



SALENTO AVR 2021

8th International Conference on Augmented Reality, Virtual Reality and Computer Graphics

September 7 - 10, 2021

**Tuesday
September 7**

Conference Opening
9⁰⁰ - 9¹⁵

Keynote Speaker 1
9¹⁵ - 10³⁰

Session 1
10³⁰ - 11⁰⁰

coffee break

Session 2
11¹⁵ - 12⁴⁵

lunch time

Session 3
14⁰⁰ - 15¹⁵

coffee break

Short paper Session 1
15³⁰ - 16¹⁵

**Wednesday
September 8**

Keynote Speaker 2
9⁰⁰ - 10¹⁵

Session 4
10¹⁵ - 11¹⁵

coffee break

Session 5
11³⁰ - 12⁰⁰

Session 6
12⁰⁰ - 12³⁰

lunch time

Session 7
14⁰⁰ - 15⁰⁰

coffee break

Short paper Session 2
15¹⁵ - 16⁰⁵

**Thursday
September 9**

Keynote Speaker 3
9⁰⁰ - 10¹⁵

Session 8
10¹⁵ - 11¹⁵

coffee break

Session 9
11³⁰ - 12³⁰

Conference Closing
12³⁰ - 13⁰⁰

Tuesday September 7

9,00 – 9,15	Conference Opening	
9,15 – 10,30	Keynote Speaker: VOLKER PAELKE Guidance in Mixed Reality Applications – Supporting Users in Complex Tasks and Environments	
10,30 – 11,00	Session 1: Virtual Reality (Lucio De Paolis)	
	Bruno Ježek, Ondřej Šimeček, Antonín Slabý	Virtual scene components for data visualization
	Tsoy D.D., Daineko Ye.A., Ipalakova M.T., Seitnur A.M., Myrzakulova A.N.	Developing a gesture library for working in a virtual environment
11,00 – 11,15	<i>coffee break</i>	
11,15 – 12,45	Session 2: Virtual Reality (cont.) (Marco Mameli)	
	Paweł Sobociński, Dominik Strugała, Krzysztof Walczak, Mikołaj Maik, Tomasz Jenek	Large-Scale 3D Web Environment for Visualization and Marketing of Household Appliances
	Nicola Capece, Monica Gruosso, Ugo Erra, Rosario Catena, Gilda Manfredi	A Preliminary Investigation on a Multimodal Controller and Freehand based Interaction in Virtual Reality
	Fabio Genz, Clemens Hufeld, Simone Müller, Daniel Kolb, Johannes Starck, Dieter Kranzlmüller	Replacing EEG sensors by AI based emulation
	Heiko Drewes, Evelyn Müller, Sylvia Rothe, Heinrich Hussmann	Gaze-based Interaction for Interactive Storytelling in VR
	Marco Mameli, Dario De Carolis, Emanuele Frontoni, Primo Zingaretti	Overcoming the limits of a Neural Network for Character-scene interactions
	Roberto Pierdicca, Michele Sasso, Flavio Tonetto, Francesca Bonelli, Andrea Felicetti, Marina Paolanti	Immersive insights: Virtual tour analytics system for understanding visitor behavior
12,45 – 14,00	<i>lunch</i>	
14,00 – 15,15	Session 3: Augmented/Mixed Reality (Roberto Pierdicca)	
	Ingo Börsting, Evgenia Shulikina, Volker Gruhn	Interdisciplinary Collaboration in Augmented Reality Development - A Process Model
	Martín Becerra, Jorge Ierache, María José Abasolo	Interoperable Dynamic Procedure interactions on Semantic Augmented Reality Browsers
	Gideon Raeburn, Laurissa Tokarchuk, Martin Welton	Creating immersive play anywhere location-based storytelling using mobile AR
	Benedikt Hensen, Ralf Klamma	VIAProMa: An Agile Project Management Framework for Mixed Reality
	Alessandro Longobardi, Franco Tecchia, Marcello Carrozzino, Massimo Bergamasco	Efficient Augmented Reality on low-power embedded systems
15,15 – 15,30	<i>coffee break</i>	
15,30 – 16,15	Short paper session 1 (Nicola Moccaldi)	
	Sara Kaszuba, Francesco Leotta, Daniele Nardi	A Preliminary Study on Virtual Reality Tools in Human-Robot Interaction
	Alberto Cannavò, Christian Bardella, Lorenzo Semeraro, Federico De Lorenzis, Congyi Zhang, Ying Jiang, Fabrizio Lamberti	An Automatic 3D Scene Generation Pipeline based on a Single 2D Image
	Lucio Tommaso De Paolis, Pasquale Arpaia, Giovanni D'Errico, Carola Gatto, Nicola Moccaldi, Fabiana Nuccetelli	Immersive VR as a Promising Technology for Computer-Supported Mindfulness
	Dietmar Siegele, Paola Penna, Michael Riedl	Visualizing Building Energy Measurement Data in Mixed Reality applying B.I.M.
	Killian Richard, Vincent Havard, David Baudry	Authoring-by-doing: an event-based interaction module for virtual reality scenario authoring framework
	E. Fabián Rivera, Edison E. Morales, Carla Cristina Florez, Renato M. Toasa	Development of an augmented reality system to support teaching-learning process in Automotive Mechatronics
	Pablo Catota, Marcelo V. Garcia, William Montalvo-Lopez, Carlos A. Garcia	Development of a virtual reality environment based on the CoAP protocol for teaching pneumatic systems
	Ingo Börsting, Bastian Fischer, Volker Gruhn	AR Scribble: Evaluating Design Patterns for Augmented Reality User Interfaces
	Riccardo Galdieri, Alessandro Longobardi, Michele De Bonis, Marcello Carrozzino	Users' evaluation of procedurally generated game levels

