical Tools Sue Rodgers and Moore Garg

*Authors: Rodrigo Pereira and Ximena Valis, Ergo Center, Adma Di Salvo, ERGOFISIO, Enilene Lovatte, Marisa Coser and Alexandre Machado, Instituto Federal do Espirito Santo*

## Poster # 2126

A Proposal for a Holistic Ergonomic Evaluation of Order-picking Workplaces in a Food Company

*Authors: Gloria Juliana Arias Paredes, Carlos Andres Rueda Gaitan, Shyrlle Berrio Garcia and Ariana Del Pilar Diaz, Pontificia Universidad Javeriana*

## Poster # 2127

Preventing De Quervain Syndrome & Improve Cycle Time: An Ergonomics 4.0 Application Case Study

*Authors: Giles Balbinotti, UNISOCIESC, Henrique Toso, João Antonio Palma Setti and Rodney Wenke, UTFPR, Paula Hembercker, UFSC*

## Poster # 2129

Improving Performance with Intelligent Systems Considering the Lean Manufacturing, Human and Ergonomics Aspects as its Base, Real Cases and Concepts in an Automaker

*Authors: Alessandro Diogo Vieira, Leandro Vieira, Renault, Giles Balbinotti, Renault-Curitiba*

## Poster # 2134

Endotracheal Intubation Skills - Insights From Movement Observations

*Authors: Ikechukwu Ohu, Gannon University, Jestin Carlson, Allegheny Health Networks*

## Poster # 2148

Comparison of Shoulder Flexibility, Strength, Asymmetry Ratio, Function between Assembly Workers with and Without Shoulder Impingement Syndrome

*Authors: Jun-hee Kim, Ui-jae Hwang, Sung-hoon Jung, Gyeong-tae Gwak, Oh-yun Kwon, Yonsei University*

## Poster # 2149

"UPPING" your Sitting Game

*Authors: Bill Gille and Kathleen Fowler, WorkPartners*

# POSTER SESSIONS

## Poster # 2151

Integrating Design for Ergonomics and Safety into Lean Product and Production System Development

*Authors: Peregrin Spieholz and Kevin Hansen, The Boeing Company*

## Poster # 2153

Tire Shop Ergonomics

*Authors: Shaheen Ahmed, Daniel Welscher, Laurence Stutsman and Shane Buchman, Minnesota State University*

## Poster # 2156

Evaluation and Redesign of the Glue Spraying Process for Boat Manufacturing

*Authors: Shaheen Ahmed, Gisell Gonzalez-Sanchez, Cassey Nielsen, Rachael Bartho and Samuel White, Minnesota State University*

## Poster # 2159

Proactive Associate Placement Method

*Authors: Kara Bender, Rachel Mentzer and Angie Beltz, Honda Transmission Mfg.*

## Poster # 2160

A Longitudinal Study on Boot Wear in Mining

*Authors: Ashley Whitson and Lydia Kocher, NIOSH*

## Poster # 2161

Application of Inertial Measurement Unit (IMU) in Ergonomics and Human Safety Surveillance

*Author: Amir Baghdadi, University at Buffalo*

## Poster # 2163

Getting to the Bottom of Shoulder Pain: An

Ergonomic Assessment of Bovine Rectal Palpations

*Authors: Robyn Reist, Brenna Bath and Murray Jelinski, University of Saskatchewan, Catherine Trask, Canadian Centre for Health and Safety in Agriculture (CCHSA)*

## Poster # 2164

Could it be that Simple

*Author: Bryan Lewis, Honda of America*

## Poster # 2165

Opposite Attracts

*Authors: Gulzhahan Oraz and Khusboo Kapadia, Indiana University-Purdue University Indianapolis*

## Poster # 2166

Direct Measurement of Exposures to Ergonomic Risk Factors in Apple Harvesting Workers

*Authors: Ornwipa Thamsuwan, Canadian Centre for Health and Safety in Agriculture, Johnson Peter, University of Washington*

## Poster # 2167

Accident Analysis of Human Causal Factors in the Oil and Gas Industry from 2013 to 2017 using the HFACS-OGI framework

*Author: Chizaram Nwankwo, Coventry University*

## Poster # 2168

Lean Ergonomics

*Authors: Gretchen Schulz Andrews, Baxter Pharmaceuticals, Gary Connor, City of Bloomington*

## Poster # 2169

Using Field Measures for Strength and Posture to Integrate the Office Chair and Work Surface can be an Effective Treatment Strategy for the Injured Worker

*Author: John Fitzsimmons, Ergonomics First*



TEXAS A&M UNIVERSITY

Ergo Center

## We improve worker safety and health through:

- Consulting
- Education
- Research

We expertly provide practical, solution-based consulting services and perform leading edge research while fostering the success of safety and health professionals.

## How can we help you?

[sph.tamhsc.edu/research/centers/ergo.html](http://sph.tamhsc.edu/research/centers/ergo.html)



# ERGO CUP® TEAMS

The internationally recognized Ergo Cup® competition, sponsored by the Ergonomics Center of North Carolina and Edward P. Fitts Department of Industrial and Systems Engineering at North Carolina State University and presented by IISE, provides an exciting opportunity for companies to highlight their successful ergonomic solutions. The general theme across all Ergo Cup® categories is innovation.

The goal of this competition is to recognize and encourage the development of innovative ergonomics solutions and education in the workplace. Any organization that can demonstrate an effective ergonomics solution or education initiative within the last 24 months (October 2016 – 2018) is eligible to compete. The ergonomic solution preferably should have been implemented at least 1 (one) full year and actual productivity, quality, and/or safety ROI results should be presented.

Five Ergo Cup® awards are presented annually for outstanding solutions through training, engineering and teamwork.

**Check the conference app – Applied Ergonomics Conference 2019 – for more details on the ergonomics solutions developed by these outstanding teams.**

## ERGO CUP® EXCELLENCE AWARD

The goal of the Ergo Cup® Excellence Award is to afford AEC attendees to recognize and encourage the development of innovative ergonomics solutions and education in the workplace. Winners will be announced, and presentations will be made during the awards ceremony on Thursday, March 28. Only one vote per person. Voting concludes *Wednesday at 2 p.m.* Voting is through the conference app – Applied Ergonomics Conference 2019.

*Teams are listed below by category*

### ERGONOMICS PROGRAM IMPROVEMENT INITIATIVES

Booth # 708  
Effectively Leveraging Virtual Reality to Enhance Ergonomics Integration  
Lockheed Martin Space  
Littleton, Colorado

Booth # 710  
Standard Ergonomic Evaluation Process  
Navistar International  
Springfield, Ohio

### WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS WITH INTERNAL COMPETITIONS)

Booth # 501  
Multi-Tool Wizard  
PPG Mojave  
Mojave, CA

Booth # 503  
All Torqued Up: Hump Seal Lid “F” clamps  
PPG Aerospace  
Huntsville, AL

### WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS WITH INTERNAL COMPETITIONS)

Booth # 505  
Cleaning of Stirrer Shafts and Cups  
PPG Industries Lackfabrik GmbH  
Bodelshausen, Germany

Booth # 507  
Facilities Maintenance Mechanics “Lifting the Lid”  
Raytheon Missile Systems  
Tucson, AZ

Booth # 509  
SAT (Shim Adjustment Tool)  
Logan Sales Center - Swire Coca-Cola  
Logan, UT

Booth # 511  
The New Philly Flipper  
The Timken Company – New Philadelphia Precision Bearing Plant  
New Philadelphia, OH

# ERGO CUP® TEAMS

## WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS WITH INTERNAL COMPETITIONS)

Booth # 600  
Flow Rack Flow Control  
Toyota Motor Manufacturing Indiana  
Princeton, IN

