IISE Transactions
on Occupational Ergonomics
and Human Factors

Journal: IISE Transactions on Occupational Ergonomics and Human Factors (IISE TOEHF)
Special Issue: Human-centered eXtended Reality (XR) Technologies and Applications for Occupational Health and Safety
Publisher: Taylor & Francis Group
Call for Papers Webpage: https://bit.ly/_Occupational_Health

Description:
Industry 5.0 envisions the next stage of a human-centric approach to the Industrial Revolution, in which the digital and physical realms merge through technology within industrial processes. While smart sensors, embedded systems, and cyber-physical systems offer great potential, human operators remain integral to industrial operations. Within this context, the utilization of eXtended Reality (XR) emerges as a vital element in the shift towards Industry 5.0 and smart manufacturing. XR technologies, encompassing the entire spectrum of virtual and augmented experience, are crucial in providing timely and practical training and operational support to users, including workers. XR technologies have applications across various industries and job domains, encompassing maintenance, quality control, training, education, remote collaboration, healthcare, and transportation. For instance, employees in various occupations can enhance their job performance while reducing both mental and physical strain through proficient XR systems like the Metaverse and Digital Twin. In summary, XR has the potential to boost user motivation, engagement, and situation awareness, leading to increased task efficiency, effectiveness, and performance. It can empower inexperienced users to acquire new skills, cultivating a workforce capable of quickly adapting and executing informed procedures in diverse scenarios. As XR applications supporting occupational tasks involve physical movements and activities, it becomes imperative to conduct various assessments, considering ergonomic and physiological factors. In response to evolving workplace conditions, XR technologies must also remain adaptable and innovative to meet the changing demands of the occupational landscape.

This special issue focuses on the current state and future developments of XR, emphasizing a human-centric approach within the field of human factors and ergonomics, with a primary focus on occupational applications and tasks. We welcome diverse submission types to explore the opportunities and challenges presented by XR technologies in various workplace settings.

Topics of interest include, but are not limited to:

- XR in Occupational Safety and Health
- XR in Safety, Health, and Hygiene Training
- XR in Human-Robot Collaboration, Digital Twin, and Product Management
- Diversity, Equity, and Inclusion in XR
- Remote Work and Collaboration in XR
- Measures and Modeling in XR
- Ergonomic and Accessible XR Applications
- Standards and Guidelines in XR
- Adaptive and Personalized XR
- Ethical and Privacy Concerns in XR
- Integration of XR with IoT and Smart Systems

What can I contribute?

- Submissions across the theoretical-to-applied spectrum are welcome, as well as domain-specific works.
- Submissions are welcome using any journal's manuscript types (i.e., Original Research, Methods/Models/Theories, Reviews, Brief Reports, Position Papers, Viewpoints, Historical Perspectives, Emerging Issues, Applications, and Case Reports).
- Methodological diversity is encouraged; we welcome submissions using qualitative approaches, action research methodologies, surveys, computational modeling, technical measurements, simulations, data analytics methods, observational approaches, etc.

Why contribute to the IISE Transactions on Occupational Ergonomics and Human Factors?

- Accepted papers will be published in a widely read and cited journal, enabling you to effectively contribute to the research area's development.
- Your research will be validated by a robust, double-blind peer review process.
- You can share your research using our open-access options.
- You can follow the impact of your research using My Authored Works.

Submission Instructions

Letters of intent (LOIs) are optional but are strongly recommended. Please provide a manuscript title, a brief abstract, and any questions you have about the special issue or submission process. Prompt feedback will be provided to authors regarding compatibility with the special issue. LOIs should be sent to Dr. Heejin Jeong at heejin.jeong [at]asu.edu.

All papers must be submitted through the journal's ScholarOne online submission website (https://v2.rp.tandfonline.com/submission/create?journalCode=UEHF). Complete information about the journal, including author instructions, review criteria and procedures, and submission templates, are available at https://www.tandfonline.com/journals/uehf21. All submissions must abide by the journal's requirements, and the journal's regular processes will be followed to

review submissions. During the online submission process, please indicate that your submission is for this special issue, entitled “Human-centered eXtended Reality (XR) Technologies and Applications for Occupational Health and Safety,” when prompted for this at the submission website.

Important Dates:
Full paper submission opening: November 1, 2023
Full paper submission closing: March 1, 2024
Return of the first reviewer decision: April 30, 2024
Resubmission of revised papers: June 30, 2024
Submission of final issue to journal office: Fall 2024

*All papers submitted or accepted for this special issue will have the opportunity to showcase their research at the **International Workshop on eXtended Reality for Industrial and Occupational Supports (XRIOS)**. This Workshop provides an opportunity for authors of journal papers to increase the visibility of their work. It also enables participants to benefit from the extended review process of the journal while also presenting their work at the Workshop. Further information about the Workshop can be accessed at https://sites.google.com/view/xrios.

For any questions about this special issue, including the relevance and suitability of a planned submission, please contact the Special Issue Editors listed below.

Special Issue Editors:
Heejin Jeong, PhD, Arizona State University, USA, heejin.jeong[at]asu.edu
Karen Chen, PhD, North Carolina State University, USA, kbchen2[at]ncsu.edu
Myounghoon “Philart” Jeon, PhD, Virginia Tech, USA, myounghoonjeon[at]vt.edu
Laura Stanley, PhD, Montana State University, USA, laura.stanley[at]montana.edu