



XR SALENTO 2025

International Conference on eXtended Reality

June 17-20, 2025 – Otranto, Italy

Virtual Reality
Augmented Reality
Mixed Reality
Artificial Intelligence



www.xrsalento.it

Program at a Glance



Tuesday June 17	Wednesday June 18	Thursday June 19	Friday June 20
Registration 9 ⁰⁰ - 13 ⁰⁰	Poster Session 1 8 ³⁰ - 9 ³⁰	Poster Session 2 8 ³⁰ - 9 ³⁰	Poster Session 3 8 ³⁰ - 9 ³⁰
	Keynote Speaker 1 9 ³⁰ - 10 ³⁰	Keynote Speaker 2 9 ³⁰ - 10 ³⁰	Keynote Speaker 3 9 ³⁰ - 10 ³⁰
	coffee break	coffee break	coffee break
	Session 3 11 ⁰⁰ - 12 ⁰⁰	Session 9 11 ⁰⁰ - 12 ⁰⁰	Project Sessions 11 ⁰⁰ - 13 ⁰⁰
	Session 4 11 ⁰⁰ - 12 ⁰⁰	Session 10 11 ⁰⁰ - 12 ⁰⁰	
	Demo Session 2 12 ⁰⁰ - 13 ⁰⁰	Company Session 12 ⁰⁰ - 13 ⁰⁰	
	lunch	lunch	lunch
Conference Opening 14 ³⁰ - 15 ⁰⁰	Session 5 14 ³⁰ - 16 ⁰⁰	Session 11 14 ³⁰ - 15 ⁴⁰	Session 15 14 ³⁰ - 15 ³⁰
Session 1 15 ⁰⁰ - 16 ¹⁰	Session 6 14 ³⁰ - 16 ⁰⁰	Session 12 14 ³⁰ - 15 ⁴⁰	XR Competition 14 ³⁰ - 15 ³⁰
coffee break	coffee break	coffee break	coffee break
Demo Session 1 16 ³⁰ - 17 ³⁰	Demo Session 3 16 ³⁰ - 17 ³⁰	Panel 2 16 ⁰⁰ - 17 ⁰⁰	Panel 3 15 ³⁰ - 16 ³⁰
Panel 1 17 ³⁰ - 18 ³⁰	Session 7 17 ²⁰ - 18 ³⁰	Session 13 17 ⁰⁰ - 18 ⁰⁰	Conference Closing 16 ³⁰ - 17 ³⁰
Session 8 17 ²⁰ - 18 ³⁰		Session 14 17 ⁰⁰ - 18 ⁰⁰	
Welcome Cocktail 19 ³⁰ - 20 ³⁰	Guided Tour of Otranto 19 ³⁰ - 20 ³⁰	Gala Dinner 19 ³⁰ - 23 ⁰⁰	

Tuesday June 17, 2025

14,30 - 15,00

Conference Opening

15,00 - 16,10

Session 1 - Room Ibuscus

Virtual Reality

Chair: Carola Gatto

1. [Immersive technologies for Cultural Heritage: Bridging History and Technology in Museums](#)
Madina Ipalakova, Yevgeniya Daineko, Zhiger Bolatov, Dana Tsoy, Yekaterina Reznikova, Ikram Bazarbekov, Darian Gabdullin
2. [Empowering Accessible Social Engagement in Virtual Reality: Piloting a preparatory Usability Experience on Neurotypical Individuals](#)
Irene Capasso, Katia Lupinetti, Elia Moscoso Thompson, Fabrizio Ravicchio, Silvio Sabatini, Andrea Canessa, Serena Ricci, Brigida Bonino, Lucia Ferlino, Chiara Malagoli
3. [Mind-Controlled Navigation in a Virtual Reality Training System](#)
Adam Gałązkiewicz, Krzysztof Walczak
4. [Leveraging Transfer Learning for Niche Sign Recognition in VR Training with Limited Data](#)
Yara Mijndonckx, Kristof Overdulse, Nick Michiels
5. [Mobile application of the hybrid propulsion system using deep learning](#)
Jimmy Gallegos Ayala, Fernando Pusda Cheza, Ciro Radicelli García