Wednesday September 8

9,00 – 10,15	Keynote Speaker: MATIJA MAROLT Visualization of multimodal volumetric data	
10,15 – 11,15	Session 4: Applications in Medicine (Valerio De Luca)	
	Giuseppina Bernardelli, Valeria Flori, Luca Greci, Arianna Scaglione, Andrea Zangiacomi	A Virtual Reality based application for children with ADHD: design and usability evaluation
	Iva Vasic, Roberto Pierdicca, Emanuele Frontoni, Bata Vasic	A New Technique of the Virtual Reality Visualization of Complex Volume Images from the Computer Tomography and Magnetic Resonance Imaging
	Pasquale Arpaia, Antonio Esposito, Francesca Mancino, Nicola Moccaldi, Angela Natalizio	Active and passive brain-computer interfaces integrated with extended reality for applications in health 4.0
	Ivón Escobar, Edwin Pruna, Silvia Alpúsig, Paola Calvopiña, Gabriel Corrales	Proposed System for Orofacial Physiotherapy Based on a Computational Interpretation of Face Gestures to Interact with a 3D Virtual Interface
11,15 – 11,30	<i>coffee break</i>	
11,30 – 12,00	Session 5: Applications in Education (Carola Gatto)	
	Jessica Lizeth Dominguez Alfaro, Peter Van Puyvelde	Mobile Augmented Reality Apps in Education: Exploring the User Experience through Large-Scale Public Reviews
	Fabio Genz, Niklas Fuchs, Daniel Kolb, Simone Müller, Dieter Kranzlmüller	Evaluation of proprietary social VR platforms for use in distance learning
12,00 – 12,30	Session 6: Applications in Cultural Heritage (Carola Gatto)	
	Louis Nisiotis, Lyuba Alboul	Initial Evaluation of an Intelligent Virtual Museum Prototype Powered by AI, XR and Robots
	Juan Jesús Ruiz Toscano, Irene Fondón, Auxiliadora Sarmiento	The experience "Mondrian from inside". An immersive and interactive virtual reality experience in art
12,30 – 14,00	<i>lunch</i>	
14,00 – 15,00	Session 7: Applications in Industry (Lucio De Paolis)	
	Mariano Guida, Paolo Leoncini	Regional Aircraft Interiors Evaluation in a Real Time Ray-Traced Immersive Virtual Environment
	Gustavo Caiza, Marco Riofrio-Morales, Angel Robalino-Lopez Orlando, R. Toscano, Marcelo V. Garcia, Jose E. Naranjo	An immersive training approach for induction motor fault detection and troubleshooting
	Dietmar Siegele, Dieter Steiner, Andrea Giusti, Michael Riedl, Dominik T. Matt	Optimizing Collaborative Robotic Workspaces in Industry by applying Mixed Reality
	Víctor I. Rocha, Kevin R. Rocha, Edwin P. Pruna	3D virtual environment for calibration and adjustment of smart pressure transmitters
15,00 – 15,15	<i>coffee break</i>	
15,15 – 16,05	Short paper session 2 (Giovanni D'Errico)	
	Pasquale Arpaia, Federica Crauso, Egidio De Benedetto, Luigi Duraccio, Giovanni Improta	An Augmented Reality-Based Solution for Monitoring Patients Vitals in Surgical Procedures
	Ersilia Vallefuoco, Carmela Bravaccio, Giovanna Gison, Alessandro Pepino	Design of a serious game for enhancing money use in teens with Autism Spectrum Disorder
	Daineko Ye.A., Kozhakhmetova B.A., Kulakayeva A.E., Tsoy D.D., Aitmagambetov A.Z., Gubsky D.S., Ipalakova M.T., Seitnur A.M.	Development of virtual laboratory work on the base of Unity game engine for the study of radio engineering disciplines
	Lucio Tommaso De Paolis, Sofia Chiarello, Giovanni D'Errico, Carola Gatto, Benito Luigi Nuzzo, Giada Sumerano	Mobile Extended Reality for the Enhancement of an Underground Oil Mill: a Preliminary Discussion
	Ramonaa Quattrini, Roberto Pierdicca, Ana Belen Berrocal, Clara Zamorano, José Rocha, Isabel Varajão	Uncovering the potential of Digital Technologies to promote railways landscape: Rail to Land project
	Carola Gatto, Giovanni D'Errico, Giovanna Ilenia Paladini, Lucio Tommaso De Paolis	Virtual Reality in Italian Museums: a Brief Discussion
	Csaba Antonya, Florin Gîrbacia, Cristian Postelnicu, Daniel Voinea, Silviu Butnariu	Saliency Detection in a Virtual Driving Environment for Autonomous Vehicle Behavior Improvement
	Daniel D. Amores, Edwin P. Lema, Lucía D. Guerrero, Víctor H. Andaluz, Brayan A. García	Virtual Control of a Perfectly Stirred Reactor for Cyclopentene Production
	Alex V. Guanopatin, José Varela-Aldás	
	Ronald J. Garcés, Juan F. Lomas, Jessica G. Pilatasig	Virtual Control of a Double Effect Evaporator for Teaching-Learning Processes
	Víctor H. Andaluz, Andrea E. Tutasig, Alexis S. Zambrano, José Varela-Aldás	
	Efren M. Jacome, Jaime F. Toaquiza, Grace M. Mullo, Víctor H. Andaluz, José Varela-Aldás	Virtual System for Industrial Processes: Distillation Towers

