International Society for Occupational Ergonomics & Safety

The XXXVIIth Annual Occupational Ergonomics and Safety Conference

CONFERENCE PROGRAM

July 24-25, 2025

Orlando, FL / Hybrid

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2025 ISOES CONFERENCE PROGRAM

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THURSDAY, JULY 24

Welcome Session	9:00	9:10
Keynote Address: Christopher Reid (Boeing)	9:10	10:00
Break	10:00	10:15
Session I: Ergonomics & Human Factors	10:15	11:45
Lunch Break – Lunch Provided	11:45	12:45
Session II: Safety/Ergo Modeling & Design	12:45	2:15
Break	2:15	2:25
Session III: Occupational Health & Safety	2:25	3:55
Break	3:55	4:00
ISOES - General Body Meeting	4:00	4:45
Break	4:45	6:00
Cocktail Hour: Carter Kerk (South Dakota Mines)	6:00	7:00
Dinner: Location TBA	7:00	

FRIDAY, JULY 25

Session IV: Biomechanics & MSKs	9:00	10:30
Break	10:30	10:40
Session V: Ergonomics & Human Factors AND Safety/Ergo Modeling & Design	10:40	12:10
Lunch Break – Lunch Provided	12:10	1:10
Session VI: Occupational Health & Safety	1:10	2:40
Conference Closing - Adjournment	2:40	2:45

Thursday, July 24, 2025
Join Zoom Meeting

https://us06web.zoom.us/j/81435054145?pwd=6K9t3RcpkTbbEh8GnHXdXtYApv9XlW.1

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Welcome Session — **George Page, MSE, CPE** — **9:00 am to 9:10 am**

Page Engineering, Inc.

Short Bio: George Page holds a B.S.E. and M.S.E. in Industrial and Operations Engineering from the University of Michigan, where he also did doctoral work. His Master's degree and doctoral work specialized in Ergonomics. George is a Certified Professional Ergonomist (CPE #609) by the Board of Certification in Professional Ergonomics and a long-standing member of ISOES. George has worked in the railroad and general industry for over 30 years, specializing in ergonomics research and applications to the workplace—5 years at the Association of American Railroad's Research and Test Department and over 25 years at Page Engineering, an ergonomics and industrial engineering consulting firm he founded. His professional interests include biomechanical modeling and analysis of occupational manual materials handling tasks, measurement and evaluation of hand-arm and whole-body vibration exposures in the workplace, measurement and analysis of grip needs in occupational tasks, and forensic analysis of workplace injuries and accidents and associated human factors and ergonomic applications. George is currently a member of the ISO-TC108-SC4, a technical advisory committee on Human Exposure to Mechanical Vibration and Shock. He has authored over 45 peer- reviewed technical papers and has presented his work at several national and international professional conferences.

Keynote Address — **Dr. Christopher (Chris) Reid, Boeing** — **9:10 am to 10:00 am**

The Boeing Ergonomics Journey in Combating Workplace Musculoskeletal Disorders

Short Bio: Dr. Christopher (Chris) Reid is a Senior Technical Fellow and Boeing Designated Expert in both the Human Factors & Ergonomics discipline and wearable technology. Prior to Boeing, Dr. Reid worked for Lockheed Martin on astronaut spacesuit assessment as a Human Factors & Ergonomics Discipline Lead at NASA Johnson Space Center and as a Human Factors Engineer for the US Army Natick Labs, assessing Warfighter personal protective equipment. Dr. Reid utilizes human-systems interaction, systems safety, human factors, and ergonomics approaches to develop and integrate processes, tools, and technologies that make the aerospace manufacturing and service environments more conducive for mechanics to work in across the different business units. He is a 2023 Fellow of the Human Factors & Ergonomics Society (HFES) and a Past President (2021-2022). He is a recipient of the 2018 Rising Star Award from the National Safety Council, the 2020 Black Engineer of the Year Award for Outstanding Technical Contribution in Industry, and the 2023 HFES Arnold M. Small & Betty M. Sanders President's Distinguished Service Award. He received a Ph.D., and M.S., in Industrial Engineering - Human Engineering & Ergonomics Focus and B.S. in Electrical Engineering Technology from the University of Central Florida.

