VIRTUAL EVENT
AUGUST 4-6, 2020

The 23rd Annual
applied ergonomics
CONFERENCES 2020
Optimize business through applied ergonomics

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Liberty Mutual leverages Corporate Partnership to advance professional development

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— Wayne S. Maynard, CSP, CPE, ALCM, Product Director-Workers Compensation Ergonomics & Tribology | Risk Control Technical Services, Liberty Mutual Insurance

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The Portuguese Society of Occupational Safety and Hygiene (SPOS HO)
The Ergonomics Society of South Africa (ESSA)
The Asociacion Española de Ergonomia (AEE)/Spanish Ergonomics Society
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<td>1:00 p.m.</td>
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<td><strong>Ergonomics Regulations in the United States</strong>&lt;br&gt;Gary Orr, OSHA&lt;br&gt;Paul Schwab, Texas Instruments</td>
<td><strong>Managing Ergonomics for Work at Home (WAH) Employees</strong>&lt;br&gt;Hank Austin, NL Austin Consultants LLC</td>
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<td><strong>Ergonomics in a Global Company</strong>&lt;br&gt;Allison Stephens, Fanshawe College&lt;br&gt;Salima Ladha, Ford Motor Company</td>
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<td><strong>Profitability: How Ergonomics Can Impact ROI in the Construction Industry</strong>&lt;br&gt;Brian Roberts, CNA Insurance (retired)</td>
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<td><strong>Potential Use of Optimization Techniques to Refine Anthropometric Design of Products</strong>&lt;br&gt;Matt Camilleri, Thomas Albin, High Plains Engineering Services LLC</td>
<td><strong>$8 Million Payback in Three Years – How the Lear Corporation Did That</strong>&lt;br&gt;Jack Nunes, Lear Corporation</td>
<td><strong>Hand-Held Technology – It’s Worse Than We Thought</strong>&lt;br&gt;Tim Pottorff, QP3 ErgoSystems</td>
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<td><strong>Master Track Panel Discussion Industry 4.0</strong>&lt;br&gt;Moderators: Allison Stephens, Fanshawe College&lt;br&gt;Kelly Hogan, Sandalwood of Canada</td>
<td><strong>Master Track Panel Discussion – Role of Ergonomics in Business Continuity – Addressing the New Normal</strong>&lt;br&gt;Moderator: Amanda Kauder, Kysor Warren Panelists: Rachel Leach, bp America, Inc.; Martha Parker, Texas A&amp;M Ergo Center; James Pomeroy, Lloyd’s Register; Tricia Saltar, Texas A&amp;M University, Bobbie Watts, Michelin Americas; Dave Wood, Raytheon/UTC</td>
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*All times are eastern daylight time (EDT)*

