## International Conference on Disability, Virtual Reality and Associated Technologies Prague, 3 – 6 September, 2024





#### **Presentation types:**

- Standard Podium Presentation (15 min)
- Short Poster Presentation (8 min)
- CYBER Presentations PART 1+2 (12 min)
- CYBER Poster Presentations (5 min)

#### First day – Tuesday, September 3

08:00 onwards	Registration of the attendees
08:45	Conference opening
09:00 – 10:25	Cyberspace, Behavior and e-Therapy (CYBER) – Part 1 Chair: Iveta Fajnerova
	Suriia Akhmetova &. Misgana Desalegne – VR-based training for improvement of positive body image: A Pilot Study
	Urme Bose &. Bryan Hilanga – A longitudinal exploratory study of neurophysiological reactions among young adults during psychometric testing
	Ling Zeng &. Maria Hashmi – Multisensory Integration and Embodiment: A Virtual Reality- Based Study
	Laura Valentina Lesmes Castañeda &. Selin Saglam – Gamification of a VR Task to Modify Attentional Bias Towards Body Parts Related to Weight
	Wu Panzifan &. Maria Castro – Exposure therapy in Virtual Reality for children and adolescents with selective mutism: A usability pilot study
10:25 – 10:45	Coffee break
10:45 – 12:30	Cyberspace, Behavior and e-Therapy (CYBER) – Part 2 Chair: Nicholas Shopland
	Prince Paul Appiah – Predicting Dropout at an Innovative Tech-focused Vocational Education Program using Machine Learning
	Ilia Kulagin &. Daniel Velez Marin – Exploring Verbal Speech Patterns to assess Attachment Style and tendencies towards Anxiety and Depression
	Javad Modaresi &. Rafael Paulino – Avatar-Enabled Virtual Therapist Application for Cognitive Rehabilitation Intervention in Traumatic Brain Injury and Post-Stroke Patients
	Sadia Maqsood – Cybersecurity Assessment and Training Simulator In Virtual Reality for Workplace Employees
	Fernanda Lima Pimentel &. Sandip Bhusal – Assessing Oxygenation Changes using fNIRS in a Time-Pressure Task
	Oluwatobiloba Sodade &. Yusuf Sani – Psychology of Frailty and Prediction of Fall among Elderly People Living in French Nursing Homes
12:30– 13:30	Lunch (provided)

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#### First day – Tuesday, September 3 (continued)

	Meleculary, September 5 (continued)
13:30 – 14:00	Welcome session Iveta Fajnerová, Jiří Horáček, Lenka Lhotská
14:00 – 15:00	Keynote talk: Professor Maria T Schultheis Chair: Bonnie Connor
	★ "Technology & Cognition": Examining new trends and opportunities
15:00 – 16:00	Session 1: VR exposure - Trauma Chair: TBS
	Michael Roy – Computer Monitor versus Augmented Reality: Expanding 3MDR Therapy for PTSD: A Randomized Controlled Trial (CARE4PTSD)
	Raúl Durón-Figueroa – Development and Usability Evaluation of Virtual Environments for the Treatment of Post-Traumatic Stress Disorder in Earthquake Victims
	Albert Rizzo – The Virtual Ukraine Project: Trauma Therapy in Warzones with Virtual Reality
16:00 – 16:30	Coffee break
16:30 – 18:00	Session 2: VR exposure - Anxiety Chair: Albert Skip Rizzo
	Soledad Quero – Overcoming traditional exposure treatments: Preliminary results from a Randomized Controlled Trial evaluating the efficacy of Projection-Based Augmented Reality Exposure Treatment for cockroach phobia.
	Muhammad Arifur Rahman – Optimizing VRET: EEG data for ML Models with Real-Time Biofeedback
	Martina Janíková – Virtual environment for exposure therapy of obsessive-compulsive disorder enriched with olfactory stimuli: A pilot study
	Soledad Quero – Enhancing exposure therapy effectiveness: projection-based augmented reality for specific cockroach phobia treatment compared to traditional treatment regarding stimuli variability.
	Markéta Jablonská – Design and Evaluation of Virtual Environments for Exposure Therapy of Aviophobia: Early Feasibility Study
	Barbora Darmová – Evaluating Virtual Scenarios through the Lens of the Contrast Avoidance Model in the Context of Generalized Anxiety Disorder Treatment
18:00 – 19:00	Cyberspace, Behavior and e-Therapy (CYBER) – Poster session Chair: Matthew Harris & Michal Sedlak
	Jiayao Chen &. Suvechhaya Shrestha – Enhancing Emotional Connection and Engagement in Long-Distance Relationships: A Comparative Study of Virtual Reality and Video Calls
	Kátia dos Santos Estevães &. Abigya Melese – Transforming perspectives: the impact of virtual embodiment on attitudes and responses to gender-based harassment in the metaverse
	Vaishali Goyal &. Gustavo Menegon – The temporal neural dynamics of aesthetic appreciation for visual art
	Esra Bayısın &. Asmar Khalilli – Using artificial intelligence to model cognitive load and adapt challenging tasks during immersions in virtual reality: Phase 1 – a literature review and study protocol for people diagnosed with schizophrenia
	Nina Belousova, Mariam Barseguyan &. Vladimir Zyablov – Psychological Impact of Breast Cancer and Premature Menopause: Digital Intervention Approach
	Miltiadis Gialousis &. Diogo Gomes – Psychological Trait Assessment Prior to Therapeutic Sessions using Open-Ended Questions
	David Felipe Vega Villa &. Vaihbav Mehra – Can an LLM-equipped Multimodal Chatbot adapted to psychological techniques improve Mental Wellbeing? A preliminary study description
	Bruna Filipa Augusto da Silva, Jana Subirana & Amir Ansari – Enhancing Personality Assessment: From Self-Reported Questionnaires to Deep Learning Predictions

