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EDITORIAL

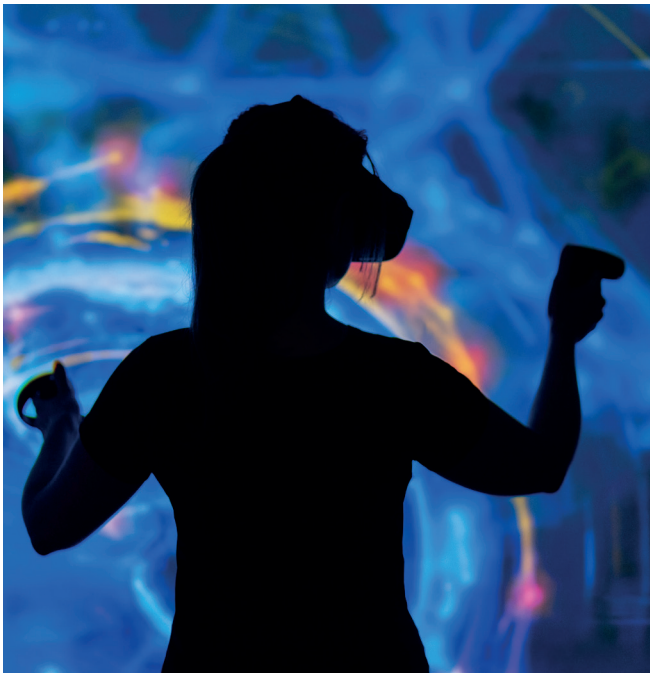
Dear Readers,

We are delighted to present the "Medycyna Pracy" – Virtual Reality issue showcasing the outcomes of a collaborative project "Mixed Reality on Universal Design's Secret Service" (Mr. UD) that brought together 5 teams from Lodz University of Technology (Poland), University of Aveiro (Portugal), Polytechnic of Porto (Portugal), University of Tartu (Estonia), and Nofer Institute of Occupational Medicine in Łódź (Poland), who joined forces to address the issues of universal design while leveraging the power of mixed reality technologies.

The idea for the project came from observations of accessibility issues that students and staff are facing on a daily basis. We decided to investigate the issue thoroughly through meetings, surveys and research conducted by departments responsible for accessibility at our educational institutions. The picture that revealed itself was far from acceptable, thus the need for some modifications was identified and had to be addressed. What we found out was that there was a pressing need to increase awareness and knowledge of universal design as well as to empower future engineers, teachers, and designers with necessary competences to put ideas of accessible universal design into their practice. Mixed reality technology was our first choice as a vessel for the idea, as it could provide a much broader scope of scenarios, situations and problems that stem from accessibility deficiencies. What is more, it provides an immersive and empathetic experience that takes into account the perspectives, needs, and emotions of the future users.

Having decided upon mixed reality as our technology of choice, we wanted to deepen the immersion and go beyond the visual effects that are the core of VR/AR experiences. To achieve that, we agreed to enhance the experience through the integration of multi-sensory stimuli. We used physical simulators to reflect movement, acoustic, visual and emotional limitations to foster a heightened sense of empathy among participants. A pregnancy belly simulator, a geriatric suit or distorted vision mimicking visual impairments are but a few of the means that we employed to put the users in the shoes of people that might experience accessibility problems. The project ensured the substantive integrity of its outcomes by actively involving representatives from communities of potentially marginalized individuals in the development of scenarios and the formulation of educational materials.

When we embarked on the project, we had one main target group in mind – students that would in the future design, engineer and conceive products or services that should be accessible for all. However, in the course of the project, it turned out that a much broader group could benefit from understanding and empathizing – academic staff, architects, city planners, as well as businesses and public offices. By cultivating sensitivity to the diverse needs of their target audiences, they can radically rethink the ways their products or services are designed, and adapt them in a way that would make them accessible – a central objective of the project.



In this VR issue, we bring forth a collection of articles that delve into the key findings, insights, and methodologies developed within the Mr. UD project. Each contribution represents a unique perspective on the intersection of mixed reality and universal design, offering valuable knowledge and practical implications for professionals in the field of design and beyond.

We extend our heartfelt appreciation to the project consortium, the contributing authors, the Foundation for the Development of the Education System and the Erasmus+ program for their support and collaboration. We believe that this VR issue will inspire and ignite further advancements in the realm of universal design, fostering a more inclusive and equitable future for all.

Thank you for joining us. We hope the book will unleash your creativity and bridge accessibility gaps.

Dorota Kamińska, Eng.D.
Project coordinator

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