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**SCHEDULE AT-A-GLANCE**

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*Plus, access to many, many more recorded sessions!*
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| 1:05 – 1:30 p.m. | **Utilization of Smart and Wearable Technology to Evaluate the Impact of Ergonomic Solutions**  
*Ben Zavitz, Ergo Human Performance LLC*  
Smart and wearable technology is all the rage, but can it be used to effectively identify cost effective solutions in industry and convince management of the need to make an improvement? This presentation will provide an overview of some of the technology available today and the challenges and benefits of using various smart and wearable technologies and measurement equipment. A series of industrial ergonomic projects related to material handling, equipment design and selection, whole body vibration of vehicle seats, hand arm vibration of power tools, and evaluation of PPE will be shared with the audience to demonstrate how various types of technology were used to evaluate the impact of ergonomics solutions. Examples of technology that will be shared include motion capture suits, heart rate monitors, wireless EMG, phone-based apps, accelerometers and pressure sensors. |
| 1:35 – 2 p.m. | **Static and Dynamic Assessments of Back-Support Exoskeletons**  
*Maury Nussbaum, Virginia Tech*  
Prolonged or repetitive trunk bending is associated with increased low-back musculoskeletal disorders (MSDs), yet reducing this risk can be challenging. Back support exoskeletons (BSEs) are an emerging technology that may be of benefit, allowing workers to perform tasks with less physical effort and reduced MSD risks. There is emerging evidence showing the potential benefits of BSEs, particularly for simple (static or symmetric) tasks. Yet, this evidence is relatively limited, especially regarding differences between exoskeleton design, diverse tasks, and adverse effects that may result from BSE use. We complete two laboratory-based studies to evaluate two very different BSE designs, in the context of pseudo-static trunk bending and repetitive lifting. Major results indicated that there are clear potential benefits of BSE use, in terms of reducing trunk muscle activity, metabolic demand, and perceived exertion. However, these benefits differed substantially between the two BSE design tests and varied across the range of task characteristics investigated (e.g., work location and symmetry). Further, such benefits were minimal in some cases. Potential adverse effects were also evident, such as related to localized discomfort at the exoskeleton-body interface, especially in more “extreme” postures involving trunk flexion, bending, or twisting. |
| 2:05 – 2:30 p.m. | **Exploring Neuroergonomic Fit of Passive Exoskeleton During Simulated Manual Material Handling Task**  
*Yibo Zhu, Texas A&M University*  
Approximately 40 percent of non-fatal occupational musculoskeletal disorders (MSDs) are low-back injuries. Recent advances in human-robotic cooperation have shown strong potential to reduce MSD risks by reducing or transferring biomechanical loading from targeted joints. However, human-robot synchrony (i.e., reducing mismatch between motor, mind, machine interactions), learnability, and usability of these technological solutions remain untested. The ultimate goal of the study is to improve exoskeleton-workspace safety and productivity by understanding, assessing, and augmenting the neuroergonomic fit of exoskeletons. Neuroergonomic fit is defined as a human-robotic fitness that minimizes the physical load while maximizing the neural (cognitive) availability of a user. In this study, the neuroergonomic fit of an industrial passive low back exoskeleton (Laevo, Delft, The Netherlands) was evaluated during simulated manual handling tasks with varying levels of physical and cognitive demands of twelve healthy subjects. The preliminary brain activation result showed significant increase of connectivity strength between the dorsolateral prefrontal cortex and the premotor cortex for the exoskeleton condition compared to non-exoskeleton condition regardless of cognitive demand level. This result implicates that the exoskeleton requires higher connection between the cognitive workload area and the motor planning area than non-exoskeleton MMH task requires. |
| 2:35 – 3 p.m. | **Potential Use of Optimization Techniques to Refine Anthropometric Design of Products**  
*Matt Camilleri*  
*Thomas Albin, High Plains Engineering Services LLC*  
Designers seek to build products that will accommodate a specified fraction of users. If multiple percentile values are used, the percent of users accommodated is generally less than expected. The Virtual Fit Tool (VFT) is a spreadsheet-based anthropometric design tool developed for the Human Factors and Ergonomics Society that addresses the problem. Upon input of a set of values for multiple variables, the VFT calculates the percent of males and females accommodated on each dimension, both separately and jointly, to ascertain if the desired percentage of users will be accommodated. It is possible that more than one design, for example, different height, width and depth dimensions, would each accommodate the desired percent of intended users. In this presentation, we will describe utilization of an optimization technique available within Excel to determine the most efficient solution in terms of materials costs, range of adjustment, etc., that will satisfy the desired accommodation percentage. An alternative use of the optimization technique would be to determine an “inverse solution”, i.e. determine the largest accommodation percentage that will satisfy desired materials cost, range of adjustment, etc. The technique might be used by product designers, or by consumers to define a product “wish list”. |
| 3 – 3:30 p.m. | **Break - Visit with the Exhibitors** |
| 3:30 – 5 p.m. | **Master Track Panel Discussion – Exoskeletons Implementation...The Pros and Cons**  
*Moderator: Joe Wallace, CNA Insurance*  
*Panelists: Greg Garrett, The Boeing Company; Michael Nahas, EMCOR Group, Inc.; Brian Roberts, CNA Insurance (retired); Robbie Schrams, Toyota*  
Exoskeletons are becoming more utilized in industrial, construction and medical work environments to help reduce worker exposure while helping to increase productivity and quality. This session will focus on challenges and successes during implementation of exoskeletons into the workplace. Attendees will be able to see how companies adopted the use of the tools and question the obstacles and challenges. |
### ERGONOMICS IN ACTION

