Fall 2020 Newsletter

International Society for Occupational Ergonomics and Safety

ISOES 2021 Conference Dates
Sept. 16-17, 2021
Location: Online
more information to follow...

Letter from the President

Welcome to the start of the 35th year of existence of the ISOES society. It is an honor to serve as the Society's 31st president. I have had the privilege of working with an extremely professional and amicable team of Executive Committee (EC) members in my previous capacity as International Member-at-Large and President-Elect. I would like to begin by thanking our past president Dr. Gabriel Ibarra-Mejia for his service and inspiration and leading us through very unsettling times. Do recognize that this is a team effort so my recognition and appreciation also goes out to the members of the Executive Committee. We are fortunate to have a knowledgeable group of experienced professionals on our EC and together we hope to deliver results that our members will be proud of. For this cycle I would like to welcome new members to the EC team – Dr. Richard Wyatt our new Secretary and Dr. Priyadarshini Dasgupta, Member-at-Large. Especial thanks to Dr. Lu Yuan for serving out his term as Member-at-Large, Mr. Jim Borchardt for his continued mentoring and advice, and to the rest of the EC members for serving and continuing to serve on the EC. Please check out the website for updated information on our EC members https://www.isoes.info/officers.html.

While we work together to build on our accomplishments of the past I reach out to each of our members to get involved and contribute to the efforts of the ISOES

Dr. Clarence C. Rodrigues
ISOES President

which has a vision to be the world's leading forum for the exchange of ideas between practitioners and researchers in the design and analysis of safe human work systems, and a mission to promote through research, education and sound professional practice of ergonomics and safety, the creation of safer, healthier and more productive working environments around the world. To deliver on the above in the coming year, we will work to:

- Increase the visibility of ISOES globally
- Maintain and increase paid membership
- Start a reach-out-to-a-member initiative to get our general membership more involved
- Maintain our fiscal integrity
- Develop alliances with relevant societies and organizations
- Plan a successful annual conference
- Increase traffic/ communications on our forum
- Increase student involvement – develop a student section
- Execute/expand the outreach research grant initiative
- Expand our existing useful links section on our homepage to serve as a platform for state-of-the-art information exchange on research, developing technologies, and innovative applications and products
- Conduct application webinars (ex. Industry success stories)

Given our individual commitments, the above is a tall order. I am therefore encouraging each of us to transition from the traditional cliché of thinking outside the box to a thinking that has no box! So please let's all chip in and seize the future!

Inside this issue:

ISOES 2020 Virtual Conference in Review

By Anand Subramanian

COVID-19 has changed the way we think and do things. It has created a new normal for all companies, businesses, organizations, and educational institutions. ISOES 2020 was a planned event that was scheduled to be held in beautiful Orlando, FL in conjunction with the ASSP 2020. But, the current pandemic necessitated us to make changes to the conference and hence the conference that was originally planned for June 2020 was re-scheduled. We found ourselves an ally in The Society for Industrial and Systems Engineering (SISE), that was also facing the effects of COVID-19. SISE's annual conference was scheduled for September 2020 and in May with COVID-19 inflicting chaos, the ISOES Executive Committee made a decision to join hands with SISE and have a joint conference. The progression of the pandemic had made it clear that the most prudent course of action is to hold a virtual conference. ISOES decided to convert its 2020 annual event to a virtual conference –XXXIInd Annual Occupational Ergonomics and Safety Conference was held as an exclusively online event.

With the assistance of University of Texas at El Paso's Department of Public Health Sciences that provided ISOES access to its Zoom video conferencing platform, the society was able to host its virtual conference event on September 17-18, 2020. The format of the conference was tweaked so we could accommodate the needs of a virtual event. Hence, in addition to having a keynote speaker, the society leverage the online platform by inviting special guests to present on their areas of expertise. ISOES 2020 was kicked off with a welcome speech by the 2019-2020 ISOES President – Dr. Gabriel Ibarra-Mejia following with the virtual attendees enjoyed keynote speech by Dr. Donald R. Peterson – who serves as the Chair of ASTM Committee F48 - Exoskeletons and Exosuits. His talk entitled "Overview and update of ASTM Committee F48 - Exoskeletons and Exosuits" and addressed the development and maintenance of standards for exoskeletons and exosuits. In terms of webinar presentations, we had a variety of topics presented by industry experts. Jeremy Wilzbacher, a senior consultant with Aon Casualty Risk Control, presented on the office ergonomics for the home or virtual office environment keeping an eye on the current COVID-19 requirements. Dr. Richard Wyatt also a senior consultant with Aon Risk Solutions, provided us with tips for developing your ergonomic training process for safety committees and ergonomic teams. We also had an expert presentation by William Tomlin of the USF SafetyFlorida Consultation Program, who presented on the respirable crystalline silica in the construction and general industry with a focus on protecting workers. This presentation was moderated by our incoming president Dr. Clarence Rodrigues. The conference also featured sessions in a wide range of presentation topics that represented high quality research and real-world application of human factors, ergonomics, occupational biomechanics, and occupational health & safety principles.

