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XRTG NEWSLETTER



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A warm welcome from the chair

By Shannon Bailey

I'm delighted to be stepping into the role of Chair for the Extended Reality Technical Group (XRTG). In this newsletter, we're excited to introduce both our new and returning TG officers. I encourage you all to connect with us and each other through our various social media platforms.

In this newsletter, we highlight some exciting updates within our group, such as new initiatives to engage students and early career professionals. To support this, **we're introducing a travel award for student or early career presenters**, aiming to make our field more accessible and inclusive (more information on this on page 3 of this newsletter). We also summarize changes to the submission process for this year's HFES conference. Looking ahead, we've set ambitious goals for 2024:

1. **Achieving Gold Tier in TG Circle of Excellence:** Our aim is to elevate the standing of our group within the HFES community by striving for **Gold Tier status** in the Circle of Excellence TG program (<https://www.hfes.org/Connect/Technical-Groups/Technical-Group-Circle-of-Excellence/HFES-TG-Circle-of-Excellence-FAQ>). We plan to achieve this by introducing initiatives focused on students and early-career professionals, showcasing our work on various media platforms, and fostering collaborations with other TGs and professional societies.
2. **Enhancing Communication and Engagement:** With the support of our new newsletter editor, Lilian, we're committed to publishing two newsletters per year. Our Social Media Manager, Shafiqul, will ensure regular posts to keep you informed about important deadlines and events within the HFES community. We also encourage members to complete their HFES profiles to enhance networking opportunities within the group.
3. **Expanding Collaborations:** Collaboration is key to our success. We're planning joint events with other TGs, such as a webinar with the Training TG, focusing on the application of XR tools in training and education. Additionally, we'll be organizing joint sessions and networking events at the HFES conference to encourage interdisciplinary interactions and knowledge exchange. Your participation in these events will be vital to their success!

As we embark on these initiatives, I want to express my gratitude for your ongoing support in driving interest and engagement in extended reality within HFES.

Thank you all for your dedication and enthusiasm!

Shannon Bailey, PhD (she/her), Chair of XRTG

EXTENDED REALITY SHOWCASE RECRUITING MESSAGE FOR THIS YEAR'S MEETING

By Randall Spain

What: The XR Showcase will be an alternative session for HF students, faculty, practitioners and professionals to showcase state-of-the-art extended reality applications. Last year's session included 13 different demonstrations with +100 attendees.

Overview: This is an interactive session. It's much like an interactive poster session, but with XR applications! The session will begin with each presenter briefly introducing (<2 mins) their application. Once this lightning round of introductions is finished, audience members will be free to move around the room and interact with all the demonstrations.

What's required: If you're interested in participating in this showcase, please send an email stating your interest and a brief written description of the XR application you would like to demonstrate as an attachment to randall.d.spain.civ@army.mil by **Monday February 19, 2024**.

- 2 paragraphs describing the application you plan to demonstrate and how it relates to human factors research.
- Several sentences describing the equipment you plan to bring to support the demonstration (Video/Audio/Computing requirements to support your demonstration).
- A picture of the environment or application.

Please contact Randall Spain if you have any questions.

XRTG STUDENT AWARDS

The XRTG also awards a Best Student Paper as well as a Travel Award for students/early career practitioners. If you are interested in either of these awards, please.

1. **Submit an abstract to the HFES annual meeting**
2. **Select "Yes" to Student Work**
3. **Select "Extended Reality" as your Technical Area**

Submitting an abstract as Student Work to the Extended Reality Technical Area will ensure we include your submission in our XRTG sessions.

Student Work will be reviewed by XRTG members to determine the Best Student Paper winners. We will have additional information about applying to the student/early career travel award once submissions have been accepted by HFES.

Recap: 67th Annual Meeting

By Stephanie Fussell

The XRTG held a record number of sessions at last year's 67th International Annual Meeting: 3 lecture sessions (including 1 with the Training TG), 2 discussion panels, 1 demonstration, and the ever-popular XR Showcase had 12 demos. Combined with the poster session, we had over 30 submissions that were given the opportunity to feature XR technology applications and research across many industries.