#### WEDNESDAY, AUGUST 5

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<td>1:05 – 1:30 p.m.</td>
<td><strong>Ergonomics Regulations in the United States</strong>&lt;br&gt;<strong>Gary Orr, OSHA</strong>&lt;br&gt;<strong>Paul Schwab, Texas Instruments</strong>&lt;br&gt;Musculoskeletal disorders (MSDs) account for roughly 1/3 of all non-fatal incidents. The cost of MSDs is as high as 60% of all workers’ compensation for some industries. Given the high costs in terms of both life changing injury and compensation some states have passed regulations that employers must implement to prevent MSDs. These regulations vary from requiring an ergonomics program to the implementation of controls for specific jobs. This session will give US and international attendees an understanding of ergonomics-related requirements for the US and will provide comparisons to ergonomics regulations in other countries.</td>
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<td>1:35 – 2 p.m.</td>
<td><strong>Ergonomics in a Global Company</strong>&lt;br&gt;<strong>Allison Stephens, Fanshawe College</strong>&lt;br&gt;<strong>Salima Ladha, Ford Motor Company</strong>&lt;br&gt;Ford Motor Company’s Ergonomics program is a Global program that effectively integrates ergonomic principles into the design of its manufacturing process around the world. It is often challenging to implement cross border programs with different regional requirements, cultural norms and travel distance. Ford has years of experience that will give you insight on how they leveraged the diversity and expertise around the globe to build a world class Global Ergonomics program. Each facility should have a vision of what they want to accomplish from awareness to measured outcomes like injury reduction. These facility goals should align with the Corporate Mission Statement. Corporate goals must address and align with the region differences and diversity. An internal Global metric driven process was the Business Plan Review – BPR. All components of the business from Safety, Quality, Delivery, Cost and Moral created metrics that were tracked. On a rotating basis presentation to directors around the globe were given. Ensuring ergonomics was measured and kept in the forefront of the company. Communication is key to keeping a productive Global Ergonomics team. Sharing of ideas and challenges, along with consistent analysis methods and specifications. The G.R.E.A.T. book – Global Reference of Ergonomic Assessment Tools was developed with that in mind. Communication is key. Weekly tech meetings were used for specification reviews, new technology development and research updates.</td>
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<td>2:05 – 2:30 p.m.</td>
<td><strong>Profitability: How Ergonomics Can Impact ROI in the Construction Industry</strong>&lt;br&gt;<strong>Brian Roberts, CNA Insurance (retired)</strong>&lt;br&gt;The cost of doing business requires employers to examine productivity and efficiencies. The Motion is Money process integrates principles of ergonomics with the concepts of lean construction. The focus of the presentation deals with increasing productivity, enhancing workers efficiency, improving bottom line profitability, and reducing jobsite exposures. The Motion is Money methodology examines how walking, bending, reaching, lifting, lowering and carrying are overlooked and never seen on a jobsite. These movements cost time and money and no one measures these movements. We will discuss how to measure these activities and success stories of reducing labor hours and the cost of completing job tasks and the overall project.</td>
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<td>2:35 – 3 p.m.</td>
<td><strong>S8 Million Payback in Three Years – How the Lear Corporation Did That</strong>&lt;br&gt;<strong>Jack Nunes, Lear Corporation</strong>&lt;br&gt;The Lear Corporation is a leading supplier of automotive seating and electrical and serves its customers with global capabilities. Headquartered in Southfield, Michigan, they maintain 261 locations in 39 countries around the globe and employ approximately 161,000 employees. Like most large operations, getting approval to invest in a new, enterprise wide ergonomics process took some number crunching. When the value of ergonomics was communicated to management and the return on investment of implementing an ergonomics process using a cloud-based system was demonstrated, the company moved from an expert based process to a participatory ergonomics approach with union support. This presentation will explain how they standardized their process elements by: • establishing an ergonomics team • providing online ergonomics training in multiple languages • implementing a common musculoskeletal risk assessment tool to be used across their globe sites • engaging their engineers using global ergonomics design guidelines • engaging manufacturing employees in the continuing improvement process • providing an easy to share data management system The results of how Lear improved its overall continuous improvement process and increased productivity, human capital and employee engagement, and efficiency in the amount of $8 million dollars will also be shared.</td>
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<td><strong>Master Track Panel Discussion - Industry 4.0</strong>&lt;br&gt;<strong>Moderators: Allison Stephens, Fanshawe College</strong>&lt;br&gt;<strong>Kelly Hogan, Sandalwood of Canada</strong>&lt;br&gt;Industry 4.0 is the name given to the next revolution in manufacturing and production. It has been proclaimed the future of work. From AR/VR and simulation to AI, emerging technologies and Big Data, this leap or journey into the next industrial revolution is fascinating and intimidating. It will change how we work from the front office to the factory floor. As ergonomists we know that the human needs to be considered as work changes, how can we ensure this continues to happen and how can we leverage these activities to further advance ergonomics. Many have written about the need to focus on the human in these changing times. There are articles are warnings of consequences when the human is not considered fully, descriptions of complex system designs and the potential for error. There is a frustrating lack of actionable advice on how to include the human voice in Industry 4.0. This MT we will provide an overview of Industry 4.0 and a collection of ideas for the ergonomics, health and safety community on how to begin involving themselves in the Industry 4.0 movement. This presentation is intended as a call to arms for ergonomists to engage in the design, implementation, and regulation of the future work.</td>