Abstract: Workplace musculoskeletal disorders (injuries) are quite common to hard labor work environments, with aerospace manufacturing being just one of them. Boeing is a 100+ year-old aerospace company located in 65 countries with customers in roughly 150 countries. The company, like many in manufacturing, has been on a workplace safety/ergonomics journey of continuous improvement through its history. Being the largest exporter in the United States, it balances a diverse portfolio of multiple products from aviation, space, defense, autonomous systems, and aviation services. With this much product/service diversity, there is a significant effort invested in workplace safety/ergonomics as each new product program is created over time to bring in the latest capabilities and technologies available. However, while organizations should pride itself in continued invention and innovation in the field of ergonomics, they should also take time to stand back and assess the progress made on the road behind them through their journey towards zero risk and injuries. This presentation will give a nod to the history behind Boeing's journey for the discipline of workplace ergonomics specifically, while also showing how the present is positioning it for an enduring future. It will include major milestones that touch on the people, processes, technology, and tools that have aided in keeping our people safe and effective in the complex work environments of building and maintaining its products.

Break	**10:00 am to 10:15 am**

Session I - Ergonomics & Human Factors 1 **10:15 am to 11:45 am** **Session Chairs:** Steve Fleming & Raina Shah		
#	**Title**	**Authors**
1	Supporting Computer Ergonomics Needs in a Virtual or Hybrid Work Environment (EasyChair #4)	Jeremy Wilzbacher
2	Ergonomics Strategies for Alleviating Return to Work Issues Among Employees (EasyChair #12)	Anand Iyer, Zach Harrison, and Briana Cardenas
3	Ergonomic Assessment of a Sample of Manicurists in the Metropolitan Area of Guadalajara (EasyChair #32)	Mariana Carbajal Curiel, Elvia Luz Gonzalez Muñoz and Gabriel Ibarra Mejia
4	Reshaping Resilience: Mental Health Challenges in Post-Pandemic Students and Workforce Readiness (EasyChair #33)	Susan Miller, Julie Boyd, Ryan Potts and Tarandeep Arora
5	Mathematical prediction of worst sitting posture in college chairs: risk of back disorder in college going population (EasyChair #11)	Priyadarsshini Dasgupta and Austin Griffitt

Lunch Break	**11:45 am to 12:45 pm**

Session II – Safety/Ergo Modeling & Design **12:45 pm to 2:15 pm** **Session Chairs:** Anand Iyer & Jim Vachon		
#	**Title**	**Authors**
1	Classification of Wood Chipper Accident Types: Influence of Bottom Bump Bar (EasyChair #9)	Dennis Brickman, Erick Knox, Anne Mathias, Christopher Eckersley and Lance Rewerts
2	When a Flashlight Looks Like a Threat: A Multifaceted Human Factors Approach in the Accident Reconstruction of a Police Officer Shooting (EasyChair #20)	Gadir Hazime, Manuel Meza-Arroyo and Katie Zakutansky
3	Deep Learning for HAZOP Studies: An Interpretable Framework for Risk Assessment in Safety Engineering (EasyChair #35)	Gourab Kumar Bagchi and Jhareswar Maiti
4	Will I Listen To ChatGPT? The Impact of Generative AI on the Spread of Healthcare Misinformation (EasyChair #26)	Halley Smith, Caden Godwin and Amro Khasawneh
5	Proposal of Approximation Algorithm for Vehicle Routing Problem using Self-Organizing Maps (EasyChair #30)	Yutaka Shirai and Hiroyuki Ono

Break	**2:15 pm to 2:25 pm**

Session III – Occupational Health & Safety 1		**2:25 pm to 3:55 pm**
Session Chairs: Gabriel Ibarra-Mejia & Richard Wyatt		
#	**Title**	**Authors**
1	Transitioning from Hard Hats to Safety Helmets for Small Construction Contractors: Literature Review (EasyChair #13)	Sang Choi, Pooja Thakkar and Alex Albert
2	Comparing Occupational Heat-Related Injury Patterns and Prevention Strategies in South Korea and the United States: A Preliminary Review (EasyChair #31)	Sang Choi and Jeong Won
3	Enhancing Construction Workers Safety and Health in Post-Disaster Recovery and Reconstruction: An Overview (EasyChair #34)	Sang Choi and S. M. Jamil Uddin
4	Toward a more precise technical risk analysis with FMEA regarding safety risks (EasyChair #28)	Oliver Mannuss and Alexander Schloske
5	Safety Leadership, Employee Practices, And Occupational Health And Safety Compliance in Western Visayas (EasyChair #36)	Alan Gicana

Break	**3:55 pm to 4:00 pm**

General Body Meeting – ISOES Members	**4:00 pm to 4:40 pm**
General Announcements & Closing	**4:40 pm to 4:45 pm**

Break	**4:45 pm to 6:00 pm**

Cocktail Hour With Carter Kerk **The Tiospaye Scholar Program.** **Location: Conference Room (Zoom for remote attendees)**	**6:00 pm to 7:00 pm**
Dinner – Location TBA	**7:00 pm**