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#### Second day – Wednesday, September 4

09:00 – 10:20	Session 3: Autism – Assessment Tools & Participatory Design Chair: William Farr & Bonnie Connor
	■ Isaac Lee – Can an LLM Al-Augmented ADI-R Improve Diagnostic Pathways and Educational Outcomes for Autistic Individuals?
	William Farr – External Fine Motor Markers of Neurodivergence: Pilot Results of the TangiBall
	Sean Haddick – Through The Eyes of An Autistic Child: The Role of Technology and Autistic Researchers in Developing Interventions
	Pascal Meital – Online Course for Autistic Adults: Usability Study and Participatory Design
10:20 – 10:50	Coffee break
10:50 – 11:30	Session 4: Autism – Social Skills & Public Transport  Chair: William Farr
	Ali Adjorlu – Virtual Station: Virtual Reality as a Bridge to Independence in Public Transportation for Autistic Youth
	Ali Adjorlu – Enhancing Social Skills in Autism Spectrum Disorder: A Virtual Reality Intervention for Educational Settings
	Sean Haddick – Metahumans: A Framework for Assessment and Feedback of Social- Emotional Reciprocity
11:30 – 12:10	Session 5: Sexology Chair: Iveta Fajnerová
	Ali Adjorlu – Virtual Sex Therapy: A virtual Psychotherapy Intervention to Help Individuals with Sexual Dysfunction Difficulties
	Ondřej Vaníček – Female sexual response to audiovisual stimuli in 2D/3D modality and first/third person perspective
12:10 – 13:10	Lunch (provided)
13:10 – 14:10	Keynote talk: Mónica Spínola Penny Standen Best Early Career Paper Award Winner 2022 Chair: Iveta Fajnerová & David Brown
	★ Functional Neuropsychological Assessment: past, present and future.
14:10 – 15:30	Session 6: Pain & Palliative  Chair: Sara Ventura
	Anna Zubková – The use of experiential VR to minimize anxiety in children with life limiting condition: A Randomized Control Trial
	Martin Zielina – Virtual Reality in Burn Treatment: A Comparative Study of High and Low Immersion Approaches on Pain and Anxiety Relief
	Alexander Moreno – Preliminary results of a systematic review of the use of virtual reality in palliative care
	◆ Carolyn Thomas – Existential Biophilic VR Therapy – Developing a Protocol for Care Settings
15:30 – 16:00	Coffee break
16:00 – 17:10	Session 7: Cognition & Spatial Navigation Chair: Cecilia Sik-Lanyi & Renáta Cserjési
	Suhani Dheer – Beyond Diagnosis: The Cognitive Demands of Stopping and Turning Behaviors Among Drivers With and Without Multiple Sclerosis and Implications for Driving Safety
	Matthew Harris – Exploring the potential of using a Spatial Navigation Task to measure cognitive decline in adults with intellectual disabilities
	Kathryn N. Devlin – Virtual Reality Driving Simulation May Enhance the Prediction of Real- World Unsafe Driving
	Mochammad Hannats Hanafi Ichsan – Navigation in 3D Virtual Environment for Older Adults