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| 1:05 – 1:30 p.m. | **Managing Ergonomics for Work at Home (WAH) Employees**  
*Hank Austin, NL Austin Consultants LLC*  
USAA has over 40,000 employees with more than 4,000 working from homes across the United States. Program obstacles have included changes in management personnel, constant justifications, potential legal roadblocks, and the logistics of providing services and equipment to home-based workers in just about anywhere USA and sometimes very remote locations. While the program works well, there are constant challenges and opportunities for improvement. USAA was awarded IBM’s Top 13 Ergonomics Programs in the US and was the first recipient of the Center for Office Technology Outstanding Office Ergonomics Program award. |
| 1:35 – 2 p.m. | **Computer-based Prompts’ Impact on Postural Variability and Sit-Stand Desk Usage: A Cluster Randomized Control Trial**  
*Greg Garrett, The Boeing Company*  
Sit-to-stand workstations have been deployed in office environments to reduce sedentary behavior and improve worker’s health. However, efforts to initiate and sustain long-term usage of sit-stand workstations has been a challenge, with primarily anecdotal evidence suggesting many employees cease using their sit-stand workstations once the newness diminishes. To objectively determine sit-stand workstation usage and what impact computer-based prompts would have on sit-stand desk use and sustainability, 200 office workers (118 control and 82 treatment) in two different geographic locations were continuously monitored over a 4 ½ month period, which consisted of a 6-week baseline and a 3-month experimental period. During the 3-month experimental period, computer-based prompts elicited a 229% increase in daily standing transitions which was sustained over the entire 3 months with 40% of the participants adhering to a pre-determined sit to stand schedule. These findings indicate that the use of computer-based prompts can be used to motivate employees to change their behavior regarding the use of sit-to-stand workstations. |
| 2:05 – 2:30 p.m. | **A Sneak Peek at Revisions to BIFMA G1 as it Transitions to an ANSI Standard**  
*Teresa Bellingar, Haworth; Lucy Hart, ergoCentric Seating Systems*  
BIFMA G1 Ergonomics Guideline for Furniture Used in Office Workspaces Designed for Computer Use has been in the marketplace since 2002. Revisions to the most recent edition, BIFMA G1-2013, are well underway including transition to an ANSI standard. Learn about the implications of moving from a guideline to a standard, changes to the chair measuring technique, updates to the anthropometric data and anticipated changes to seating and work surface dimensions and their impact on existing and new furniture. Find out about a new appendix that will provide recommendations for large occupants between 300 and 400 lbs. |
| 2:35 – 3 p.m. | **Hand-Held Technology – It’s Worse Than We Thought**  
*Tim Pottorff, QP3 ErgoSystems*  
We know the use of hand-held technology has detrimental physical effects such as upper extremity and neck disorders. This talk will present findings showing how the use of hand-held technology presents risks much worse than ergonomics-related hand/wrist or neck disorders, including speech delays in toddlers, sleep deprivation, social isolation, adolescent spinal deformities, significant increases in car crash fatalities, and significant increases in pedestrian accidents—including those involving both vehicles and pedestrians. This is a critical issue not only from a worker-injury perspective, but for the whole of society due to the effects on young people and children. We will also evaluate steps that can be taken to reduce the negative impact of improper use of handheld technology, and steps that have been taken by some governing bodies to address the issue. |
| 3 – 3:30 p.m. | **Master Track Panel Discussion - Role of Ergonomists Amid the COVID-19 Crisis**  
Moderator: Amanda Kauder, Kysor Warren  
Panelists: Rachel Leach, bp America, Inc.; Martha Parker, Texas A&M Ergo Center; James Pomeroy, Lloyd’s Register; Tricia Salzar, Texas A&M University, Bobbie Watts, Michelin Americas; Dave Wood, Raytheon/UTC  
As we bring employees back into the workplace after an event such as COVID-19, a hurricane hit, a catastrophic event to the working facility, there is going to be a lot of reconfiguration. These reconfigurations are likely to apply both in the office and in the factory setting. Employers are following CDC, OSHA, and/or EPA guidelines to put controls in place around social distancing, physical dividers, one-way path of travel etc. How does this impact how people work? What, if any, are the ergonomic challenges? Is the role of the ergonomist restricted to helping work from home workers in a less than ideal setup? How do increased cleaning duties at work and increase demands on the respiratory systems from wearing a mask apply to ergonomics? How can the ergonomist be most effective in helping to bring people back to work after possibly being sedentary? Are your project teams, who are “rethinking/redesigning” the new business norm, considering prevention through design strategies and proper ergonomic design in these new ventures up front? |
| 3:30 – 5 p.m. | **Break - Visit with the Exhibitors** |