Booth # 601  
The Janny Tool  
Bridgestone Warren County  
Morrison, TN

Booth # 602  
Karakuri Frame Trolley  
Toyota Motor Manufacturing Canada  
Woodstock, Ontario, Canada

Booth # 603  
Automatic Fabric Puller  
Cintas Corporation  
La Ceiba, Honduras

Booth # 604  
Push-It-Pin (PIP)  
Toyota Motor Manufacturing Kentucky  
Georgetown, KY

Booth # 605  
Hospital Scrubs Ergo-Buggy  
Cintas, Location - 258  
Lawrenceville, GA

Booth # 606  
The Pup (IP Line Kit)  
Toyota Motor Manufacturing Kentucky  
Georgetown, KY

Booth # 607  
Flywheel Coupling Lift Adapter  
Cummins Technical Center  
Columbus, IN

Booth # 608  
3D Printed Self Lubrication Rail System  
Toyota Motor Manufacturing, TX, Inc.  
San Antonio, TX

Booth # 609  
RotoErgo - Improving Ergonomics in Roof Sub  
Assembly  
Cummins Power Generation  
Fridley, MN

## WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS WITH INTERNAL COMPETITIONS)

Booth # 610  
SaraSara  
Toyota Motor Manufacturing, TX, Inc.  
San Antonio, TX

Booth # 611  
Credenza Monitor Lift  
Gulfstream Aerospace Corp.  
Appleton, WI

Booth # 700  
The Pit Crew  
Honda of America Mfg.  
East Liberty, OH

Booth # 702  
"Stuck On You" - Magnetic Part Separation  
Honda of Canada Mfg.  
Alliston, Ontario, Canada

Booth # 704  
Weightless High Torque Motor Application for  
F-35 Vertical Tails Installation  
Lockheed Martin Aeronautics Company  
Fort Worth, TX

## WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS)

Booth # 401  
Radome A.I.R. (Articulating Internal Repair) Tooling  
Delta Air Lines Technical Operation Center  
Atlanta, GA

Booth # 403  
New Twist to an Old Problem: Deburring 1.540 Rods  
ATI, Huntsville, AL

Booth # 405  
D-Container Improvements  
Estée Lauder Logistics AG  
Brunegg, Switzerland

Booth # 407  
Bulk Supply Hole Covers  
Estée Lauder Companies  
Oevel, Belgium

Booth # 409  
Lipstick Mass Cutter  
Estée Lauder Companies  
Oevel, Belgium

## WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS)

Booth # 411  
Power Prime Pump  
Estée Lauder Companies  
Petersfield, Hampshire, United Kingdom

Booth # 413  
Mass Cutting Device  
The Estée Lauder Companies  
Markham, Ontario, Canada

Booth # 415  
Stepanquat GA-90 (Ammonyx) Handling  
Estée Lauder Companies - Aveda Corporation  
Blaine, MN

# ERGO CUP® TEAMS

## WORKPLACE SOLUTIONS I (TEAM-DRIVEN WORKPLACE SOLUTIONS)

Booth # 417  
Radar Love  
Honda Manufacturing of Indiana, LLC  
Greensburg, IN

Booth # 419  
Knuckle Cart  
Honda of South Carolina  
Timmonsville, SC

Booth # 421  
Pack Crate Fixture  
Honda of South Carolina  
Timmonsville, SC

Booth # 423  
THAAD Missile Canister Shock Isolator Compression Tool  
Lockheed Martin Missiles and Fire Control  
Camden, AR

Booth # 425  
B.R.A.T (Bearing Removal Assistance Tool)  
Mercury Marine Plant 15 Assembly  
Fond du Lac, WI

Booth # 427  
Electric Arc Furnace Tap Hole Sanding  
Nucor Steel Gallatin  
Ghent, KY

Booth # 429  
Chair Hauler  
Wegmans Food Markets  
Rochester, NY

## WORKPLACE SOLUTIONS II (ENGINEERING/ERGONOMIST-DRIVEN WORKPLACE SOLUTIONS WITH INTERNAL COMPETITIONS)

Booth # 422  
The Mold Changers  
Honda of America Mfg. Inc.  
Marysville, OH

Booth # 424  
The Fifth Element Filter  
Honda Transmission Mfg.  
Russells Point, OH

Booth # 426  
Harness Installation Hooks and Spool  
Sikorsky Aircraft Corporation  
Stratford, CT

Booth # 428  
GFA Light Weight Drill Jig Lifting  
PPG Aerospace  
Sylmar, CA

Booth # 430  
Batwing  
Toyota Motor Manufacturing, TX, Inc.  
San Antonio, TX

Booth # 431  
Fuel Line Vibration Isolator Pliers  
Cummins Inc. - Jamestown Engine Plant  
Lakewood, NY

Booth # 432  
Engine Pick End Effectors  
Toyota Motor Manufacturing, TX, Inc.  
San Antonio, TX

## WORKPLACE SOLUTIONS II (ENGINEERING/ERGONOMIST-DRIVEN WORKPLACE SOLUTIONS)

Booth # 400  
Auto-Bagger Easy Release Pole  
Estée Lauder Companies Inc.  
Bristol, PA

