



ISOES NEWSLETTER

International Society for Occupational Ergonomics and Safety

**FALL
2019**

www.iso.es.info

ANNOUNCEMENT

**The
2020 ISOES
Conference
will take place on
JUNE 25 & 26
in
ORLANDO, FL**

Inside this issue:

- Letter from the Past President **2**
- Message from a Student Award Recipient **3**
- Safety Culture in the Middle-East **4**
- 2019 Conference Reflection **4**
- Message from a Student Award Recipient **5**
- ISOES Booth at the ASSP Expo **5**

Letter from the President

By Gabriel Ibarra-Mejia

Welcome all to a new & challenging year! This will be my second term as President of the ISOES, and it could not be a better challenge and opportunity to serve our society. I feel optimistic. We have a tremendous responsibility to build up upon what as a society we accomplished this past year. Even though still in this planning phase, we have set our sights on having our next conference in Orlando, Florida. We also have our hopes on continuing to work in collaboration with ASSP as we did in New Orleans, which we feel was a success. Thank you ASSP!

For the upcoming year, we have assembled an impressive team to lead, along with extraordinary members that continuously feed advice. I want to thank every member of the Executive Committee for their continuing effort in the success of our society and the vote of confidence placed in my person to lead these efforts. The challenge will only make us stronger in our endeavor to achieve excellence as the leading

and unique ergonomics society that brings together both practitioners and researchers. Let us congratulate ourselves for this past year, but set it aside to concentrate on the next one.

We need to maintain and increase membership. Strategies are in place to spread our membership and seek new members and partnerships in other countries in Latin America, although we are also aware of their limitations. We also need to increase our efforts in encouraging student participation. Our student award competition has attracted some of the most interesting and diverse works that made it difficult to select to whom we give the award as the best. They are all great! We also need to encourage our members to motivate their students to participate. I invite you to check out our photo gallery and take a glance at this year's participants.

The state of the society is strong, healthy and stable. Although at the same time, it can be improved. We welcome the challenge of this upcoming year and look forward to working side by side with an awesome team.



**Current ISOES President
Gabriel Ibarra-Mejia
MD, PhD, MSErg**

Expect to receive periodic messages asking to contribute to the efforts of the society and input on how to better serve its member community. Let us aim high. Let us make this everyone's society. Let us be true to our mission and continue building upon it. Let us tackle all these challenges in front of us. Let us be better next year.



RtPTR Panelists: Dr. Rammohan Maikala (Providence Regional Medical Center), Dr. Mark Friend (Embry-Riddle Aeronautical University), Ms. Laura Hintz (Harley-Davidson Motor Corporation), Dr. Andrew Merryweather (University of Utah), Dr. Mark Schall (Auburn University), and Dr. Richard Wyatt (AON Global Risk Consulting).



Past ISOES President
Sang D. Choi
PhD, CSP, CPE

Letter from the Past President

By Sang D. Choi

It has been my great pleasure and honor to serve as the President of International Society of Occupational Ergonomics & Safety (ISOES) for 2018-2019. I would like to take this opportunity to whole-heartedly thank you for attending the XXXIst Annual Occupational Ergonomics and Safety Conference held on June 12th and 13th in New Orleans, Louisiana, USA. We had an awesome and successful conference in NOLA, which was the first joint conference with the American Society of Safety Professionals (ASSP)'s Academic Forum and the ISOES!

"Dr. Marley's "call to action" brought the combined strength of the two organizations (and others) together to facilitate even greater integration of practice and research in the future."

Our goals for the year were to: increase membership and visibility by implementing networking through new social media, and promote publicity for the annual conference. Also, the executive committee worked hard not only to retain members, but also to gain new members globally – which we believe we have achieved as more international members joined and participated in the 2019 ISOES conference.

We had 65 or more participants, including presenters, attendees and guests including members from ASSP's Academic Practice Specialty/Academic Forum. On June 12th, the ISOES Welcome Session and Keynote Address were held jointly with ASSP's Academic Forum. Dr. Robert Marely, Provost & Executive Vice



Mr. Liangjie Guo
(Scholarship Award Winner)

Chancellor, Missouri University of Science and Technology, Rolla, MO delivered the Keynote Address entitled "Bridging the Gap between Safety Practitioners and Academic Researchers: A Call to Action". Dr. Marley's insightful words truly inspired both academicians and practitioners at the joint meeting. Dr. Marley's "call to action" brought the combined strength of the two organizations (and others) together to facilitate even greater integration of practice and research in the future.