Cocktail Hour	**Carter J. Kerk, PhD, PE, CSP, CPE** **The Tiospaye Scholar Program.** **Location: Conference Room (Zoom for remote attendees)**	**6:00 pm to 7:00 pm**
Dinner	**Please join us for dinner following the cocktail hour. Location TBA.**	**7:00 pm**

Short Bio: Carter J. Kerk is a Professor at South Dakota Mines in the Industrial Engineering Department. He specializes through education, research, and consulting in ergonomics, human factors engineering, safety engineering, and American Indian STEM education initiatives. His BS and MS degrees are in Industrial & Management Systems Engineering from the University of Nebraska and PhD in Industrial and Operations Engineering from the University of Michigan. Dr. Kerk is a licensed Professional Engineer (South Dakota and Michigan), a Certified Safety Professional, and a Certified Professional Ergonomist.

His teaching experience includes courses in Ergonomics/Human Factors Engineering, Work Methods & Measurement, Safety Engineering, Industrial Hygiene, Safety Management, Ergonomics for Managers, Engineering Management & Labor Relations, Quality Methods & Teaming, System Safety Engineering, Occupational Biomechanics, Work Physiology & Anatomy, Engineering Economics, Accounting for Engineers, and Senior Design. Previous industry engineering experience was with Central Nebraska Tubing (tubular steel manufacturing), Brownie Manufacturing (metal fabrication and finishing), Dorsey Laboratories (pharmaceutical manufacturing), Nebraska Energy Office (energy conservation), and Criswell Farm. Previous academic experience was at Texas A&M University (TAMU) as an Assistant Professor in the Industrial Engineering Department and the Safety Engineering Program in the Nuclear Engineering Department. While at TAMU, Dr. Kerk served as Co-Director of the Ergonomics Center; Associate Director of the NSF Industry/University Cooperative Research Center in Ergonomics; and Associate Director of the NIOSH Training Grant in Ergonomics.

Dr. Kerk is the Director of the Tiospaye Scholar Program at SD Mines, providing support in five areas for American Indian students in STEM degrees: financial, academic, professional, cultural, and social. He currently serves on the Professional Engineer Committee for Industrial Engineering for the National Council on Examiners for Engineers and Surveyors (NCEES). He assists with US Navy recruiting, in particular with the NUPOC Program to help recruit and support students. He was the Pietz Professor from 2012-2015. He served two terms on the College Industry Council on Material Handling Education (CICMHE) for the Material Handling Industry of America (MHIA). He also served on the Council on Professional Affairs (American Society of Safety Professionals - ASSP), a Scholarship Trustee for the Institute of Industrial & Systems Engineers (IISE), President of the Society for Work Science (SWS), as Chair of the National Advisory Committee on Ergonomics (NACE) for OSHA (2002 to 2004), as a Trustee and Scholarship Chair for the ASSP Foundation for six years, and as a Director on the Board of Certified Safety Professionals (BCSP), where he was Chair of the Professional Standards Committee, and BCSP Liaison to the Education Standards Committee for ASSP. At SD Mines he has served as the Assistant to the Provost for American Indian Initiatives, the NCAA Faculty Athletics Representative, ADA Committee, Safety Committee, and Promotion & Tenure Committee. For 18 summers he worked with the SD GEARUP Honors Program for American Indian students (9–12th grade). He is an affiliate member of AISES (American Indian Science & Engineering Society) and a professional member of ASSP, HFES (Human Factors & Ergonomics Society), IEA (International Ergonomics Association), IISE, and the National Society of Profession Engineers. Awards include the Presidential Award for Outstanding Professor at SD Mines (2025), the national inaugural McDonald Mentoring Award from Tau Beta Pi, Distinguished Service Award from the ASSP Foundation, Benard Ennenga Award from SD Mines for excellence in teaching and motivating students, the SD Mines Virginia Simpson Award for community involvement, the Most Valuable Professor in the Industrial Engineering Department at TAMU, the Ergonomics Division Award from IISE, and the Certificate of Excellence in Improving Workers' Health and Safety from the Texas Workers' Compensation Commission.
Dr. Kerk has 35 peer-reviewed publications in journals, books, and conference proceedings and has delivered over 190 invited seminars and lectures in the United States, Spain, Mexico, and Canada. He has been awarded over $5.4 million in sponsored research and support from organizations including NSF, NIOSH, NASA, US Army, State of South Dakota, Salish Kootenai College, MHIA, Browning-Ferris Industries, Dow Chemical, EDS, IBM, INTEL, Liberty Mutual Insurance Company, Motorola, Texas Instruments, United Parcel Service, and USAA.