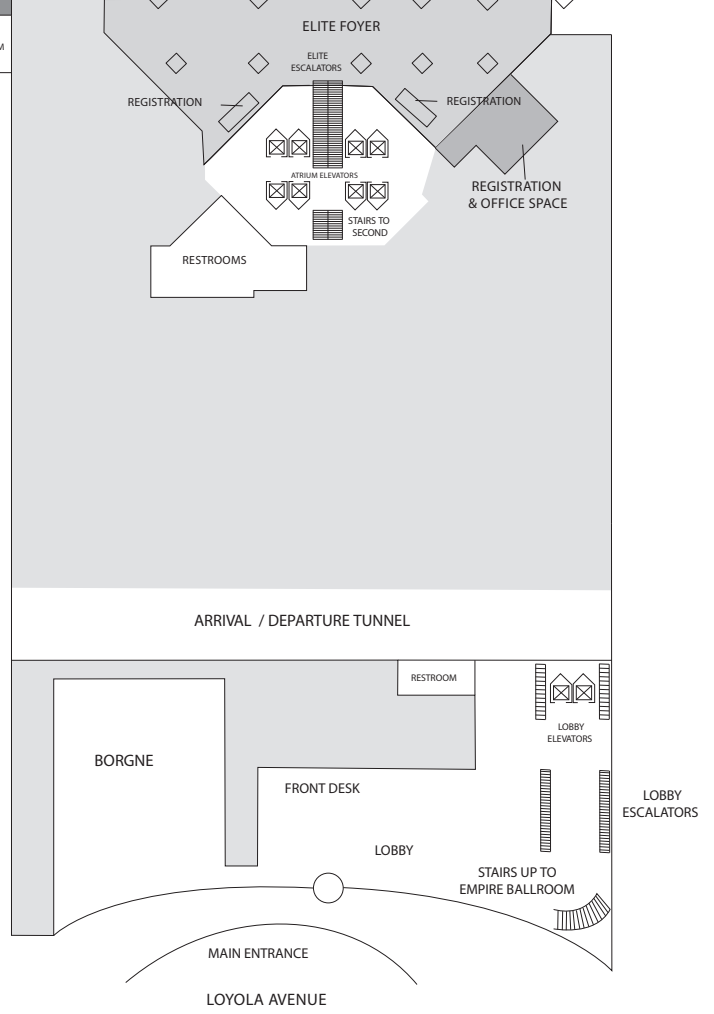
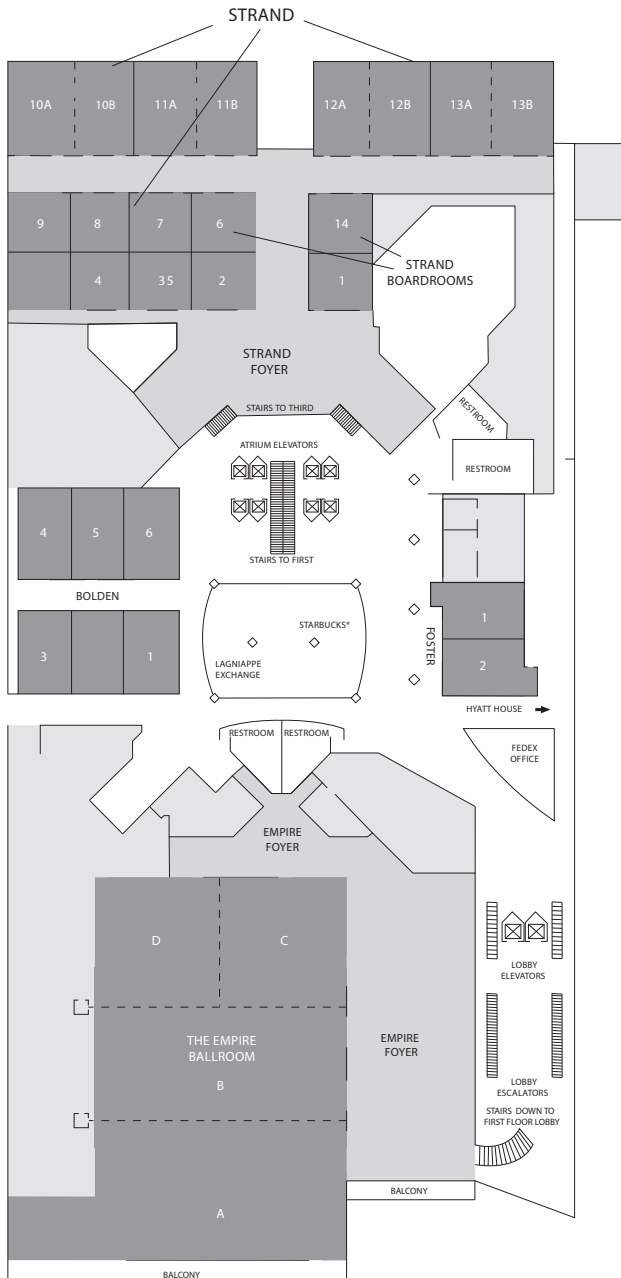
Booth # 402  
Low Weight Recovery System  
Estée Lauder Companies - Aveda Corporation  
Blaine, MN

# HOTEL MAP

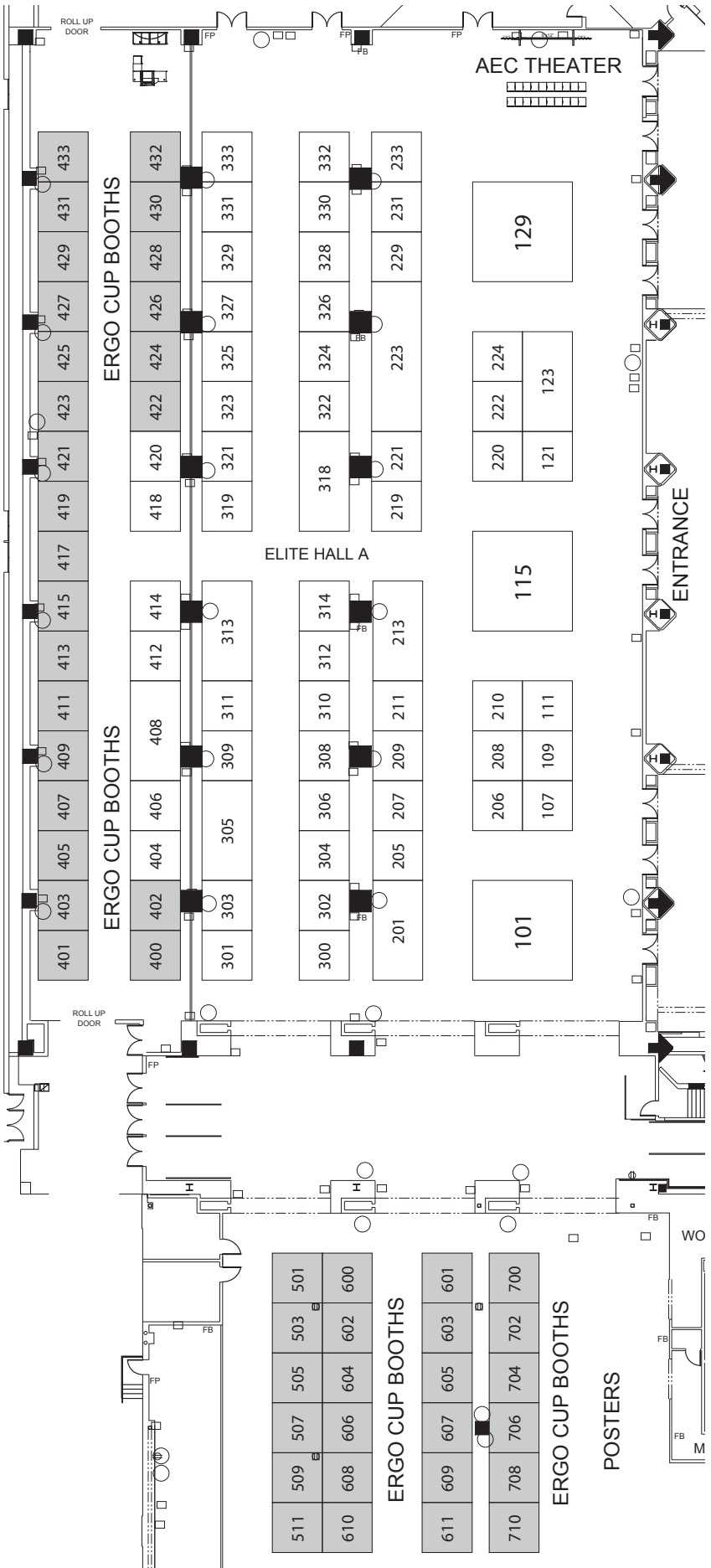
Level One



Level Two



# EXHIBIT HALL



# EXHIBITOR BOOTH & ERGO CUP® LISTING

## Exhibitors by Booth #

101	Kinetic Technologies	222	Blickle Wheels and Casters	318	ergoCentric Seating Systems
107	Caster Works Inc.	223	Logitech	319	Standing inOvation
109	Levitae Technologies Inc.	224	Enviance	321	Goldtouch
111	Saturn Ergonomics Consulting	229	Albion Casters	322	Ergo Advantage Inc.
115	BodyBilt by ErgoGenesis	231	Posture Depot	323	LifeBooster Inc.
121	Ergonomics Center of North Carolina	233	Kensington	324	Backapp Europe AB
123	Caster Connection	300	Lean Factory America LLC	325	SRI-Ergonomics, The Ohio State University
129	Loctek/FlexiSpot	301	3ARM by EuroLink	326	VersaTables
201	The EASE Council	302	Fit For Work	327	ErgoScience
205	PowerLift® Training	303	NexGen Ergonomics Inc.	328	Texas A&M University Ergonomics Center
206	Contour Design Inc.	304	Fanshawe College	331	Victor Technology
207	Briotix Health	305	Darcor Casters and Wheels	332	O'Mara Sprung Floors
208	MEGAComfort	306	Ergoweb LLC	333	MyAbilities
209	KINETIC	308	Ekso Bionics	404	University of Michigan Center for Ergonomics
210	PHS West Inc.	309	Board of Certification in Professional Ergonomics (BCPE)	406	Center for Occupational and Environmental Health (COEH-Berkeley)
211	Hamilton Caster & Mfg. Co.	310	IMPACTO Protective Products Inc.	408	AES (Applied Ergonomics Society)
213	VelocityEHS   Humantech	311	Roemheld	412	TENTE Casters Inc.
219	Working Concepts, Inc.	312	Xsens	414	Flexpipe
220	Modjoul Inc.	313	BakkerElkhuizen	418	Aubin Industries
221	IPCS	314	HealthPostures	420	On-Site Solutions Physical Therapy