Applied Ergonomics Virtual Event 2020 7
Starting & Managing an Exoskeleton Program
Presenters: Misty Wies and Mike Wilson, Toyota Motor Manufacturing; Marisol Barrero, Toyota Motor North America

Wearable Sensors for Ergonomics: Worker Ratings of Discomfort, Distraction, and Burden
Presenter: Mark Schall, Auburn University

Assessing the Accuracy of a Five Wearable IMU Sensor System for Measuring Lifting Risk Factors
Presenter: Menekse Barim, NIOSH

Functional Wellness: How Posture & Movement Help Workers Thrive
Presenter: Mark Vettraino, TaskGroup International

Computer Vision Revolutionizing Ergonomics
Presenter: Brenda Jones, Kinetica Labs, Inc.

Manual Materials Handling Assessment Tools: Updates & Extensions
Presenter: Blake McGowan, VelocityEHS/Humantech

Desktop and Mobile Device Accessories by Kensington
Presenter: Lisa Schuiteboer, Kensington

A New Set of Biomechanically-determined One-handed Lifting Guidelines Protective of the Low Back
Presenter: Eric Weston, The Ohio State University Spine Research Institute

CAPTIV Solution Motion Tracking Physiological Analyses Hostile Environment Layouts
Presenter: Benoit Gaussin, TEA ERGO INC.

Combining Connected Worker Technology and Onsite Intervention Services for Long-term Risk Reduction of Musculoskeletal Disorders
Presenter: Bryan Statham, LifeBooster Inc.

