First Workshop on VR for Exergaming (VR4Exergame)

VR exergames have the potential to enable a broader spectrum of users to participate in fitness and rehabilitation activities in immersive social environments. However, consumer grade VR systems do not yet have the full capabilities needed to realize the adoption of interactive VR exergaming at such scale. Key areas of focus that can enable VR as an engaging, interactive, and social alternative to existing practices for rehabilitation and exercise include – 1) Therapeutic Benefits, across a range of physical and cognitive conditions where the ability to tailor VR exergames to different neurological, physical, and age-related conditions can provide goal-based scenarios for targeted rehabilitative interventions. 2) Human Factors in VR, that include but are not limited to the ability to simulate real-world scenarios, long term usage comfort, and overcoming usability challenges for users with limited mobility or cognitive capacity. 3) Technical capabilities that focus on simplified system setup, low multi-user latency, and realistic whole-body immersion among other milestones that are yet to be crossed for a seamless immersive and social experience in VR. This full-day workshop will bring researchers and industry practitioners together to discuss these new emerging research challenges and technologies. The workshop will consist of keynote speakers, juried paper presentations, and a panel discussion. We invite authors to submit 6-page (plus 1-page for references) research or position papers.

Location

The workshop will be held remotely, details will be shared here later.

Date

TBD

Topics of interest

The topics of interest for the workshop are related to the following themes in VR and exergaming:

- Design of exergames (Virtual, Augmented or Mixed Reality) to facilitate engaging modalities for physical or cognitive exercises
- Simulating the real-world in VR (e.g., weight, friction, resistance, whole-body avatar immersion)
- Incorporating haptics and physiological biofeedback for clinical assessment and intervention
- Feasibility and Effectiveness of VR exergaming through results from case/clinical studies
- Emergent hardware platforms to broaden the accessibility and ease-of-use of VR exergaming
- Co-located and remote social environments for VR exergaming and telehealth
- Designing for children, older adults, and individuals with physical disabilities
- Designing immersive environments to overcome psychological/cognitive clinical challenges

Important Dates AOE

- Submission Deadline: January 6, 2023
- Notification: January 20, 2023
- Camera-Ready: February 3, 2023

- Workshop: TBD

Paper Submission Information

All papers must be submitted online using the PCS system as a single PDF file using the VGTC template. Authors must ensure that their papers are anonymized. All papers have a strict 6-page limit (excluding references, max 1-page for references). Authors are strongly encouraged to use the LaTeX template provided on the IEEE website for compiling their papers. The PCS system will enable authors to select IEEE VR 2023 as the conference and then IEEE VR 2023 Workshop: VR4Exergame as the track.

Upon acceptance, at least one author must register for the workshop as well as one day of the IEEE VR full conference. Accepted authors will be expected to give a 15-minute (12 minute talk + 2 minutes Q/A + 1 minute for transition) presentation at the workshop. The workshop will be held online with paper sessions in the morning and afternoon. Proceedings from the workshop will be submitted for inclusion in the IEEE Digital Library.

Reviewing process

All papers will be reviewed by at least two experts in the domain. There will be no rebuttal phase for the submissions. Publication in the workshop will not prohibit future publications as full or journal papers with additional material. However, workshop papers cannot be submitted verbatim to another venue with additional material. Authors of accepted papers will be expected to make changes requested during the review and resubmit a final version by the camera-ready deadline.

IEEE VR Resubmissions

Authors with papers that were rejected from the IEEE VR main conference track can submit their papers to the workshop as long as the paper fits the workshop themes and the authors follow the following resubmission guidelines. The revised submission must fit within the 6 page limits of the workshop. The changes made should be summarized in a revisions letter (max one A4 page) to be included with the submission. All revised papers must include the meta-reviews directly from the PCS system. Papers that do not meet these requirements will be desk rejected. All papers will be reviewed by at least two experts in the domain. There will be no rebuttal phase for the submissions.

Organisers

Bhawna Shiwani - *Delsys/Altec, USA*
Serge Roy - *Delsys/Altec, USA*
Sean Banerjee - *Clarkson University, USA*
Natasha Banerjee - *Clarkson University, USA*

Contact

If you have any questions, please contact Bhawna Shiwani at bshiwani@delsys.com and indicate VR4Exergame 2023 in the title.