## Ergo Cup® Teams by Booth #

400	Auto-Bagger Easy Release Pole - Estée Lauder Companies Inc. - USA	425	B.R.A.T (Bearing Removal Assistance Tool) - Mercury Marine Plant	602	Karakuri Frame Trolley - Toyota Motor Manufacturing Canada
401	Radome A.I.R. (Articulating Internal Repair) Tooling - Delta Air Lines Technical Operation Center	426	Harness Installation Hooks and Spool - Sikorsky Aircraft Corporation	603	Automatic Fabric Puller - Cintas Corporation Honduras
402	Low Weight Recovery System - Estée Lauder Companies - USA	427	Electric Arc Furnace Tap Hole Sanding - Nucor Steel Gallatin	604	Push-It-Pin (PIP) - Toyota Motor Manufacturing Kentucky
403	New Twist to an Old Problem: Deburring 1.540 Rods - ATI Huntsville	428	GFA Light Weight Drill Jig Lifting - PPG Aerospace	605	Hospital Scrubs Ergo-Buggy - Cintas Corporation Georgia
405	D-Container Improvements - Estée Lauder Logistics AG	429	Chair Hauler - Wegmans Food Markets	606	The Pup (IP Line Kit) - Toyota Motor Manufacturing Kentucky
407	Bulk Supply Hole Covers - Estée Lauder Companies - Belgium	430	Batwing - Toyota Motor Manufacturing Texas, Inc.	607	Flywheel Coupling Lift Adapter - Cummins Technical Center
409	Lipstick Mass Cutter - Estée Lauder Companies - Belgium	431	Fuel Line Vibration Isolator Pliers - Cummins Inc. - Jamestown Engine Plant	608	3D Printed Self Lubrication Rail System - Toyota Motor Manufacturing Texas, Inc.
411	Power Prime Pump - Estée Lauder Companies - United Kingdom	432	Engine Pick End Effectors - Toyota Motor Manufacturing Texas, Inc.	609	RotoErgo - Improving Ergonomics in Roof Sub Assembly - Cummins Power Generation
413	Mass Cutting Device - Estée Lauder Companies - Canada	433	3D Printed Bucking Bar - Gulfstream Aerospace Company	610	SaraSara - Toyota Motor Manufacturing Texas, Inc.
415	Stepanquat GA-90 (Ammonyx) Handling - Estée Lauder Companies - USA	501	Multi-Tool Wizard - PPG Mojave	611	Credenza Monitor Lift - Gulfstream Aerospace Corporation
417	Radar Love - Honda Manufacturing of Indiana	503	All Torqued Up: Hump Seal Lid "F" Clamps - PPG Aerospace	700	The Pit Crew - Honda of America Mfg.
419	Knuckle Cart - Honda of South Carolina	505	Cleaning of Stirrer Shafts and Cups - PPG Industries Lackfabrik GmbH	702	"Stuck On You" - Magnetic Part Separation - Honda of Canada Mfg.
421	Pack Crate Fixture - Honda of South Carolina	507	Facilities Maintenance Mechanics "Lifting the Lid" - Raytheon Missile Systems	704	Weightless High Torque Motor Application for F-35 Vertical Tails Installation - Lockheed Martin Aerospace
422	The Mold Changers - Honda of America Mfg.	509	SAT (Shim Adjustment Tool)	708	Effectively Leveraging Virtual Reality to Enhance Ergonomics Integration - Lockheed Martin Space
423	THAAD Missile Canister Shock Isolator Compression Tool - Lockheed Martin Missiles and Fire Control	511	The New Philly Flipper - New Philadelphia Precision Bearing Plant	710	Standard Ergonomic Evaluation Process - Navistar International
424	The Fifth Element Filter - Honda Transmission Mfg.	600	Flow Rack Flow Control - Toyota Motor Manufacturing Indiana		
		601	The Janny Tool - Bridgestone Warren County		



# EXHIBITORS

## 3ARM | Booth # 301

Each 3ARM is customized for your tool and application at the factory to optimize the arm for your process and achieve out of the box performance. The Manipulator can be equipped with a variety of specialty gripping tools. The Manipulator aids the operator in precise ergonomic work handling.

### 3ARM

106 W. Ohio Ave.  
Mount Vernon, Ohio 43050  
P: (740) 392-1549  
www.3armamerica.com



## Albion Casters | Booth # 229

As heavy-duty and material handling experts for over 70 years, Albion is a leader in the manufacture of ergonomic casters and wheels. From the largest offering of standard products globally, to cutting edge custom designs. Albion's experience ensures that every solution meets each customer's needs.

### Albion Casters

800 North Clark St.  
Albion, MI 49224  
P: (248) 345-6111  
albioncasters.com



## Aubin Industries | Booth # 418

Aubin Industries is a manufacturer of ergonomic material handling mobility solutions. Aubin's patented products, innovative technology and individualized problem solving create groundbreaking manual and assisted mobile systems to fit your needs. Come see the revolutionary Swivel-EAZ® Pro, our patented solution for push/pull resistance, with the new Swivel-EAZ® OPTI-Guard our new patent pending toe guard that is a bright, bold, safety orange so your employees see it before it hits them.

### Aubin Industries Inc.

23833 S. Chrisman Road  
Tracy, CA 95304  
P: (800) 324-0051 | F: (209) 833-7594  
www.aubinindustries.com



## Backapp Europe AB | Booth # 324

Backapp features a Scandinavian sit-to-stand concept, designed to keep people moving while sitting and standing. Both the Backapp chair and 360 Balance Board intuitively position you in "neutral-spine," effectively preventing and reducing musculoskeletal pain. Over 100,000 users in Scandinavia have proven the efficacy of the products.

### Backapp Europe AB

Vastra Gotagatan 4, Anderstorp, Sweden  
P: (336) 210-0610  
www.backapp.com



## BakkerElkhuizen | Booth # 313

At BakkerElkhuizen we specialize in high-end office ergonomic hardware and software solutions that contribute to the well-being of computer users. Our innovative tools help employees adopt healthier postures, move regularly and work efficiently. BakkerElkhuizen reduces employee discomfort and injury in the workplace along with the associated insurance and business costs.

### BakkerElkhuizen

228 East 45th St., Suite 9E  
New York, NY 10017  
P: (773) 253-5351  
www.bakkerelkhuizen.com



## Blickle Wheels and Casters | Booth # 222

Blickle Wheels and Casters is a leading manufacturer of Ergonomic Solutions across all industries. We offer Best in Class product testing and individual or group training/certifications at our Blickle US Headquarters. Call us at (888) 558-7878 to schedule a visit to our Customer Experience Center.