This year we have selected two excellent Student Scholarship Award winners, Mr. Srikanth Sagar Bangaru (LSU) and Mr. Liangjie Guo (CUG/KAIST) who presented their research papers entitled "Biomechanical Analysis of Manual Material Handling Tasks using IMU Sensors", and "Perceived Postural Instability during Simulated Lifting Tasks in Construction Workers" respectively. I would especially like to thank the student scholarship/best paper selection committee, Dr. Gabriel Ibarra-Mejia (University of Texas at El-Paso) and Mr. James Borchartd (Construction Ergonomics, LLC).

This year, once again, we brought together a devoted panel discussion on "Research to Practice to Research (RtPTR)", chaired by Dr. Andrew Merryweather (University of Utah) and Dr. Clarence Rodrigues (Kalifa University of Science and Technology, UAE) and co-



Mr. Srikanth Sagar Bangaru
(Scholarship Award Winner)

chaired by Dr. Sang Choi (University of Wisconsin at Whitewater, WI) and Jim Borchartd (Construction Ergonomics LLC, IA). The distinguished panelists consisted of: Laura Hintz (Harley-Davidson Motor Corporation, WI); Dr. Mark Schall (Auburn University, AL); Dr. Richard Wyatt (AON Global Risk Consulting, AL); Dr. Mark Friend (Embry-Riddle Aeronautical University, FL); and Dr. Ram Maikala (Providence Regional Medical Center, WA). In addition to presenting their work, the panelists discussed the importance of translating research into real world applications, and vice versa.

On June 12th, Dinner Banquet in the Higgins Room of Calcasieu Restaurant, Dr. Jeffery Fernandez, PhD, PE, CPE delivered the Dinner Talk, "Application of Ergonomics: A Journey from Academia to Consulting." Dr. Fernandez's informal speech was very insightful by sharing his know-hows from a professionally well-rounded former prominent academician (professor) and successful practitioner (consultant business) in the field of occupational ergonomics.

Student presenters from U.S. and other countries such as Africa, China, and South Korea actively participated and delivered their high-quality research work at the ISOES-NOLA 2019. Their presentations were well received with constructive feedback and comments from the audience.

ISOES Executive Committee and conference participants are grateful to the leadership of American Society of Safety Pro-



Dr. Robert Marley's key-note speech



Dr. Robert Marley with Dr. Lu Yuan (Academic Forum Chair) and Dr. Sang Choi (ISOES Conference Chair)



**Dr. Jeff Fernandez
(Dinner Speaker)**

professionals (ASSP) and the organizing staff of the 2019 Safety PDC, especially Laura Clements, Director of External Affairs for contributing to the success of 2019 ISOES Conference. The registration/speaker prep room was great and the professionally prepared general conference room enhanced the effectiveness of all presentations and the Research to Practice to Research (RtPtR) Panel Discussion. A Special Thanks to all who facilitated the joint Opening Session and hosted the Afternoon Reception with ASSP's Academic Forum (AF). These joint events provided great opportunities for AF and ISOES participants to network with academic and professional peers.

Last but not least, a big thanks to the Executive Committee, Dr. Gabriel Ibarra-Mejia, Mr. Jim Borchardt, Mr. Steve Fleming, Dr. Anand Subramanian, Dr. Marc Snell, Dr. Lu Yuan, and Dr.

Shuping Xiong who worked tirelessly to make sure the conference was successful. I would like to take this opportunity to welcome our new executive committee members – Dr. Clarence Rodrigues, Dr. Chao Wang, and Dr. Jaejin Hwang for their continued efforts and hard work to keep the ISOES organization on its mission. Special note to convey my sincere appreciation to Mr. Jim Borchardt who has served several years as secretary for the ISOES: his tireless support, energy and time contributed to the success of the 2019 ISOES NOLA conference.

Well, now it's time for me to pass the torch to Dr. Gabe Ibarra-Mejia of University of Texas at El Paso, the current President and Conference Chair. I look forward to seeing everyone in Orlando at the next ISOES conference!



Professor Sang Choi, ISOES 2018-19 President guides ISOES conference participants to the joint Opening Session and the afternoon Academic Forum/ISOES Reception hosted by ASSP.