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Second day -	- Wednesday, September 4 (continued)
17:10 – 18:00	Session 8: Emotions Chair: Sean Haddick
	Alex Sumich – Beneficial effects on subjective mood and brain function of biophilic quality in university environments shown in virtual reality
	<b>S</b> Jiří Pešek – <i>Assessing emotional memory in VR</i>
	Raissa de Oliveira Negrao – Exploring Emotional Responses to Virtual Reality Environments in Younger Adults
19:30 – 23:00	Social evening & dinner - see Program Specials for details
Third day – T	hursday, September 5
09:00 – 10:15	Session 9: Education Chair: David Brown
	🗣 Iveta Fajnerová – Experiential Learning Game Simulating Symptoms of Mental Disorders
	Thomas Hughes-Roberts – Enabling Creativity through Game Making for the Socially Marginalised: Co-Designing a Game Making Toolkit
	Teresa Souto – What happened after ethical decision-making training went virtual: some features about VREthics Application
	Adam Novotník – Method of Loci and PEG system in VR as learning method for patients with ADHD
	Cecilia Sik-Lanyi – Modelling realistic avatars for the "P-game" negotiation game
10:15 – 10:45	Coffee break
10:45 – 12:00	Session 10: Rehabilitation Chair: Pedro Gamito
	Ian Male – What stops therapists from using virtual reality in paediatric acquired brain injury upper limb rehabilitation?
	Emil Rosenlund Høeg – Exploring therapists' technology acceptance of virtual reality bike- based rehabilitation: A longitudinal study
	Philip Breedon – Development of an immersive Virtual Reality (VR) system to improve the quality of rehabilitation for paediatric Ataxia Telangiectasia (A-T) patients
	Gianluca Sorrento – Conditions for inducing freezing of gait in Parkinson's disease freezers on a split-belt treadmill in a virtual environment
12:00 – 13:00	Lunch (provided)
13:00 – 14:00	Keynote talk: Professor Mariano Alcañiz  Chair: Pedro Gamito

★ Could Embodied Conversational Agents Be the Future for Assessment and Interventions in Clinical Psychology?

### 14:00 – 15:00 Session 11: Design Ideas Chair: Emil Rosenlund Høeg

- Sharon Mozgai & Albert Rizzo Virtual Humans in Mobile Health (mHealth) Applications:

  Designing for increased user-engagement and adherence
- Michal Sedlák Feasibility of using OCD exposure therapy application with VR omnidirectional treadmill: A study protocol
- ➡ Tereza Langová Virtual Reality Games for Lying Patients
- ➡ Hanan Namrouti Comparison Between 2D and 3D Icons as Menus in Virtual Reality Assessing the Usability of the Menus and User Satisfaction
- ➡ Hyosun Kweon VR based Community Reintegration Contents Design: Focusing on mobility activities

# 15:30 – 15:30 Coffee break 15:30 – 16:30 Company panel discussion Chair: Albert Skip Rizzo

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16:30 – 19:00

Company presentations & demos with catering Chair: Ali Adjorlu & Iveta Fajnerova

#### Fourth day - Friday, September 6

09:00 – 10:00	Session 12: Cognition - Varia  Chair: Orly Lahav
	Kinga Nedda Pete – Immersive virtual reality experiences for the improvement of attention in post-COVID-19 condition
	Soma Zsebi – The assessment of the cognitive profile of elderly individuals using Virtual Reality: A comparison between experienced and inexperienced users
	James Lewis – The use of the Meta Quest as a tool for ADHD screening through a self administered immersive test of attention and activity
	Karolína Zuzánková – Virtual environment aiming to train cognitive flexibility in patients with Obsessive – Compulsive Disorder
10:00 – 10:20	Coffee break
10:20 – 11:30	Session 13: Relaxation & Nature Chair: Mufti Mahmud
	🗣 Lukáš Hejtmánek – It's Not All About the Graphics: Finding Calm in Stylized Digital Forests
	◆ Ágnes Karolina Bakk – Designing Nature Simulated VR Applications for Hospitalized Seniors
	Patrícia Szabó – Design virtual reality games that instruct proper breathing techniques with dynamically changing virtual environment
	Donovan Morel – Effect of natural environment simulation on depression score: single case approach in French university students
11:30 – 12:00	Coffee break / small lunch
12:00 – 13:00	Best paper award ceremony and closing remarks Chair: Iveta Fajnerová & David Brown & Paul Sharkey
13:00 – 14:00	Cyberspace, Behavior and e-Therapy (CYBER) – Diploma ceremony  Chair: Pedro Gamito
14:00	Goodbye ceremony