### Blickle Wheels and Casters

75 Coweta Industrial Parkway  
Newnan, GA 30265  
P: (888) 558-7878  
www.blickle.us



## Board of Certification in Professional Ergonomics (BCPE) | Booth # 309

The non-profit Board of Certification in Professional Ergonomics provides internationally recognized, comprehensive, professional certification for human factors/ergonomics/user experience practitioners. BCPE is the primary source of credentialed practitioners, providing employers and consumers an independent verification of competency and knowledge they are working with a professional who has met a rigorous standard.

### Board of Certification in Professional Ergonomics (BCPE)

2950 Newmarket St.  
Ste. 101 PMB 244  
Bellingham, WA 98226  
P: (888) 856-4685  
www.bcpe.org



## BodyBilt by ErgoGenesis | Booth #115

Our life's work is to put you in the best possible position to do yours. Manufactured by ErgoGenesis, BodyBilt seating and workplace solutions have long exemplified the evolution of ergonomic thinking. We proudly introduce the next iteration of innovation: the Altnwork.

### BodyBilt by ErgoGenesis

1 BodyBilt Place  
Navasota, TX 77868  
P: (800) 364-5299 | F: (963) 825-1725  
www.BodyBilt.com



# EXHIBITORS

## **Briotix Health | Booth # 207**

At Briotix Health, we build relationships with you and your workforce to deliver meaningful results in employee health. We focus on musculoskeletal injury and disability prevention; leveraging customized next generation technology to optimize results. Our three areas of focus are Industrial Sports Medicine, Office Ergonomics & Health and Specialized Solutions.

### **Briotix Health**

9000 E. Nichols Ave., #104  
Centennial, CO 80112  
P: (844) 274-6849  
www.Briotix.com



## **Caster Connection | Booth # 123**

Caster Connection's team of veteran experts will exhibit ergonomic caster, wheel, and mobility solutions for visitors' toughest challenges. Stop by for tips on reducing downtime in your facility by eliminating employee ergonomic injury and product failure, and learn about our push/pull collaboration with The Ohio State University Spine Research Institute.

### **Caster Connection**

2380 International St.  
Columbus, OH 43228  
P: (800) 544.8978  
casterconnection.com



## **Caster Works Inc. | Booth # 107**

Caster Works Inc. is your best source for casters, offering a range of casters for all applications. Our casters have a significant impact on the movement of carts and the like, and a well-made ergonomic caster can significantly improve the movement of all types of applications.

### **Caster Works Inc.**

2407 Surrett Drive  
Archdale, NC 27263  
P: (800) 599-5131  
www.casterworks.com



## **Center for Occupational and Environmental Health (COEH) | Booth # 406**

The Center for Occupational and Environmental Health Continuing Education presents the Online Ergonomics Training Program, consisting of six, eight-week online courses. Ideal for learners with a degree in a related field, these asynchronous, instructor-led courses are designed to provide expertise in core competencies required for CPE Certification by BCPE.

### **The Center for Occupational and Environmental Health (COEH)**

School of Public Health  
50 University Hall, #7358  
Berkeley, CA 94720  
P: (510) 642-8365  
coeh.berkeley.edu



## **Contour Design Inc. | Booth # 206**

Contour Design is a global leader in ergonomic mouse design. We strive to provide unique and innovative solutions that provide users with an ergonomic mouse without sacrificing productivity. Come by our booth (#206) for a live demo of the RollerMouse Red and Unimouse, the world's only fully adjustable mouse.

### **Contour Design Inc.**

10 Industrial Drive  
Windham, NH 03087  
P: (603) 893-4556 | F: (603) 893-4558  
www.contourdesign.com



## **Darcor Casters and Wheels | Booth # 305**

Since 1931, Darcor Casters and Wheels has been the world leader in high performance caster solutions—helping companies and organizations in every industry to keep things rolling more easily, safely, quietly, and reliably. Across the board, our work has assured that our casters and wheels are the best in the world.

### **Darcor Casters and Wheels**

7 Staffordshire Place  
Toronto, ON, Canada M8W 1T1  
P: (416) 255-8563 | F: (416) 251-6117  
www.darcor.com



## **The EASE Council | Booth # 201**

The EASE Council, a division of the MHI (Material Handling Industry) is a trade association of 18 manufacturers of material handling equipment which offer solutions that provide better human results and increased productivity to the ergonomic challenges in the industrial workplace.

### **The EASE Council**

8720 Red Oak Blvd.  
Charlotte, NC 28217-3992  
P: (704) 676-1190  
www.mhi.org/ease



## **Ekso Bionics | Booth # 308**

Ekso Bionics is a leading developer of exoskeleton solutions that amplify human potential. During Applied Ergonomics Conference, Ekso Bionics will be demoing the EksoVest - an upper body exoskeleton that elevates and supports a worker's arms to assist them with tasks ranging from chest height to overhead.

### **Ekso Bionics**

1414 Harbour Way South, Suite 1201  
Richmond, CA 94804  
P: (510) 984-1761  
eksobionics.com



# EXHIBITORS

## Enviance | Booth # 224

Enviance is an industry-leading Environmental, Health, and Safety (EHS) software provider. Our Ergonomics Cloud solutions (formerly Remedy Interactive) include Office Ergonomic Solution (OES), Case Manager and RSiGuard. Learn about Ergonomic Assessment/Training best practices that can help you focus on the right priorities and increase the effectiveness of your ergonomics program.

### Enviance

5780 Fleet Street, Suite 200  
Carlsbad, CA 92008  
P: (866) 368-4262  
www.Enviance.com



## Ergo Advantage Inc. | Booth # 322

Ergo Advantage is North America's leading manufacturer of modular ergonomic PVC matting. For 25 years our tiles have been improving industrial employee comfort and safety. They have the best warranty and environmental footprint on the market. We pride ourselves on exceptional product quality, incomparable service, and long-term value to customers.

### Ergo Advantage

630 Glengary Cres.  
Fergus, ON, Canada N1M 3E2  
P: (519) 791-4989 | F: (519) 843-1982  
www.ergoadvantageinc.com



## ergoCentric Seating Systems | Booth # 318

At ergoCentric, our sole mission is to design and manufacture the best ergonomic chairs in the world and we are recognized as North America's premier manufacturer of high-quality ergonomic seating for office, specialty and healthcare environments.

### ergoCentric Seating Systems

275 Superior Blvd  
Mississauga, ON, Canada, L5T 2L6  
P: (866) GET ERGO (438-3746)  
F: (800) 848-5190  
www.ergocentric.com



## Ergonomics Center of North Carolina | Booth # 121

The Ergonomics Center of North Carolina is a membership-based organization housed in the College of Engineering at N.C. State University. The Center's experienced, board-certified ergonomists provide the highest quality ergonomics consulting, training programs and research for companies throughout the world. Services include onsite training, job and task analysis, program development, engineering design guidelines, and cost-saving solutions for both industrial and office ergonomics.

### Ergonomics Center of North Carolina

3701 Neil St.  
Raleigh, NC 27607  
P: (919) 515-2052  
www.theergonomicscenter.com



## ErgoScience | Booth # 327

ErgoScience helps employers decrease work-related musculoskeletal strains/sprains and slips, trips and falls. We provide pre-hire and return-to-work Physical Abilities Testing, Job Analysis, Ergonomic Assessment, Worksite Early Intervention/Rehabilitation and employee education and training. Come by our booth to see a demo of our new grip sensor gloves for job analysis.