Students Presenters (ISOES-NOLA, 2019)



Students Presenter and ISOES EC Members



**Student Award Recipient
Liangjie Guo^{1,2}**

Message from a Student Award Recipient

By Liangjie Guo^{1,2}

I am currently an assistant professor in the Department of Safety Engineering at the China University of Geosciences. I completed my Ph.D. research work in the Human Factors and Ergonomics Lab (HFEL) at Korea Advanced Institute of Science and Technology under the supervision of Dr. Shuping Xiong and Dr. Yunsheng Zhao. We conducted one research on postural instability during lifting tasks in construction workers and found

that lifting posture, lifting load and standing surface slope had not only significant main effects on postural instability, but also significant and complicated second-order interaction effects. I was encouraged by Dr. Xiong to submit part of our research findings to the ISOES 2019 Conference held in New Orleans, and I was excited to have the opportunity to present this research at the conference. I really enjoyed that conference experience, and I got many valuable comments and suggestions from the professionals in both academia and

industry, which could help me a lot in my future study. I highly recommend that researchers who are in the occupational ergonomics and safety or related fields submit your studies to and attend the ISOES conference, it would be a good opportunity of sharing and exchanging your research ideas. Lastly, I would like to thank the ISOES 2019 Conference Committee for providing me the good opportunity and the student paper award; and thank Dr. Xiong for his guidance on this research.

1. Department of Safety Engineering, China University of Geosciences. 388 Lumo Road, Wuhan, Hubei Province 430074, P.R. China.
2. Human Factors and Ergonomics Lab (HFEL), Korea Advanced Institute of Science and Technology. 291 Daehak-ro, Yuseong-gu, Daejeon 34141, Republic of Korea

The confluence of safety culture and operational excellence is gaining increasing importance in business sectors of the middle-east

By Clarence C. Rodrigues

Safety culture is the value and priority placed upon safety by every individual in an organization, and can be seen as the shared values and norms of personnel within a company, their perceptions, feelings, beliefs, and attitudes about the safety risk to which they are exposed, and their beliefs regarding the necessity and success of safety control systems. Operational Excellence is when an organization's efforts are in a state of alignment for achieving its strategies and where the corporate culture is committed to measured and continuous improvement of company performance and where operational

excellence is achieved by design and not by chance. Top performing organizations are those that have achieved operational excellence and that perform well in all aspect of the business. Operational excellence would reflect good overall company culture with employees who strive for continuous improvement of self and company performance. Since safety culture can be seen as a subset of the overall culture of the organization, so having a good overall culture will invariably translate to having good safety culture. So, estimating safety culture can provide a measure of human performance and operational excellence levels. Evaluating safety culture could also identify areas and activities with the

potential to undermine human performance and operational excellence. Poor safety culture usually results in poor safety performance. Safety culture measures are leading indicators of safety performance and provide an insight to the state of safety in an organization. Perception surveys are a commonly-used technique for assessing safety culture. Perception surveys can measure effectiveness of safety systems as described by individuals within an organization, reveal strengths and weaknesses in current systems, and can identify what needs to be done to correct identified deficiencies. Oil and Gas and Aviation are 2 major sectors that are rapidly expanding the use of safety culture assessments.



President Elect
Clarence C. Rodrigues
PhD, PE, CSP, CPE

"In partnership with ASSP, ISOES joined over 5,000 health and safety professionals, over 300 speakers, and an impressive expo that included over 600 companies eager to share their contributions to the field."

New Orleans ISOES Conference Reflection

By Steve Fleming

The International Society for Occupational Ergonomics and Safety found a Big Conference in The Big Easy this past June. In partnership with ASSP, ISOES joined over 5,000 health and safety professionals, over 300 speakers, and an impressive expo that included over 600 companies eager to share their contributions to the field. Being among the exhibitors, engaging in an ISOES/ASSP mixer, and presenting our research alongside the ASSP proved to be a valuable opportunity to share what ISOES has to offer with like-minded professionals. The exposure was priceless and I hope we can keep the momentum going in 2020 as we endeavor to bring ISOES and ASSP together in Orlando.

Thank you to Dr. Robert Marley for a rousing keynote presentation as ISOES kicked off the 2019 conference at the ASSP

Academic Forum. As always, the ISOES presentation sessions brought together a wide range of interesting topics and high-quality research. Real-world applications of ergonomics and safety were also indicative of the cutting-edge technology and practices employed by our ISOES membership. Thank you to the Research to Practice to Research panelists who brought their unique experiences to the table for a truly great discussion. The dinner banquet at The Calcasieu Restaurant provided a sampling of the best Creole cuisine. A very special thank you to our dinner speaker, Dr. Jeff Fernandez, who reflected on an extremely vivacious and full career as an ergonomist. His experiences were relatable to academics and practitioners alike.