A vote of thanks to the keynote speaker - Dr. Donald R. Peterson, and the invited speakers - William Tomlin, Jeremy Wilzbacher, and Dr. Richard Wyatt for their significant contributions to the ISOES 2020 conference and providing us with their insights. While the year 2020 continues to be a disappointment for all of us, a special thanks for all the members of the ISOES executive committee that has worked diligently in providing this excellent virtual conference and recognizing the need to adapt to our environment and support the profession in new ways. We look to an optimistic future where we all can once again connect in person. Wishing every one good health – Stay safe!!

a special thanks for all the members of the ISOES executive committee that has worked diligently in providing this excellent virtual conference and recognizing the need to adapt to our environment and support the profession in new ways.

2020 ISOES Executive Committee: Election Results

Position	Name	Term
President	Dr. Clarence Rodrigues	2020-2021
President Elect	Mr. Steve Fleming	2020-2021
Past President	Dr. Gabriel Ibarra-Mejia	2020-2021
Secretary	Dr. Richard Wyatt	2020-2022
Treasurer	Dr. Anand Subramanian	2020-2022
Newsletter Editor & Webmaster	Dr. Marc Snell	2020-2022
Member-at-Large	Dr. Chao Wang	2020-2021
Member-at-Large	Dr. Priyadarshini Dasgupta	2020-2022
International Member-at-Large	Dr. Jaejin Hwang	2020-2022
International Member-at-Large	Dr. Shuping Xiong	2020-2022

ISOES Student Award Recipient

By Shani Gomez

These past few years, I have been working toward completing my bachelor's degree in Engineering Technology with a concentration in Safety Management at Sam Houston State University. I've had the chance to participate in various organizations such as the Honors College as an Ambassador and even served as President of the Construction Association. Additionally, this year, I had the opportunity to work with the guidance of Dr. Ali Aljaroudi in a research project studying ergonomic risks of janitorial occupation.

While I did not get the opportunity to attend the ISOES 2020 Conference this year, I was grateful to have my mentor presenting my research on "Risk of Musculoskeletal Disorders (MSDs) among Janitors during Most Frequent Occupational Tasks" and was recognized as a Student Award Recipient. The research focused on assessing the ergonomic risk related to janitorial work due to repeated tasks on a daily basis. After identifying the top three most frequently conducted tasks, we conducted a risk assessment of musculoskeletal disorders (MSDs) and applied ergonomics tools to evaluate the severity. The participant janitors provide one of the most crucial tasks in any job location and more so during these times in the middle of a pandemic. Being able to assess the risks associated with their more common tasks will allow the cleaning services industry to provide better engineering controls and help janitors complete the job more efficiently and effectively without being at risk. Our study did find that, while not urgent, changes should be made to lower the risk.

The experience of conducting this research was extremely valuable and served as a steppingstone toward my journey in attending graduate school and become further involved in the industry.

I want to express my sincerest appreciation for the ISOES 2020 Conference Committee for taking the time to read through my paper and for providing me with the opportunity to bring this topic to the surface. I would also like to thank Dr. Ali Aljaroudi for serving as my mentor during this research and for all of his guidance.

Ms. Shani Gomez
Sam Houston State University
2020 ISOES Student Award Recipient

Improvements in Ergonomics Through a Motivated Workforce

By Steve Fleming

It is often said that "the greatest asset of a company is its people." The people on the front lines not only perform the work, but they have the best perspective when it comes to the details of how the job is done. In fact, they are in a great position to offer suggestions for job improvements. The question is, will anyone be listening? Will ideas be encouraged, and innovation embraced? The following is an example of a successful ergonomics improvement that was driven by the people who do the work every day.

Freight cars have ladders with 5/8" ladder rungs which provide a firm handhold and foothold while riding. It is common practice for railroad workers to ride on the side of a freight car while moving to a new work location or to serve as a lookout for the moving train. One railway maintenance team recently re-thought the way that they ride on these ladders by envisioning, designing, and fabricating a temporary riding platform. The railroad supported the idea by enlisting ergonomists and safety professionals to formally approve the riding platform for use, but it was the team of maintenance employees who saw a potential improvement and pursued it whole-heartedly. The ergonomics evaluation found that the riding platform reduced the required grip strength for holding on while riding. This, in turn, reduced fatigue and recovery time after riding. With the riding platform, the center of mass was positioned more in line with the feet, which helped to enhance the comfort of the holding and riding task as well.

What ideas do the workers in your organization have for ergonomics and job safety improvements? How can your organization provide the support that is needed to make these ideas a reality?

Riding on a ladder with (left) and without (right) a riding platform.

It is often said that "the greatest asset of a company is its people." The people on the front lines not only perform the work, but they have the best perspective when it comes to the details of how the job is done.