### ErgoScience

201 Office Park, Suite 150  
Birmingham, AL 35223  
P: (205) 879-6447  
Toll free: (866) 779-6447  
www.ErgoScience.com



## Ergoweb LLC | Booth # 306

Since 1995, companies have trusted us to help manage their ergonomics programs through proven ergonomics software management systems & services. Our flagship Ergoweb Enterprise™ cloud-based solution offers one of the most comprehensive and proven assessment methodologies. It's intended to reduce workforce injuries, protect your productivity, and deliver a higher quality product. See how at www.ergoweb.com.

### Ergoweb LLC

P.O. Box 2353  
Carefree, AZ 85377  
P: (888) ERGOWEB (888-374-6932)  
www.ergoweb.com



## Fashawe College | Booth # 304

One of Ontario's largest colleges - with four campuses, Fanshawe serves close to half a million people with a promise to educate, engage, empower and excite. The Advanced Ergonomic Studies graduate program is the first of its kind in North America and will provide you with a fundamental understanding about the science of ergonomics.

### Fashawe College

1001 Fanshawe College Blvd.  
London, ON, Canada, N5Y 4T9  
P: (519) 452-4430  
www.fanshawec.ca/ADE1



## Fit For Fit For Work | Booth # 302

Fit For Work is an established national provider of innovative workplace injury prevention services. As world-class leaders in our field with 20 years of experience, we have shown that by embracing a culture of wellness and safety today, and making prevention a priority, you will experience a stronger, healthier workforce

### Fit For Work

12508 Jones Maltsberger Road  
San Antonio, TX 78247  
P: (210) 495-8788  
www.wellworkforce.com



# EXHIBITORS

## Flexpipe | Booth # 414

Flexpipe's priority is offering the best equipment to maximize your production floor's efficiency and ensure employees work in a safe, ergonomic manner. Modular materials handling systems help you implement lean manufacturing and continuous principles. Engineered custom solutions for automobile, aeronautics, aerospace, electronics, and many other industries.

### Flexpipe

1355 Magenta E.  
Farnham (QC) Canada J2N 1C4  
P: (855) 406-0253  
www.flexpipeinc.com



## Goldtouch | Booth # 321

We offer ergonomic solutions designed to increase productivity, employee satisfaction and ROI, while decreasing RSI's, Workers Comp Claims, and absenteeism. Our products range from ergonomic wired and Bluetooth keyboards, to wired and wireless ergonomic mice, as well as numeric keypads, wrist rests, and laptop stands, plus featuring our new sit/stand desk converter – the EasyLift Desk!

### Goldtouch

1320 Arrow Point Drive  
Bldg. 1, Suite 101  
Cedar Park, TX 78613  
P: (512) 259-5688



## Hamilton Caster & Mfg. Co. | Booth 211

Hamilton Caster manufactures industrial casters and wheels with capacities from 150 lbs. to 40,000 lbs. Popular models are stocked for same-day/next day shipment. Hamilton gladly engineers custom solutions for special applications. Hamilton also manufactures a complete line of industrial carts and trailers, with capacities from 1,000 lbs. to 100,000 lbs.

### Hamilton Caster & Mfg. Co.

1637 Dixie Highway  
Hamilton, OH 45011-4087  
P: (888) 699-7164  
www.HamiltonCaster.com



## HealthPostures | Booth # 314

HealthPostures provides ergonomic work space solutions designed for a workforce increasingly tied to computers and desk. Since 1998, HealthPostures has been an industry leader in promoting the long-term benefits of increasing movement in the workplace. HealthPostures products are designed with outstanding ergonomic features and are proudly made in the U.S.A

### HealthPostures

16801 Industrial Circle SE  
Prior Lake, MN 55372  
P: (952) 873-3266  
www.healthpostures.com



## Impacto Protective Products Inc. | Booth # 310

Impacto is a manufacturer and distributor of specialized personal ergonomic protection including gloves and wrist supports for protection from impact and vibration injuries. Other PPE include back supports, kneepads, body pads, anti-fatigue insoles and heel cushions, puncture resistant insoles, steel toe caps, metatarsal protectors and Ice Cleats traction overshoes.

### Impacto Protective Products Inc.

PO BOX 524  
Belleville, ON K8N 5B2 Canada  
P: (888) 232-0031  
www.impacto.ca



## IPCS | Booth # 221

IPCS offers physical strength evaluations allowing employers to evaluate their workforce and lower healthcare cost. IPCS determines a candidate's physical capability for new hire positions, return to work, and the risk for certain diseases among their current employees. IPCS prevents employers from HIRING THE CLAIM!

### Industrial Physical Capability Services Inc (IPCS)

1696 Georgetown Road, Unit B  
Hudson, OH 44236  
P: (330) 463-5757  
www.ipcs-inc.com



## Kensington | Booth # 233

Kensington is a leader in desktop and mobile device accessories, trusted by organizations around the world for over 35 years. Kensington products empower people to be more productive and create content at the highest levels. In both desktop and mobile environments, Kensington's extensive lineup of award-winning products provide trusted security, desktop productivity innovations, and ergonomic well-being.

### Kensington

1500 Fashion Island Blvd., 3rd Floor  
San Mateo, CA 94404  
P: (650) 267-2664  
www.kensington.com



## Kinetic | Booth # 209

Kinetic creates wearable technology for the connected workforce. Kinetic's smart wearable, REFLEX, reduces the incidence of workplace injuries. REFLEX automatically detects unsafe postures and provides workers with feedback whenever a high-risk motion occurs. Over time, workers can use REFLEX to improve their biomechanics, resulting in fewer injuries and improved well-being.

### Kinetic

450 W 33rd Street 12th Floor  
New York, New York 10001  
P: (617) 480-8200  
www.wearkinetic.com



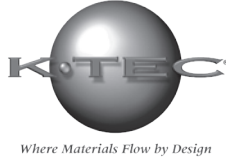
# EXHIBITORS

## Kinetic Technologies | Booth # 101

K-Tec engineers and manufactures material handling carts, equipment and solutions focused on ergonomics and safety. Ensuring that your employees are operating within company ergo zone and safety guidelines, from push-pull limits to lifting, rotating and elevating, K-Tec has a solution for you.

### Kinetic Technologies

1350 Rockefeller Road  
Wickliffe, OH 44092  
P: (440) 943-4111 | F: (440) 943-4777  
www.ktecinc.com



## Lean Factory America LLC | Booth # 300

For over five years Lean Factory America has represented some of the finest ergonomic equipment companies in the world. These include lifters from Orgatex and Hovmand along with compact tuggers from Movexx. These devices help reduce or eliminate ergonomic injuries from bending, lifting, and pushing/pulling. Stop by our booth to see how we can help with your challenging applications.

### Lean Factory America LLC

816 E. 3rd Street  
Buchanan, MI 49107  
P: (888) 674-2839  
www.leanfactoryamerica.com



## Levitate Technologies Inc. | Booth # 109

The Levitate AIRFRAME™ is a wearable, lightweight technology engineered to improve upper extremity musculoskeletal health in professionals and skilled trade workers who engage in repetitive arm motion and/or static elevation of the arms. The AIRFRAME™ lowers exertion levels by up to 80% - keeping workers healthier and more productive, while mitigating healthcare and disability costs.

### Levitate Technologies, Inc.

9540 Waples St., Suite F  
San Diego, CA 92121  
P: (858) 668-5381  
www.levitatetech.com



## LifeBooster Inc. | Booth # 323

LifeBooster is doing the heavy lifting to make the challenging work of professional ergonomic assessments easier. Our Senz technology is an extensible platform that digitizes, automates and scales proven ergonomic standards. Personal wearable sensors make the exacting measurement and analysis of motion data dynamic to better determine levels of risk.

