

Scientific Programme

Tuesday 25th June	
9,00 – 9,30 Opening Ceremony	
9,30 – 10,30 Keynote speaker Luigi Gallo, ICAR-CNR, Italy <i>Interactive Virtual Environments: from the Laboratory to the Field</i>	
10,30 – 11,00 <i>Coffee break</i>	
11,00 – 13,00 Session 1 - Augmented Reality <i>Chair: Luigi Gallo</i>	
Lee Kent, Chris Snider, Ben Hicks	Engaging Citizens with Urban Planning Using City Blocks, a Mixed Reality Design and Visualisation Platform
Loris Barbieri, Emanuele Marino	An Augmented Reality tool to detect design discrepancies: a comparison test with traditional methods
Alexander Ohlei, Daniel Wessel, Michael Herczeg	Usability of Direct Manipulation Interaction Methods for Augmented Reality Environments using Smartphones and Smartglasses
Arnis Cirulis	Ultra wideband tracking potential for augmented reality environments
Fernando R. Pusda, Francisco F. Valencia, Víctor H. Andaluz, Víctor D. Zambrano	Training Assistant for Automotive Engineering through Augmented Reality
Georgia Albuquerque, Dörte Sontag, Oliver Bodensiek, Manuel Behlen, Nils Wendorff, Marcus Magnor	A Framework for Data-Driven Augmented Reality
A'aeshah Alhakamy, Mihran Tuceryan	An Empirical Evaluation of the Performance of Real-Time Illumination Approaches: Realistic Scenes in Augmented Reality
Nicola Covre, Fabrizio Nunnari, Alberto Fornaser, and Mariolino De Cecco	Generation of Action Recognition Training Data Through Rotoscoping and Augmentation of Synthetic Animations
13,00 – 14,30 <i>Lunch</i>	

<p>14,30 – 15,30 Keynote speaker <i>Pasquale Arpaia – University of Naples Federico II, Italy</i> Wearable Brain-Computer Interface for Augmented Reality-based Inspection in Industry 4.0</p>	
<p>15,30 – 15,45 <i>Coffee break</i></p>	
<p>15,45 – 17,00 Poster Session 1</p>	
Alexander Ohlei, Lennart Bundt, David Bouck- Standen, Michael Herczeg	Optimization of 3D Object Placement in Augmented Reality Settings in Museum Contexts
Fabrizio Cutolo, Nadia Cattari, Umberto Fontana, Vincenzo Ferrari	Towards the Development of a Quasi-Orthoscopic Hybrid Video/Optical See-Through HMD for Manual Tasks
Gissela M. Guanoluisa, Jimmy A. Pilatasig, Leonardo A. Flores, Víctor H. Andaluz	GY MEDIC v2: Quantification of Facial Asymmetry in Patients with Automated Bell's Palsy by AI
Yevgeniya Daineko, Madina Ipalakova, Dana Tsoy	Development of the multimedia virtual reality-based application for physics study using the Leap Motion controller
Josef Wideström	The Transdisciplinary Nature of Virtual Space
Ying Li, YanXiang Zhang, MeiTing Ching	Intercultural communication research based on CVR: An Empirical Study of Chinese Users of CVR about Japanese Shrine Culture
YanXiang Zhang, WeiWei Zhang, YiRun Shen	Design of a SCORM courseware player based on Web AR and Web VR
YanXiang Zhang, Yaping Lu	Application Advantages and Prospects of Web-Based AR Technology in Publishing
Louis Nisiotis, Lyuba Alboul, Martin Beer	Virtual Museums as a New Type of Cyber-Physical-Social System
Aldrin G. Acosta, Víctor H. Andaluz, Hugo Oswaldo Moreno, Mauricio Tamayo Giovanni Cuzco, Mayra L. Villarroel, Jaime A. Santana	Immersive Virtual System for the Operation of Tourist Circuits
Víctor H. Andaluz, José A. Pérez, Christian P. Carvajal, Jessica S. Ortiz	Virtual Environment for Teaching and Learning Robotics Applied to Industrial Processes
Víctor H. Andaluz, Jorge Mora-Aguilar, Darwin S. Sarzoza, Jaime A. Santana, Aldrin Acosta, Cesar A. Naranjo	Augmented Reality in Laboratory's Instruments, Teaching and Interaction Learning
Alex P. Porras, Carlos R. Solis, Víctor H. Andaluz, Jorge S. Sánchez, Cesar A. Naranjo	Virtual Training System for an Industrial Pasteurization Process
Marián Hudák, Štefan Korečko, Branislav Sobota	Microsoft HoloLens Evaluation under Monochromatic RGB Light Conditions
Juan E. Romo, Gissela R. Tipantasi, Víctor H. Andaluz, Jorge S. Sanchez	Virtual Training on Pumping Stations for Drinking Water Supply Systems
Rosanna Maria Viglialoro, Giuseppe Turini, Sara Condino, Vincenzo Ferrari, Marco Gesi	Proof of Concept: VR Rehabilitation Game for People with Shoulder Disorders