The HFES annual meeting, now called "ASPIRE," will be broadening the target audience to increase engagement. For many years, our conference has struggled with opening up space for practitioners. The new submission process will help that. This year, we will be given a quota of abstracts (and therefore submissions and sessions in all forms) based on the number sessions we have had in previous years as well as the number of members in the TG. It is therefore very important that our membership roster be up-to-date. **If you haven't done so already, please be sure to a) renew your membership with HFES, and b) join the XRTG in an official capacity, which is \$5.**

Important due dates for this year:

- 1250-word abstracts due February 21, 2024
- Bidding on abstracts March 1 – 8, 2024
- Abstract submission confirmations to TG by March 15, 2024
- Abstract review and author notifications due mid-April
- 5-page papers and extended abstracts due May 20, 2024 for peer review
- Late-breaking submissions opening in April, closing in June (these will not have a publication option)



By Lilian Garza

ASPIRE is an acronym for...

Advance Systems and Practices through Innovation, Research & Education.

When? Sept. 9-13, 2024

Where? Arizona Biltmore Waldorf Astoria Hotel in Phoenix, Arizona

This year's meeting will take place in the sunny Arizona! Don't forget to bring:

- Semi formal and formal attire
- Sunscreen!
- Bathing suit
- Although refreshments will be offered throughout, a refillable water bottle is not a bad idea for this hot state.

This year's conference has placed a special focus on being inclusive to all fields of Human Factors. For this reason, the submission process for has changed.

Speaking of the new submission processes...

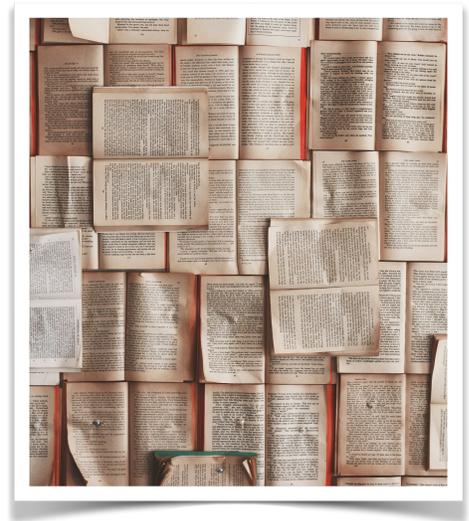
Call for Abstracts: Changes to Submission Process

...from a submitter (author) perspective.

By Stephanie Fussell

Here is a run-down of what is changing:

- The first submission will be an abstract of no more than 1250 words. Although supplemental information can be included (like a table or figure), references are not required. APA/other formatting is not required.
 - Abstract structure: Objectives (500 words), Approach (250 words), Findings (250 words), and Takeaways (250 words)
 - **Abstracts are due February 21, 2024**
- Another huge goal is to promote joint sessions with TGs – this is something the XRTG does well with, and we are excited to expand our relationships with other TGs!
- Authors can still submit preliminary data with the chance to submit a longer paper with more data if they are accepted.
- Authors do not have to choose a TG to submit to but may identify up to 2 TGs they believe the submission fits well with. **Please select “Extended Reality”** if you want your work in one of the XRTG sessions.
- Authors should include up to 5 key words - this helps ensure that the submission is reviewed by an appropriate TG.
- The submission types are changing! More information will be coming, but we believe there will be longer lecture sessions (20-minute lectures time slots as opposed to 15) and lightning sessions (5 to 7-minute talks), alongside panels and more (interactive!) poster sessions. Practitioner case studies are also an option.
- Accepted abstracts can be published as 5-page papers or extended abstracts (both are peer-reviewed). Or, authors can choose not to publish at all.



You can submit your abstract here: <https://www.hfes.org/Events/ASPIRE-The-International-Annual-Meeting/Call-for-Abstracts> and if you have any questions, please contact sfussel2@kent.edu.

Q&A:

Q: Do you need to include references or citations?

A: Including referenced/citations for the abstract submission are *OPTIONAL* and *NOT required*. However, if you would like to include it, there is an additional materials section you can upload a PDF with that information.

Q: When is the deadline for the full-paper submission?

A: May 20, 2024.

Q: Should author names be included in the abstract submission?

A: No, submissions will be double-blind. **However**, panels and symposiums are not double blind and do require participant information.



Chair

Shannon Bailey, PhD, is a Sr. Human Factors Scientist at the University of South Florida's (USF) Center for Advanced Medical Learning and Simulation, as well as an Assistant Professor in the USF Health Morsani College of Medicine's Department of Medical Education. She specializes in human factors and extended reality technologies, leading research efforts to investigate educational best practices and cutting-edge simulation technologies for clinical training. Dr. Bailey received her Ph.D. in Human Factors and Cognitive Psychology from the University of Central Florida.