### LifeBooster Inc.

309-1777 West 13th Ave.  
Vancouver, BC, V6J 2H2  
Canada  
P: (206) 898-8520  
lifebooster.ca



## Loctek/FlexiSpot | Booth # 129

At Loctek/FlexiSpot, we're passionate about bringing healthy movement to the modern workplace and home, and strive to create new, innovative ways to stay active in our increasingly sedentary lives. From desk bikes to voice-controlled height adjustable desks, experience the workplace of the future, today! Join the movement at flexispot.com!

### Loctek/FlexiSpot

6475 Las Positas Road  
Livermore, CA 94551  
P: (925) 344-6700  
flexispot.com



## Logitech | Booth #223

Logitech designs experiences so you can create, achieve and enjoy more. And as we lead more digitally demanding lives, it enables you to do so in greater comfort and over longer periods of time. Come to visit our booth #223 to see how we're elevating the art and science of ergonomics.

### Logitech

7700 Gateway Blvd.  
Newark, CA 94560  
P: (510) 795-8500  
www.logitech.com



## MEGAComfort | Booth # 208

MEGAComfort is an innovative work-life wellness solutions company for the workplace. We provide clinically proven and field-tested footwear accessories including ergonomically designed, anti-fatigue insoles and orthotics with patented dual-layer memory foam technology, to proactively combat pain and fatigue. MEGAComfort's work-life wellness solutions are created to maximize employee engagement, motivation, and productivity in a cost-effective way.

### MEGAComfort

14351 Myford Road, Suite 220-F  
Tustin, CA 92780  
P: (949) 387-7159  
megacomfort.com

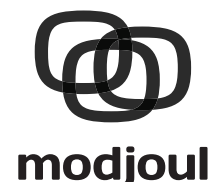


## Modjoul Inc. | Booth # 220

The Modjoul SmartBelt by Modjoul, a data invention company, is a wearable device designed to capture the motion and environment of your employees in the workplace. Our mission is to improve the safety record of every company by providing data and actionable insights to eliminate employee injuries from the workplace.

### Modjoul Inc.

105-2 Sloan Street  
Clemson, SC 29631  
P: (864) 722-9760  
www.modjoul.com



# EXHIBITORS

## MyAbilities | Booth # 333

MyAbilities is a software platform delivering workplace ergonomics, injury prevention and return to work strategies using Artificial Intelligence (AI) and robust data analytics. Our integrated data ecosystem promotes shared communication, reduces the frequency and cost of claims, expedites return to work through objective job-matching, and minimizes the risk of ADA non-compliance.

### MyAbilities Technologies Inc.

5500 North Service Road, Suite 801  
Burlington, ON, L7L 6W6  
Canada  
P: (888) 312-5009  
www.myabilities.com



## NexGen Ergonomics Inc. | Booth # 303

NexGen offers the world's largest product line for ergonomics and biomechanics, featuring Mark-10 force and torque measurement instruments for every budget. Ideal for push and pull applications in muscle strength testing, industrial ergonomics, and job task analysis. NexGen also manufactures & distributes ErgoIntelligence, ErgoMaster, HumanCAD, VATS vibration analysis, LMM, EMG systems, I2M&Xsens IMU system.

### NexGen Ergonomics Inc.

6600 Trans Canada Highway, Suite 750  
Pointe Claire, Quebec H9R 4S2  
Canada  
P: (514) 685-8593  
www.nexgenergo.com



## O'Mara Sprung Floors | Booth # 332

O'Mara Sprung Floors has been manufacturing ergonomic flooring for 20 years. With a 70% shock absorption rating, our floors help thousands of people avoid injury associated with working on hard floors and worn-out anti-fatigue mats. Our patented system allows for easy installation and reconfiguration. We offer standard and custom configurations.

### O'Mara Sprung Floors

3116 Eugene Street  
Burton, MI 48519  
P: (810) 309-9025 | F: (810) 743-2303  
www.antifatiguefloors.com



## On-Site Solutions Physical Therapy | Booth # 420

On-Site Solutions Physical Therapy provides injury prevention services to companies of all sizes. We are driven to devise the most effective, efficient injury management programs possible for our clients. We merge our musculoskeletal expertise with technological innovation and in-depth understanding of the workplace to keep workers healthy & costs down.

### On-Site Solutions Physical Therapy

6828 Hemlock Lane  
Maple Grove, MN 55369  
P: (763) 657-7547  
Onsitesolutionspt.com



## PHS West Inc. | Booth # 210

Ergo-Express® Motorized carts and tugs are a safe and efficient solution for moving heavy materials, equipment and supplies. With any of our motorized products, one staff member can safely perform the same task that may currently take multiple trips or multiple staff members.

### PHS West Inc.

6704 Bleck Drive  
Rockford, MN 55373  
P: (763) 498-7576 | F: (763) 498-8128  
www.phswest.com



## Posture Depot | Booth # 231

Offering unique ergonomic solutions that help employers reduce injuries and absenteeism while increasing employee productivity, satisfaction, and retention. Work active with Oploft – a portable, slim, and economical sit-stand workstation. No other workstation packs the features and ergonomic benefits! Specializing in ergonomic assessments, consulting, and the best brands in ergonomics.

### Posture Depot

179 Gasoline Alley, #203  
 Mooresville, NC  
P: (704) 999-0809  
www.posturedepot.com



## PowerLift® Training | Booth # 205

PowerLift® Training provides safe material handling training to companies of all types resulting in dramatic, documented decreases or elimination of sprains and strains. We've trained nearly 500,000 workers in 800+ companies. We'll be demonstrating basic good lifting techniques with conference participants and will have training/promotional materials to distribute.

### PowerLift® Training

330 West Spring St., No. 320  
Columbus, OH 43215  
P: (800) 470-7010  
www.powerlifttraining.com



## Roemheld | Booth # 311

Roemheld provides products to create ergonomic workstations for light/medium duty assembly. Our products are used as building blocks to create a customized workstation capable of lifting, tilting, rotating and moving your work-piece during the assembly process. By optimizing the part position, human effort is minimized and part quality is optimized.

### Roemheld

927 Horan Drive  
Fenton Missouri 63026  
P: (636) 386-8022  
www.roemheld-usa.com



**ROEMHELD**  
HILMA ■ STARK

Carr Lane Roemheld Mfg. Co.

# EXHIBITORS

## SRI-Ergonomics, The Ohio State University | Booth # 325

SRI-Ergonomics, part of OSU's Spine Research Institute, offers comprehensive ergonomics technical assistance services to companies and organizations nationwide. These include quantitative evaluations of work activities, training courses by our ergonomics experts (both at the university and on-site), and applied research projects related to ergonomics issues of concern to practitioners.

### SRI-Ergonomics, The Ohio State University

1971 Neil Avenue, 210 Baker Systems  
Columbus, OH 43210  
P: (614) 292-4565 | F: (614) 292-7852  
ergonomics.osu.edu



## Saturn Ergonomics Consulting | Booth # 111

Saturn Ergonomics provides INNOVATIVE technology solutions and PRACTICAL ergonomics consulting services. ErgoCalculatorSuite™ enables your team to determine acceptable force design limits, and conveniently conduct multi-task force and fatigue evaluation. We put state of the art ergonomic evaluation technologies at your fingertips!

### Saturn Ergonomics Consulting

311 N. College Street  
Auburn, AL 36830  
P: (334) 502-3562  
www.saturnergonomics.com



## Standing inOvation | Booth # 319

Standing inOvation is the only system that can transform your existing office workstation into a fully height-adjustable sit-stand desk with over 19 inches of travel and over 250lbs of lift. The patented retro-fit design works universally with all major cubicle systems, allowing you to keep your office layout and reuse your existing work surfaces.