Ergonomic, Health & Safety Products from Lean Factory America
Presenter: Kurt Greissinger, Lean Factory America

Ergonomic-Centric OSHA-Compliant Early Intervention: A Wellness/Ergonomics Collaboration
Presenter: Deborah Lechner, ErgoScience, Inc.

Ergonomics and Workplace Accommodations
Presenter: Nikki Weiner, The Rising Workplace

Ergonomics Guidelines for the Design and Use of Manually Handled Carts
Presenter: Thomas Albin, High Plains Engineering Services LLC

How to Evaluate Push/Pull Exposures found within Manufacturing and Warehouse Distribution Settings
Presenter: Gregg Kloss, Nationwide Insurance

Improving Industrial Ergonomics and Productivity with Wearables and Big Data: Real-World Applications and Insights
Presenter: Jason Guss, Iterate Labs

Introducing Digital Human Modeling to Your Business
Presenters: Alessa Bazua and Jacob MacCara, Sandalwood Engineering and Ergonomics

Introduction of SelectFlex: The World’s First Arch-Control Insole
Presenter: Barry Renow, SelectFlex

Introduction to kybun
Presenter: Carolin Gey, kybun USA LLC

Perfecting Push/Pull Force Measurement and Communication
Presenter: Eric Hassen, Caster Connection

Quantitative Ergonomic Risk Reduction
Presenters: Cynthia DiMeglio and Robert Thomas, Lockheed Martin

The Impact of Ergonomics at Home
Presenter: Paula Dymond, Logitech

Wearable Sensors: Emerging Technology in Ergonomics, Safety, Job Analysis, and Worker Assessment
Presenter: Deborah Lechner, ErgoScience, Inc.

Welcome to Kensington
Presenter: Lisa Schuiteboer, Kensington

Plus many more ...
POSTERS ON DISPLAY

The Effect of Using the “20-8-2” Pattern at an Active Workstation on Task Performance and Energy Expenditure
Presenter: Gulberg Ergin, Texas A&M University

Difficulties and Solutions for a Better Relationship between Companies and Brazilian Government Institutions
Presenter: Adriano Varasquin, PUCPR

Controlling Ergonomic Hazards in Masonry Construction
Presenter: Robert Batson, University of Alabama, Dept. of Civil and Construction Engineering

Macroergonomics and the Workplace Experience: Integrative Strategies for Improving Employee Engagement, Health and Performance
Presenter: David Weiner, The Rising Workplace

Work Safety with Industry Advent 4.0: Applying Virtual Reality in Training - A Systematic Literature Review
Presenter: Leandro Vieira, Renault

Pilot Study: A New Technology for Ergonomic Assessment in Healthcare
Presenter: Xiaoxu Ji, Gannon University

Advanced Work Assessment & Worker Training System
Presenter: JuHyeong Ryu, University of Waterloo
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**EXHIBITORS**

**Applied Ergonomics Society (AES)**
AES, the Applied Ergonomics Society, is a worldwide resource dedicated solely to the support of the ergonomics profession and individuals involved with improving workplace performance, quality, sustainability and employee availability. AES provides knowledge, training, and networking opportunities to enhance the skills and effectiveness of the ergonomics professional.

Applied Ergonomics Society
3577 Parkway Lane, Suite 200
Norcross, GA 30092
P: (800) 494-0460 | F: (770) 441-3295
www.iise.org/AES

**Bionic Lift LLC**
Bionic Lift LLC is the US Distributor of the Skelex 360, a lightweight, wearable, non-powered, upper-body Exoskeleton with an innovative carbon-fiber FlexFrame. The Skelex 360 has high ergonomic wearability without limiting freedom of movement while also reducing muscular-skeletal strain when working overhead, holding tools or with arms extended. Ideal for assembly, construction, maintenance, mechanical and other trades.

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P: (937) 369-3969
bioniclift.com

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

**Board of Certification in Professional Ergonomics (BCPE)**
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**
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. This year we proudly introduce three new ergonomic products: Next24, Pendulum, and Midback AirCelli. Stop by and see us!