Giuseppe Turini, Sara Condino, Umberto Fontana, Roberta Piazza, John E. Howard, Simona Celi, Vincenzo Positano, Mauro Ferrari, Vincenzo Ferrari	Software Framework for VR-Enabled Transcatheter Valve Implantation in Unity
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Wednesday 26th June	
9,00 – 10,00 Keynote speaker <i>Danijel Skočaj, University of Ljubljana, Slovenia</i> Computer Vision as an Enabling Technology for Interactive Systems	
10,00 – 11,00 Session 2 - Virtual Reality <i>Chair: Danijel Skočaj</i>	
Nicola Capece, Ugo Erra, Domenica Mirauda	StreamFlowVR: A Tool for Learning Methodologies and Measurement Instruments for River Flow through Virtual Reality
Alessandro Longobardi, Franco Tecchia, Marcello Carrozzino, Massimo Bergamasco	A real-time video stream stabilization system using inertial sensor
Bruno Ježek, Jiří Borecký, Antonín Slabý	Real Time Simulation and Visualization of Particle Systems on GPU
Ahmet Kose, Aleksei Teplyakov, Mihkel Abel, Eduard Petlenkov	Towards Assessment of Behavioral Patterns in a Virtual Reality Environment
11,00 – 11,30 <i>Coffee break</i>	
11,30 – 13,00 Session 3 - Virtual Reality <i>Chair: Ahmet Kose</i>	
José Varela-Aldás, Guillermo Palacios-Navarro, Iván García-Magariño, Esteban M. Fuentes	Effects of immersive virtual reality on the heart rate of athlete's warm-up
Krzysztof Walczak, Jakub Flotynski, Dominik Strugala	Semantic Contextual Personalization of Virtual Stores
Francesco Scarlato, Giovanni Palmitesta, Franco Tecchia, Marcello Carrozzino	Design and implementation of a reactive framework for the development of 3D real-time applications
Carlos A. Garcia, Jose E. Naranjo, Fabian Gallardo-Cardenas, Marcelo V. Garcia	Virtual Environment for Training Oil & Gas Industry Workers
Daniel Brice, Thomas McRoberts, Karen Rafferty	A Proof of Concept Integrated Multi-Systems Approach for Large Scale Tactile Feedback in VR
Juan Sebastian Munoz-Arango, Dirk Reiners, Carolina Cruz-Neira	Design and architecture of an affordable optical routing - Multi-user VR system with lenticular lenses
13,00 – 14,30 <i>Lunch</i>	

14,30 – 15,30 AVR Competition	
15,30 – 15,45 <i>Coffee break</i>	
15,45 – 17,00 Poster Session 2	
Stella Sylaiou, Vlasios Kasapakis, Elena Dzardanova, Damianos Gavalas	Assessment of Virtual Guides' Credibility in Virtual Museum Environments
Jorge S. Sánchez, Jessica S.Ortiz,Oscar A. Mayorga, Carlos R. Sánchez, Gabrilea M. Andaluz, Edison L. Bonilla, Víctor H. Andaluz	Virtual Simulator for the Taking and Evaluation of Psychometric Tests to Obtain a Driver's License
Angelo Corallo, Marco Esposito, Manuela Marra, Claudio Pascarelli	Transmedia digital storytelling for cultural heritage visiting enhanced experience
Edison P. Yugcha, Jonathan I. Ubilluz, Víctor H. Andaluz	Virtual Training for Industrial Process: Pumping System
Paolo Sernani, Renato Angeloni, Aldo Franco Dragoni, Ramona Quattrini, Paolo Clini	Combining Image Targets and SLAM for AR-based Cultural Heritage Fruition
Stefan H. Tanderup, Markku Reunanen, Martin Kraus	Identifying Emotions Provoked by Unboxing in Virtual Reality
Oguzhan Topsakal, M. Mazhar Çelikoyar	Surgeries that would Benefit Augmented Reality and Their Unified User Interface
D. Rivas, Marcelo Alvarez V., J. Guanoluisa, M. Zapata, E. Garcés, M. Balseca, J. Perez, R. Granizo	Intelligent System for the Learning of Sign Language Based on Artificial Neural Networks
Burkhard Hoppenstedt, Thomas Witte, Jona Ruof, Klaus Kammerer, Matthias Tichy, Manfred Reichert, Rüdiger Pryss	Debugging Quadrocopter Trajectories in Mixed Reality
Burkhard Hoppenstedt, Michael Schmid, Klaus Kammerer, Joachim Scholta, Manfred Reichert, Rüdiger Pryss	Analysis of Fuel Cells Utilizing Mixed Reality and IoT Achievements
Burkhard Hoppenstedt, Klaus Kammerer, Manfred Reichert, Myra Spiliopoulou, Rüdiger Pryss	Convolutional Neural Networks for Image Recognition in Mixed Reality Using Voice Command Labeling
Ciril Bohak, Jan Aleksandrov, Matija Marolt	Collaborative web-based merged volumetric and mesh rendering framework
Marwene Kechiche, Ioan-Alexandru Ivan, Patrick Baert, Rolnd Fortunier, Rosario Toscano	A new loose-coupling method for vision-inertial systems based on retro-correction and inconsistency treatment
David Checa, Lydia Ramon, Andres Bustillo	Virtual Reality travel training simulator for people with intellectual disabilities
Doriana Cisternino, Carola Gatto, Giovanni D'Errico, Valerio De Luca, Maria Cristina Barba, Giovanna Ilenia Paladini, Lucio Tommaso De Paolis	Virtual Portals for a Smart Fruition of Historical and Archaeological Contexts
Yanxiang Zhang, Pengfei Ma, Ali Raja Gulfray, Li Kong, Xuelian Sun	Application of physical interactive mixed reality system based on MLAT in the field of stage performance