### Standing inOvation

1057 West 5th Ave.  
Columbus, Ohio 43212  
P: (844) 746-3375  
www.standinginovation.com



## Tente Casters Inc. | Booth 412

Move heavy loads effortlessly with the TENTE e-drive flex caster. Reduce absences due to work-related injuries to neck, back, shoulders and wrists. The extra soft wheels offer good shock-absorbing properties and low-vibration transport of goods. TENTE provides mobility solutions for safety; environment, durability, productivity and design needs of our customers.

### TENTE Casters Inc.

2266 Southpark Drive  
Hebron, KY 41048  
P: (859) 586-5558  
www.tente.com



## Texas A&M University Ergonomics Center | Booth # 328

The Texas A&M ErgoCenter will be expanding its reach at AEC. We'll showcase opportunities in the areas of consulting, education and research. We'll discuss recent findings and projects and talk with booth goers as to how we may be able to help them improve worker safety and health.

### Texas A&M University Ergonomics Center

Texas A&M School of Public Health  
212 Adriance Lab Road  
College Station, TX 77843-8371  
P: (979) 436-9443  
sph.tamhsc.edu/research/centers/ergo.html



## University of Michigan Center for Ergonomics | Booth # 404

Ergonomic job analysis and design software developed by the University of Michigan Center for Ergonomics will be explained and demonstrated. Information will be available about continuing education and academic training opportunities in ergonomics and other occupational health and safety sciences.

### University of Michigan Center for Ergonomics

1205 Beal Ave.  
Ann Arbor, MI 48109  
P: (734) 763-2243 | F: (734) 764-3451  
www.centerforergonomics.org



## VelocityEHS | Humantech | Booth # 213

For 40 years, global companies have relied on VelocityEHS' Humantech software and services for workplace ergonomics improvements. By combining experienced, board-certified ergonomists with our proprietary assessment tools and comprehensive software, we deliver integrated solutions that impact safety, quality, and productivity. To learn more about how our Humantech solutions can help you "do ergonomics right," visit [www.humantech.com](http://www.humantech.com).

### VelocityEHS | Humantech

1161 Oak Valley Drive  
Ann Arbor, MI 48108  
P: (734) 663-6707  
www.humantech.com



## VersaTables | Booth # 326

VersaTables is a pioneer in American-Made innovative ergonomic furniture. We specialize in top quality furniture for both private and public sectors. As a U.S. maker working directly with end-user businesses and customers, we are competitive and have the experience in producing functional and inspiring active workplace furniture.

### VersaTables

14105 Avalon Blvd.  
Los Angeles, CA 90061  
P: (888) 929-0322  
VersaTables.com



# EXHIBITORS

## **Victor Technology | Booth # 331**

Victor's height-adjustable standing desks are easy-to-use solutions allowing people to stand and sit throughout the day. Our models are designed to sit on top of existing desks, so there's no need to replace office furniture. Victor offers standing desk options in multiple sizes and colors for a wide variety of uses.

### **Victor Technology**

100 E. Crossroads Parkway, Suite C  
Bolingbrook, IL 60440  
P: (630) 754-4400



## **Working Concepts Inc. | Booth 219**

We design and manufacture ergonomic knee protection, standing mats and other custom products. Our products are Soft Knees no strap knee pads, Ergo Kneel Kneeling Mats, Extreme Standing Mats for standing without pain and Stop a Ladder.

### **Working Concepts Inc.**

PO Box 1345  
Gresham, Oregon 97030  
P: (503) 663 3374  
[www.softknees.com](http://www.softknees.com)



**Working Concepts, Inc.**

## **Xsens | Booth # 312**

Xsens motion capture solution including the proprietary MVN Analyze software. MVN Analyze is a Full-body human measurement system based on inertial sensors, biomechanical models, and sensor fusion algorithms. Easy to use, short setup time and instant validated data output. The system can be used anywhere.

### **Xsens**

10557 Jefferson Blvd., Suite C  
Culver City, CA 90232  
P: (310) 481-1800  
[www.xsens.com](http://www.xsens.com)



**XSSENS**





# Develop your teams faster and safer with an IISE/AES Corporate or University Partnership

## AES Partnerships provide exceptional value

- Corporate Partners can affordably develop staff and get them the training necessary to optimize the enterprise.
- IISE University Partners boost their faculty's opportunity to network and publish research.
- IISE tailors your Corporate or University Partnership to address your organization's unique needs.
- Contact **Doug Long**, IISE's Global Director, Strategic Alliances, at [dlong@iise.org](mailto:dlong@iise.org) or **(770) 349-1109** to learn more.

## CNA Insurance uses Applied Ergonomics Conference/Society to grow manufacturing, keep teams up to date

*IISE provides valuable information and training that CNA has leveraged to grow our manufacturing business. All our manufacturing specialists go through IISE's Lean and Six Sigma training to deepen their knowledge and skills in continuous improvement practices. Also, we leverage many highly informative webinars and information provided through the Applied Ergonomics Conference, Applied Ergonomics Society (AES) and website. Ergonomics plays such a large and important role in manufacturing and other segments we underwrite, so we rotate our ergonomic specialists every year in attending the Applied Ergonomics Conference. This allows our team to be part of the latest cutting-edge information available in the ergonomic world.*

— Brian Roberts, Assistant Vice President, Workers Compensation and Ergonomics, CNA Insurance

## Join these Corporate and University partners on the AES road to success:

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- Gulfstream
- Ohio State University
- Sandalwood
- Universal Orlando
- Virginia Tech

**Contact Doug Long, IISE's Global Director, Strategic Alliances, at [dlong@iise.org](mailto:dlong@iise.org) or (770) 349-1109 to learn more.**

# NOTES

# SAVE THE DATE



**aes** applied ergonomics society presents

*The 23rd Annual*

**appliedergonomics**

CONFERENCE 2020

*Optimize business through applied ergonomics*

# MARCH 16 – 19, 2020

# KENTUCKY INTERNATIONAL CONVENTION CENTER LOUISVILLE, KENTUCKY

[www.iise.org/AEC](http://www.iise.org/AEC)

[#AppliedErgo2020](https://twitter.com/AppliedErgo2020)

A ballerina in a white tutu is captured in a graceful dance pose on a factory floor. She is standing on a light-colored, textured floor that resembles wood grain. The background is a complex industrial setting with various pipes, machinery, and structural elements, all illuminated by warm, yellowish lights. The ballerina's right arm is raised high, and her left leg is extended forward in a classic ballet position. The overall scene contrasts the elegance of dance with the ruggedness of an industrial environment.

# Increased Energy. Improved Bottom Line.

O'Mara ergonomic sprung floors eliminate the discomfort, pain, and long-term injury associated with working on improper flooring. Made with resilient wood panels and cushioning foam blocks, our floors are crafted to far surpass and outlast the performance and lifespan of your typical anti-fatigue mat.

Improve your employees' health, wellness, vitality and safety while experiencing a long-term return on your investment. This floor is registered as an asset on the books and can be expensed over time as a tax write-off.

Visit Booth #332 to feel the difference!

A Step Ahead  
[omarasprungfloors.com](http://omarasprungfloors.com)

The logo for O'Mara Sprung Floors features the company name in a clean, sans-serif font. Above the text is a stylized graphic of three curved lines that sweep upwards and to the right, suggesting movement or a spring mechanism. The entire logo is set against a dark green background.

**O'Mara**  
SPRUNG FLOORS

Singapore Ballet Academy · Chrysler Belvidere · Walt Disney World Animal Kingdom · Cal Poly  
Michigan State University · Whirlpool Corporation · Chrysler Trenton · NBC Hairspray Live