15,00 - 16,10

Session 2 - Camelia

Augmented and Mixed Reality

Chair: Valerio De Luca

1. [Development and Evaluation of a Mobile Augmented Reality Application for Environmental Education](#)
Athanasios Evagelou, Alexandros Kleftodimos
2. [Towards Precise Geo-Localization for Outdoor Mobile Augmented Reality - State-of-the-Art in Visual Geo-Localization and Novel Silhouette Matching Approach based on Surface Models](#)
Nicolai Skutsch, Frank Fuchs-Kittowski, Olaf Hellwich
3. [Video Game Quality of Experience Assessment of Augmented Reality User Interface for Military Purposes](#)
Katarina Mišura, Mirko Sužnjević
4. [A method for identifying application scenarios for mobile augmented reality - Results and experiences from use in state environmental agencies](#)
Frank Fuchs-Kittowski, Daniel Faust, Simon Burkard
5. [Enhancing the atmosphere in Hybrid Restaurants: a dining experience assessment with Mixed Reality](#)
Alice Bettelli, Maria Luisa Campanini, Francesco Costalunga, Luciano Gamberini, Michele Mingardi, Valeria Orso
6. [A Conversational Agent for Cultural and Environmental Education: Enhancing User Experience and Immersion in Augmented Reality](#)
Ilias Logothetis, Dimitris Pirpiris, Nikolas Vidakis

Coffee break

16,30 - 17,30

Demo Session 1 - Room Camelia

Chair: Chiara Tagliaferri

RoboMate - Medical Software Device for Rehabilitation Through Humanoid Robots

17,30 – 18,30

Panel 1

Chair: Roberta Quarta

Panelist: Fabio Roberto Tolledi

Images, Augmented Reality and Performance Practices

Wednesday June 18, 2025

8,30 – 9,30

Poster Session 1

Chairs: Carola Gatto, Maria Cristina Barba

1. [Maritime Training through Virtual Reality: System Design and Research Roadmap](#)
Panagiotis Georgiou, George Pachoulas, Athanasios Christopoulos, Chrysostomos Stylios, Ioannis Tsoulos
2. [Spatial Cognition and Awareness of non-Euclidean Virtual Reality Environments: A pilot study on the Effect of Personality Traits](#)
Fabrizio Serrao, Alessandro Gabbiadini, Marcello Gallucci, Andrea Gaggioli, Massimo Montanaro, Alberto Gallace
3. [Decryption of Evolutionary Fractals by means of Procedural Randomness generated with an Intelligence Model based on the CSN Algorithm](#)
Catalin Silviu Nutu
4. [Artificial intelligence enabled indoor localization and navigation: A review](#)
Erisa Bekteshi, Christian Catalano, Jacopo Conte, Claudio Pascarelli, Renzo Pennetta
5. [The Role of VR Technology in Shaping Customer Experience, Satisfaction and Purchasing Decisions](#)
Dawid Gajda
6. [From neurocognitive functions to Human-Robot Collaboration: applications of Artificial Intelligence in reducing mental workload](#)
Flavia Ciminaghi, Luca Mastrogiacomo, Riccardo Gervasi, Roberta Antonia Allegratta, Carlotta Acconito, Michela Balconi
7. [A case study of the FRIA project: Supporting human evaluation of an AI-based hiring system](#)
Lucilla Gatt, Ilaria Amelia Caggiano, Maria Cristina Gaeta, Emiliano Troisi, Maria Teresa Lo Conte, Roberto Trasarti, Roberta Savella, Marco Di Cristo, Francesca Pratesi
8. [Digital \(AI-driven\) Leadership: Revolutionizing Indian Businesses through Digital Work Environment and Learning Culture](#)
Sivarethinamohan R, Aranganathan P, Chithra M., Chrstina Sheela S, Sujatha S.
9. [Examining the impact of pilot expertise and task difficulty on visual attention and flight performance in a high visual-fidelity flight simulator](#)
Claudia Martin Calderon, Diako Mardanbegi, Elizabeth Irving, Shi Cao, Suzanne Kearns, Andrew Duchowski, Ewa Niechwiej-Szwedo
10. ["360 Nature Hub" - An open repository of 360° nature videos for research and health interventions](#)
Giovanna Calogiuri, Elena Brambilla, Thomas M. Gabrielsen, Sigbjørn Litlekare
11. [Enabling Digital Spaces: Bringing Gaussian Splats Alive in XR](#)
Yücel Uzun, Suhana Biswas, Simon Hetzer, Leif Oppermann, Urs Riedlinger
12. [Transforming Industrial Training: A Comparative Study of Volumetric Video in Mixed Reality and Paper-Based Instructions](#)
Erik Freydank, Nora Kießling, Maiara Rosa Cencic, Lina Seyfried
13. [A Vision-Based Fiducial Object Input Device for Intuitive Interaction](#)
José Manuel Alcalde Llergo, Pilar Aparicio Martínez, Pablo Garcia Ruiz, Enrique Yeguas Bolívar, Andrea Zingoni
14. [Designing in an Immersive Virtual Reality Environment: Implications for Design Education](#)
Sehnaz Cenani, Mahmut Çağdaş Durmazoğlu, Ethem Güner, Z. Gözde Kutlu, Gamze Dane
15. [Enhancing Accessibility and Inclusivity in Business Meetings through AI-Driven Extended Reality Solutions](#)
Nikolaos Tantaroudas, Ilias Karachalios, Andrew McCracken, Evangelos Papatheou
16. [Revolutionizing Agrifood Training: The MetaLAM Virtual Laboratory for Multielement Analysis](#)
Francesco Bonavolontà, Edvige Gambino, Annalisa Liccardo, Maria Teresa Verde, Diana Agrelli, Carmine Amalfitano, Elisabetta Pignoli, Antonio Monaco, Paola Adamo
17. [XR Training in Industry 5.0: Advancing Human-Machine Collaboration with the XR5.0 Training Platform](#)
Jorge Oliveira, Tomaz Saraiva, Harsh Manoj Shah, Emmanouil Mavrogiorgis, Argyro Mavrogiorgou, Athanasios Kiourtis
18. [Enhancing Manufacturing Engineering higher education through Mixed Reality and Gaussian Splatting: Preliminary experimental results](#)
Mattia Trombini, Matteo Capponi, Domenico Augusto Maisano, Fiorenzo Franceschini
19. [Towards optimal shift mapping heuristics for ReSTIR-SSS](#)
Theodoros Galazios, Konstantinos Moustakas