Atieh Mahroo, Luca Greci, Marco Sacco	HoloHome: An Augmented Reality Framework to Manage the Smart Home
Mina Abdi Oskouie, Pierre Boulanger	Using Proxy Haptic for a Pointing Task in the Virtual World: A Usability Study

Thursday 27th June	
9,00 – 10,00 Session 4 - VR/AR in Medicine <i>Chair: Lucio Tommaso De Paolis</i>	
Yaritza P Erazo, Christian P Chasi, María A. Latta, Víctor H. Andaluz	Machine Learning for Acquired Brain Damage Treatment
Gustavo Caiza, Cinthya Calapaqui, Fabricio Regalado, Lenin F. Saltos, Carlos A. Garcia, Marcelo V. Garcia	Upper Limb Rehabilitation with Virtual Environments
Marta Mondellini, Simone Pizzagalli, Luca Greci, Marco Sacco	Assessment of an Immersive Virtual Supermarket to Train Post-Stroke Patients: a Pilot Study on Healthy People
Lucio Tommaso De Paolis, Giovanna Ilenia Paladini, Giovanni D'Errico, Maria Cristina Barba, Valerio De Luca, Serena Magliaro, Fabrizio Nunnari, Annamaria Schena, Simona Di Gestore, Attilio Covino, Pierpaolo Di Bitonto, Ada Potenza	BRAVO: a Gaming Environment for the Treatment of ADHD
10,00 – 11,00 Session 5 - VR/AR in Education <i>Chair: Roberto Pierdicca</i>	
Ahmed Ewais, Olga De Troyer, Mumen Abu Arra, Mohammed Romi	A Study on Female Students' Attitude Towards the Use of Augmented Reality to Learn Atoms and Molecules Reactions in Palestinian Schools
Elif Topsakal and Oguzhan Topsakal	Augmented Reality to Engage Preschool Children in Foreign Language Learning
Emanuele Frontoni, Marina Paolanti, Mariapaola Puggioni, Roberto Pierdicca, Michele Sasso	Measuring and assessing Augmented Reality potential for educational purposes: SmartMarca Project
Lucio Tommaso De Paolis, Valerio De Luca, Giovanna Ilenia Paladini	Touchless navigation in a multimedia application: the effects perceived in an educational context
11,00 – 11,30 <i>Coffee break</i>	
11,30 – 13,00 Session 6 - Virtual Reality <i>Chair: Valerio De Luca</i>	
Roberto Pierdicca, Marco Mameli, Eva Savina Malinverni, Marina Paolanti, Emanuele Frontoni	Automatic generation of point cloud synthetic dataset for historical building representation
Vladimir Averbukh, Natalya Averbukh, Pavel Vasev, Ilya Gvozdev, Georgy Levchuk, Leonid Melkozerov, Igor Mikhaylov	Metaphors for software visualization systems based on virtual reality
Katia Lupinetti, Brigida Bonino, Franca Giannini, Marina Monti	Exploring the benefits of the virtual reality technologies for assembly retrieval applications

Dominik Strugala, Krzysztof Walczak	Virtual Reality and Logic Programming as Assistance in Architectural Design
Carlos A. Garcia, Jose E. Naranjo, Edison Alvarez M., Marcelo V. Garcia	Training Virtual Environment for Teaching Simulation and Control of Pneumatic Systems
Nicoletta Adamo, Hazar N. Dib, Nicholas J. Villani	Animated agents' facial emotions: does the agent design make a difference?
13,00 – 13,15 <i>Closing Ceremony</i>	
13,15 – 14,30 <i>Lunch</i>	