Thanks to all of the members of the Executive Committee for the time and effort spent on taking the annual ISOES conference to

the next level. Whether you found yourself on Bourbon Street or at the impressive World War II Museum, New Orleans had a lot to offer conference attendees in their free time as well. This was a big year for the ISOES and I am looking forward to what 2020 has to offer!



Message from a Student Award Recipient

By Srikanth Bangaru



**Student Award Recipient
Srikanth Bangaru**
Bert S. Turner Department of
Construction Management
Louisiana State University,
Baton Rouge, Louisiana

I am a construction management Ph.D. student in the Intelligent Construction Management Lab (ICML) at Louisiana State University (LSU). In our lab, we work on research projects related to construction safety monitoring and training using wearable sensors and artificial intelligence under the supervision of Dr. Chao Wang. Some of our current projects include investigating the use of passive exoskeleton for scaffold erectors to prevent Work-related Musculoskeletal Disorders (WMSDs), smart hearing protection training assistant system for self-performance evaluation and rectification, and ergonomic risk assessment of construction workers using wearable sensors. All these projects address the workforce shortage problem of the construction industry.

I attended the ISOES conference for the first time this year and had a chance to present two papers. One of my papers titled “Effect of Temperature and Rest Intervals on Static Strength” was awarded as the best paper. For

this project, we have conducted grip strength experiments under three different temperature and rest interval condition under the guidance of Dr. Fereydoun Aghazadeh. Through this study, we have observed that the average static strength increases with an increase in ambient temperature and rest interval duration. During the conference, I also had the opportunity to participate in the Safety 2019 conference research poster competition, where my poster titled “Smart Hearing Protection Training Assistant System for Self-Performance Evaluation and Rectification” was awarded as one of the best posters.

The ISOES conference is a great platform to present my work to

pioneers of ergonomics and human factors. I have received valuable feedback and future directions for my research. Also, ISOES conference gave me the opportunity to interact with industry practitioners which helped me to learn the real-world applications of ergonomics. I highly recommend students interested in the area of safety, ergonomics, and human factors to be a part of ISOES and attend the conference.

I want to take this opportunity to thank my adviser Dr. Chao Wang and my mentor Dr. Fereydoun Aghazadeh, for their guidance and encouragement.

“Great Opportunity to Meet and Present my Work to Pioneers in the Area of Occupational Ergonomics”



ISOES Mission/Vision Promoted at 2019 ASSP Exposition Booth

By James G. Borchardt

For the third time in the past 4 years, ISOES members volunteered for the ISOES Expo Booth to promote the [ISOES Mission & Vision](#) to thousands of Safety, Health & Ergonomic (SH&E) practitioners, academics and students attending the 2019 ASSP PDC Exposition in New Orleans, LA, USA.

Special thanks to Steve Fleming of Page Engineering for creating the Display Binders (right side of table) of student and professional papers presented at 4 previous ISOES PDC Conferences which

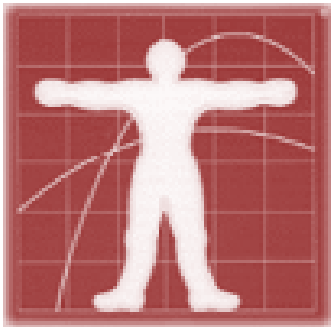
projects the international scope and high quality of ISOES SH&E research papers. Thanks also to Grainger Industrial Supply for providing the booth “handout” ear plugs and sponsoring the ASSP Expo Flash Session co-presented by Professor Sang Choi, 2018-19 ISOES President and me entitled [Melior, Velocius, Tutior \(Better, Safer, Safer\): Construction Automation’s Objective](#). More thanks to [Quad City Safety, Inc.](#) and [ISK-Industries](#) for the thermo coffee mugs and cooling towels respectively – the students found both gifts to be helpful for their conference presentations.



Page 5

Steve Fleming, 2019-21 ISOES Secretary (left) and Dr. Gabriel Ibarra-Mejia, 2019-20 ISOES President (right) explain ISOES’ Mission/Vision to Roxio Medina, 2018-19 ASSP President (center).

International
Society for
Occupational
Ergonomics and
Safety



www.iso.es.info

ANNOUNCEMENT

**The
2020 ISOES Conference
will take place on
JUNE 25 & 26
in
ORLANDO, FL**

Please remember to pay your membership dues here:

<http://www.iso.es.info/membership.html>



New Orleans' Bourbon Street – “beads in the trees” and “crawdads on a plate”