Program Chair

Dr. Stephanie G. Fussell is an assistant professor at Kent State University and acting graduate program coordinator. Her research has focused on using extended reality (XR) technologies for aviation training. As a proponent of using XR efficiently and effectively, Dr. Fussell's research concentrates on XR usability, user experience, and transfer of training. Dr. Fussell is also interested in the factors that influence a user's intention to use XR technologies in a dynamic learning environment.



Program Chair-Elect

Randall Spain is a Research Scientist at the U.S. Army Combat Capabilities Development Command, Soldier Center, Simulation and Training Technology Center where he conducts research that focuses on designing, developing, and evaluating adaptive training technologies. For the last several years he has led the "Me and My VE" (newly named XR Showcase), an alternative session which has become a popular HFES series to showcase how Human Factors researchers and practitioners use virtual, mixed, and augmented reality-based technologies to investigate human performance in health care, aviation, forensics, and in the military. His goals are to continue to work closely with the XRTG's leadership to increase our presence at next year's meeting.



Communications Director

Md Shafiqul Islam is a Ph.D. candidate at the Industrial and Systems Engineering Department at Virginia Tech. His research combines principles from HF/E with data analytics to create innovative approaches for enhancing human performance and well-being in interconnected systems, occupational settings, and constructed environments. He focuses on diverse populations to emphasize his research philosophy of inclusive and accessible system design. His future research and career goal is to develop an accessible home-based exercise and rehabilitation system. For this, he will integrate wearable technologies, computer vision, and AR, further developing his system to ensure participation from people with different socioeconomic backgrounds and functional capabilities.



Secretary

Ziho Kang is an Associate Professor in the School of Industrial Engineering at the University of Oklahoma. He earned his M.S. and Ph.D. from Purdue University and worked as a post-doctoral researcher at the University of Virginia and Drexel University. Dr. Kang's specialty is in developing eye movement analysis algorithms and designing training intervention methods. He has received research grants awarded by the NSF, FAA, NAS, and Microsoft Corporation. Dr. Kang is the recipient of the NSF CAREER Award, which focuses on developing smart learning methods within virtual reality.



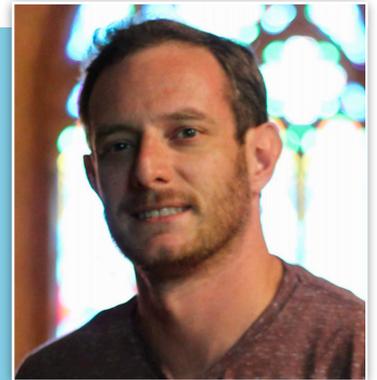
Treasurer

Hy Kim (hyungil@uic.edu) is an Assistant Professor of Industrial Engineering at the University of Illinois Chicago. He is currently leading the Human-Centered Engineering lab (<https://sites.google.com/view/human-centered-engineering>) where his team explores new methods for the requirements analysis, design, prototyping, and evaluation of extended reality applications with an emphasis on human-technology partnerships at future workplaces. He has published over 30 papers on extended reality in top conferences and journals including HFES, IEEE VR, IEEE ISMAR, IEEE TVCG, and Human Factors.



Webmaster

Saeid Alimoradi is a Ph.D. student and Human Factors researcher at the Virginia Tech Grado Department of Industrial and Systems Engineering. His work involves need analysis through focus group studies and survey research, human-centered design, and qualitative and quantitative usability testing in XR to ensure effective incorporation and implementation for online learning in higher education. He has a passion for integrating new technologies to improve everyday life of users is evident. He is the VP for the HFES Student Chapter at VT.



Past Chair

Dr. Benjamin Goldberg is a Senior Scientist at the U.S. Army Combat Capabilities Development Command (DEVCOM) Soldier Center in Orlando, FL. He has been conducting research in the Modeling & Simulation community for the past 14 with a focus on adaptive learning in simulation-based environments and how to leverage immersive technology and artificial intelligence to create engaging and personalized learning experiences.



Newsletter Editor

Lilian Garza, M.S. is a Human Factors Scientist at Explicit Inc, a consulting firm consisting of experts, engineers, and other scientist assisting in litigation cases, where she leads about 20 plus cases. Her work specializes in human factors topics, cognitive psychology, and applies extended or virtual reality to accurately visualize and communicate important findings, data and scientific analyses, that are often

misunderstood in a courtroom setting in an easy to grasp, visual manner. She attained her master degree form the Universität Ulm in Germany.