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

**Caster Connection**
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

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

**Chubb Global Risk Advisors**
Chubb Global Risk Advisors creates custom solutions to help you make your workplace safer, prevent or mitigate property damage, minimize environmental impact, and leverage technology to enhance efficiency. Our team works with you to develop and execute solutions that align with your organization’s vision and values and achieve your goal.

Chubb Global Risk Advisors
436 Walnut Street
Philadelphia, PA 19106
P: (866) 357-3797
www.chubb.com/cgra
Darcor Casters and Wheels
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.

Durable Superior Casters
Durable Superior Casters is one of the most innovative, trustworthy providers of casters and wheels in North America.

Ekso Bionics
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.

Doctors of Physical Therapy
We provide onsite physical therapy & prevention for companies of all sizes across the U.S. All services provided by a licensed physical therapist v. an ATC. Our prevention and therapy are functionally based. We can be onsite full or part time. No capital investment – we pay for all startup costs.

Enviance
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.

Ergo Advantage Inc.
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.

ErgoScience
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.
EXHIBITORS

Ergotron
Ergotron uses movement to improve how people work, learn, play and care for others. With a focus on healthcare, education, general office and custom solutions, we rely on human-centered design principles and the technology of movement to build environments that help people thrive. Our products remove limitations to support healthier, more productive environments for life and work. Ergotron is moving you forward.

Ergotron
1181 Trapp Road
Eagan, MN 55121
P: (800) 888-8458
www.ergotron.com/en-us

Ergoweb LLC
Since 1995, companies have trusted Ergoweb to help develop and deliver effective and sustainable ergonomics programs. Our flexible Ergoweb Enterprise™ cloud-based software gives employers the tools, knowledge and processes to continuously improve workplace ergonomics. Simple. Adaptable. Streamlines management reporting.

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

Ergoweb LLC
Since 1995, companies have trusted Ergoweb to help develop and deliver effective and sustainable ergonomics programs. Our flexible Ergoweb Enterprise™ cloud-based software gives employers the tools, knowledge and processes to continuously improve workplace ergonomics. Simple. Adaptable. Streamlines management reporting.

Flokk (HÅG)
HÅG Capisco is a design icon inspired by a horseback rider’s posture. Its pioneering saddle seat and unique shape offers endless ways to sit or half stand. This encourages you to vary your positions. It is perfectly suited to any table height. We also will feature HÅG Futu and HÅG SoFi.

Flokk (HÅG)
62 Seville Road
Madison VA, 22727
P: (855) 821 5270

Goldtouch
Goldtouch offers ergonomic solutions designed to increase productivity, employee satisfaction and ROI, while decreasing RSI’s, workers comp claims, and absenteeism. Goldtouch products range from ergonomic wired and Bluetooth keyboards, to wired and wireless ergonomic mice, as well as numeric keypads, wrist rests, laptop stands, and our EasyLift Sit/Stand Desk Converter.

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

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

HealthPostures
HealthPostures provides ergonomic workspace 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

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

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www.healthpostures.com

Kensington
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

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

VelocityEHS | Humantech
For nearly 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 about how our solutions help you “do ergonomics right,” visit www.humantech.com.

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

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Ann Arbor, MI 48108
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**Kinetta Labs Inc.**

No markers, no sensors, no suits... you just need a smartphone or digital camera. Kinetta Labs harnesses the power of computer vision and machine learning to help you assess ergonomic risks. You video a worker, review the worker’s skeleton and calculate ergonomic scores with commonly used ergo tools.

**Kinetic Technologies**

K-Tec (Kinetic Technologies) 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.

**Kynba USA**

Kynba standing mats and shoes are a simple way to improve workplace ergonomics and provide comfort while reducing fatigue and sick leave absences. Swiss made from a multi-component polyurethane material, both place the foot in a dynamic motion that strengthens muscles and improves balance and coordination.