Health literacy might help improve safety climate

By Priyadarshini Dasgupta

Health literacy is defined as "the degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions" It has been positively correlated with patients' ability to manage chronic disease through better understanding, evaluation and use of health information. At an anecdotal level, we expect that higher levels of health literacy will enable workers to better understand the impact of their behaviors on their health status and thus to avoid unsafe behaviors, including unsafe work practices. In other words, workers will prioritize safety policies and procedures when making behavioral decisions. It seems an interesting idea for workers' health literacy assessment in order to find out the tendency of 'compliance' and 'non-compliance'. This might be especially interesting for a developing country like India that has started giving more importance on topics like work health, safety and work environment than before. Strikingly, India's construction workforce contain 97% of female workers and some of the work culture intrigues us to ask questions like whether the workers have any basic ideas of the hazards and its effects.

We hypothesize that workers with higher levels of health literacy would have perceptions of a better safety climate. Because workers may perceive safety as part of the job, but not something that affects their individual health, management should address this by implementing training expressing that tasks carried out by workers directly impact individual health outcomes. For aspects of safety related to safety behaviors, levels of health literacy might contribute to a positive safety climate, which demonstrates the value of educating workers to be health literate.

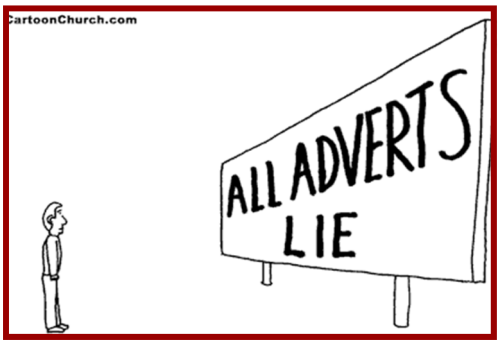
This work is being performed together with Dr. Alissa Dickey, a fellow professor at Southeastern Louisiana University

At an anecdotal level, we expect that higher levels of health literacy will enable workers to better understand the impact of their behaviors on their health status and thus to avoid unsafe behaviors, including unsafe work practices.

On the use of Innovative Technologies

By Marc Snell

The use of new technologies for health and safety are alluring in part due to the appeal of flashy, modern technologies, but also since the manufacturers often tout claims of research and studies demonstrating the superiority of their product. For example, in searching for cutting-edge technologies like exoskeletons, there are an abundance of options, each claiming some variation of "proven results". The question becomes, to what extent such claims from a manufacturer can be trusted, and how to evaluate such claims when compared to each other.



On the surface it seems clear, manufacturers will (and can) make almost limitless claims to the efficacy of their product. How it is possible that all these technologies solve seemingly the same problem better than each other? The simple answer is, they don't. Even though there are laws preventing outright lying, claims may appear truthful, while in fact representing cherry-picked data, narrowly defined classifications, or any number of falsehoods.

Consider the following claim for a lift assist device:

"Moves loads more efficiently than any other lift assist device".

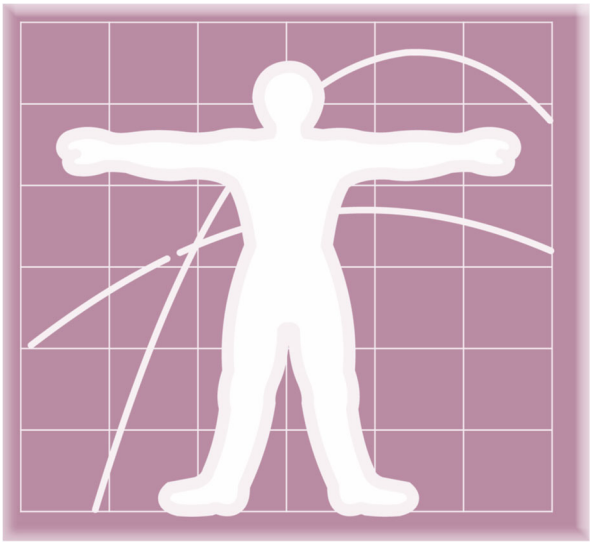
What does this claim really say about the product? Efficiency while moving loads may seem appealing on the surface, but this implies potential counterintuitive functions, e.g. speed while moving heavy loads may actually reduce safety.

One major red flag to watch out for is the claim of scientific studies demonstrating the superiority of a given device. The expectation that a company is going to give all test groups a fair consideration, when clearly the only acceptable result is the superiority of their product is unrealistic. Consider the following; would you advertise that your product was 2nd-best? Since the clear answer is *no*, one can safely assume that any money a company spends to scientifically test their product had better result in their product being superior.

Even in cases where such studies may have been conducted by independent laboratories, there is much room for manipulation. There are many (albeit ethically dubious) ways in which data can be cherry-picked, selectively analyzed, etc. which can result in positive outcomes. A manufacturer is in no way obligated to report all, or even negative, results. Further, there is no advantage to the company who is scientifically honest.

The purpose of this brief article is to encourage practitioners to think more critically. When something seems to good to be true, it probably is.

International Society for Occupational Ergonomics and Safety



LinkedIn:
https://www.linkedin.com/groups/8240131/

Twitter
https://twitter.com/ISOESinfo

Mailing List:
https://bit.ly/ISOESemail

Website:
http://www.isoes.info/

Forum:
https://isoes.createaforum.com/