Moderator: George Page

Friday, July 25, 2025
Join Zoom Meeting
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Session IV - Biomechanics & MSKs		**9:00 am to 10:30 am**
Session Chairs: George Page & Raina Shah		
#	**Title**	**Authors**
1	Biomechanical Evaluation of Three Different Police Load Carriers for Officer Duty Equipment (EasyChair #3)	John Saleski, Majed Zreiqat, Luz Marin, Wanda Minnick and Marcia Cole
2	Biomechanical Insights for Adaptive Exoskeletons: EMG-Based Identification of Critical Lower-Limb Muscles in Construction Climbing (EasyChair #8)	Ehsan Shourangiz, Chao Wang and Fereydoun Aghazadeh
3	Evaluating User Acceptance of Exoskeleton in Dynamic Construction Trades (EasyChair #10)	Fatemeh Ghafari, Chao Wang and Fereydoun Aghazadeh
4	Musculoskeletal Simulation of the Trunk in Normal-Weight Subjects During Load Lifting Using OpenCap and OpenSim (EasyChair #19)	Jhon Alexander Quiñones Preciado, Lessby Gómez Salazar, Jose Javier Guevara Lopez and José Jaime Gracia Álvarez
5	Biomechanical Analysis of Dental Polishing Postures: Comparing Naked-eye Dentistry and Microscope Dentistry, A Pilot Study (EasyChair #29)	Juan Carlos Ortiz-Hugues, Amy Gale, Steve Fleming and Greg Weames

Break	**10:30 am to 10:40 am**

Session V - Ergonomics & Human Factors *AND* Safety/Ergo Modeling & Design		**10:40 am to 12:10 pm**
Session Chairs: Marc Snell & Richard Wyatt		
#	**Title**	**Authors**
1	Accident Reconstruction of a Ladder Slide-Out: Integrating Human Factors, Design, and Safety (EasyChair #14)	Dave Fortenbaugh, Erick Knox and Dan Kruger
2	Forensic Analysis of a Walker-Related Fall: Balancing Design, Safety, and Intrinsic Risk Factors (EasyChair #15)	Dave Fortenbaugh, Erick Knox and Steve Smith
3	A Starting Point Language Set to Support Performing Safe Whole-Body Exertions in the Workplace—Part 3—Asymmetry (EasyChair #23)	George Page, Greg Weames, Steve Fleming, Josdell Gurerra Ruis and Gabrial Ibarra-Mejia
4	RULA Versus The Strain Index—A Case Study in the Railroad Industry (EasyChair #24)	George Page, Steve Fleming, Greg Weames, Josdell Gurerra Ruis and Gabrial Ibarra-Mejia
5	Accelerations of the Locomotive Cab Space and Locomotive Engineer During Coupling Events and Their Comparison to Typical Human Activity -A Case Study (EasyChair #27)	Greg Weames, Steve Fleming and George Page

Lunch Break	**12:10 am to 1:10 pm**

Session VI – Occupational Health & Safety **1:10 pm to 2:40 pm** **Session Chairs:** Jim Vachon & Steve Fleming		
#	**Title**	**Authors**
1	Antioxidant System's Interventions for Ionizing-Radiation and/or Toxic-Insults (EasyChair #7)	Alvah Bittner and Priyadarshini Dasgupta
2	Graded Compression Sleeves Could Promote Healing or Fibrosis in Mechanically Loaded Tendons by Upregulating the Expression of miRNA 21-5p (EasyChair #16)	Daniel Conde, Josdell Guerra, Valeria Fontes, Carlos Saenz, Raul Zubia, Manuel Gomez, Ricardo Rangel-Martinez, Jacen Moore and Gabriel Ibarra-Mejia
3	Using Graded Compression Sleeves Reduces the Expression of MIR 29a-3p in Mechanically Loaded Tendons (EasyChair #17)	Valeria Fontes and Daniel Conde
4	Graded Compression Sleeves Reduce the Expression of Micro RNA 192-5p in Mechanically Loaded Tendons of the Forearm (EasyChair #18)	Carlos Saenz, Daniel Conde and Josdell Guerra
5	Proxy Occupational Human Health Risk Assessment on PM2.5 Exposure at Targeted International Border Ports of Entry (EasyChair #22)	Josdell Guerra Ruiz, Hannah Syungo, Eva Gutierrez, Rachel Elliott, Carlos Rivera and Gabriel Ibarra-Mejia

Conference Closing - Adjournment	**2:40 pm to 2:45 pm**

Thank you for your contribution to ISOES!
We look forward to seeing you in 2026!