**Robotics Technologies Inc.**

The Robot RSP™ 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 RSP™ lowers exertion levels by up to 80% – keeping workers healthier and more productive, while mitigating healthcare and disability costs.

**LifeBooster Inc**

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.

**Logitech**

Logitech designs products that have an everyday place in people’s lives, connecting them to the digital experiences they care about. More than 35 years ago, Logitech started connecting people through computers, and now it’s a multi-brand company designing products that bring people together through music, gaming, video and computing.

**Mark-10**

Mark-10 force gauges and testing kits help ergonomists with job task analysis and muscle strength testing. A selection of implements accommodate a wide range of push and pull requirements, up to 500 lbf / 2,500 N of force. Mark-10 products are designed and manufactured in the USA.
Modjoul Inc.
Modjoul is a data analytics company that utilizes a wearable device, The Modjoul SmartBelt, to capture employee movement metrics. Data from SmartBelt is streamed real time to an online dashboard for employees and supervisors. Our mission is to improve the safety record of every company by providing data and actionable insights to eliminate employee injuries.

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

O’Mara Sprung Floors
O’Mara Sprung Floors, USA-manufacturer of ergonomic flooring since 1996. Industrial anti-fatigue floors with a 70% shock-absorption rating reduce injury caused by working on hard and unsupportive surfaces, while increasing employee energy and productivity levels. Resilient panels with industrial finishes are suitable for high-traffic areas; patented system allows for easy installation and reconfiguration. Custom configurations available.

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

PHS West Inc.
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

SRI-Ergonomics, The Ohio State University
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

PPS UK
Pressure Profile Systems Inc.’s TactileGlove features tactile pressure sensing elements embedded throughout the palm and fingers, enabling natural hand use and high-resolution pressure mapping for product development, ergonomics research, and OSHA compliance. Our second product, Wrist-Aid MD, is a discrete non-invasive orthotic that actively relieves symptoms of carpal tunnel syndrome.

PPS UK
Inovo, Suite-H.
121 George St.
Glasgow G1 1RD
SCOTLAND
P: +44 141 559 7150
www.pps.us

SelectFlex
SelectFlex™ is the world’s first ARCH-ADJUSTABLE Orthotic Insole providing relief from Flat Feet, Plantar Fasciitis, Lower Extremity Fatigue and Joint Pain. Our proprietary PowerLift Arch™ dynamically lifts and uncompresses the arch delivering:
- CORRECTIVE RE-ALIGNMENT and ENERGY RETURN to the body
- Up to 50% Greater ANKLE STABILIZATION
- (3) SELECTABLE COMFORT LEVELS

SelectFlex
219E 69th St, Suite 6C
New York, New York 10021
P: (917) 375-5635
www.selectflex.com

MEGAComfort
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

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P: (949) 387-7159
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P: +44 141 559 7150
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- Up to 50% Greater ANKLE STABILIZATION
- (3) SELECTABLE COMFORT LEVELS

SelectFlex
219E 69th St, Suite 6C
New York, New York 10021
P: (917) 375-5635
www.selectflex.com
TEA Ergo
TEA ERGO Inc. is a high-tech company developing software and wireless sensors for the measurement and analysis of human behavior. We assist companies to prevent organizational hazards and academic laboratories in their research by providing the most comprehensive ergonomics assessment tool available on the market. Visit us at booth 506.

TEA Ergo (Tech Ergo Appliquées)
SBD Center
1510 Cecil B. Moore Avenue
Philadelphia, PA 19121
www.teaergo.com

University of Michigan Center for Ergonomics
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

Texas A&M University Ergonomics Center
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

Working Concepts
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
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Gresham, Oregon 97030
P: (503) 663-3374
www.softknees.com
GROW WITH US!

Making your workplace safer.

IISE is committed to improving the design of systems, jobs, machines, products and various workplace exposures. With the new Applied Ergonomics Society (AES), IISE members can work together to build a safer workforce. Join us as we revolutionize the ergonomics profession and expand on the important lessons shared at the Applied Ergonomics Conference year after year.

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