Thursday September 9

9,00 – 10,15	Keynote Speaker: ALDO FRANCO DRAGONI <i>Augmenting Reality with Artificial Intelligence</i>	
10,15 – 11,15	Session 8: Applications in Industry (Lucio De Paolis)	
	Giuseppe Di Gironimo, Sara Buonocore, Antonio Fariello, Fabrizio Carpentiero, Maria Rosaria Lanza, Andrea Tarallo	System Engineering Approach for the Development of a Virtual Training Platform: Case Study in the Missile System Sector
	Pepe Ibáñez, Edwin Pruna, Ivón Escobar, Galo Ávila	3D Virtual system for control valve calibration
	Israel S. Aguilar, Jorge L. Correa, Edwin P. Pruna	3D virtual system of a liquid filling and packaging process, using the Hardware in the loop technique
	Erick B. Cobo, Víctor H. Andaluz	Virtual Training System for Robotic Applications in Industrial Processes
11,15 – 11,30	<i>coffee break</i>	
11,30 – 12,30	Session 9: Applications in Industry (Valerio De Luca)	
	Brayan Pila, Efraín Alcoser, Edwin Pruna, Ivón Escobar	Inspection and verification training system of production lines in automated processes, through virtual environments
	Edwin Pruna, Geovanna Balladares, Hugo Teneda	3D Virtual System of a Distillation Tower, and Process Control Using the Hardware in the Loop Technique
	Silvia Alpúsig, Edwin Pruna, Ivón Escobar	Virtual Environment for Control Strategies Testing: A Hardware-In-The-Loop Approach
	Steven I. Pogo, Jhonatan F. Arias, Víctor H. Andaluz	Control of the Malt Mashing and Boiling Process in Craft Beer Production: Hardware-in-the-Loop-Technique
12,30 – 13,00	Conference Closing	