20. [AI-Driven Surgical Tool Localization in Microsurgical Training Simulations](#)
Flavio Di Lisio, Marina Cardone, Emanuele Frontoni, Angelo Lasala, Olimpia Mani, Sara Moccia, Domenico Parchi, Sandra Pfanner, Andrea Poggetti, Francesca Pia Villani
21. [Virtual Reality Chemistry Laboratories: Transforming Chemistry Education through Immersive Experimental Learning](#)
Andrei Dubrovskii, Elena Bataeva, Viktor Demin
22. [Semantic Edge Extraction by Logical Operations for Room Structure Estimation Using a Segmentation Result](#)
Ryusuke Miyamoto, Kae Nakayama, Junya Morioka, Miho Adachi
23. [IM-MetaLAB: First Step Towards a New Metaverse Laboratory for Teaching Fundamental Concepts in Instrumentation and Measurement](#)
Francesco Bonavolonta, Enzo Caputo, Annalisa Liccardo, Antonio Monaco, Rosario Schiano Lo Moriello
24. [Evaluating Deep Learning Architectures for Real-Time Binary Surgical Tool Segmentation in Minimally Invasive Surgeries](#)
Stefano Mazzocchi, Laura Cercenelli, Emanuela Marcelli
25. [Exploring VR Accessibility Challenges and Solutions through Crowdsourced Insights from Reddit](#)
Mehmet Akhoroz, Caglar Yildirim
26. [Adaptive Interface for Collaborative AR Systems](#)
Robin Fischer
27. [Immersive questionnaire framework for perception research studies](#)
Gorazd Gorup, Žiga Lesar
32. [Exploiting Immersive Virtual Reality for Maintenance Training of Freight Trains](#)
Marina Ricci, Nicola Mosca, Daniele Pirone, Pasquale Memmolo, Pietro Ferraro, Maria Di Summa

9,30 - 10,30

Keynote Speaker 2 - Room Camelia

Filip Górski - Poznań University of Technology, Poland

The Future of XR Healthcare: Bridging the Gap Between Technology and Personalized Medicine

Coffee break

11,00 - 12,00

Session 3 - Room Ibiscus

Integrating AI, Computer Vision and AR in Computer-Assisted Intervention (Thematic Session #10)

Chair: Stefano Mazzocchi

1. [Exploring the Potential of AR in Simulating Central Vision Loss: An Experimental Study with HoloLens2](#)
Francesca Nonis, Enrico Vezzetti, Federica Marcolin, Alessia Celeghin
2. [A Comparative Analysis of VR-Based Hand Therapy Using Custom Orthotic Controllers and Commercial Hardware](#)
Aleksandra Grohs, Filip Górski, Sabina Siwiec-Troszczyńska, Magdalena Żukowska
3. [An integrated VR-based tele-rehabilitation platform to support RECOVERY and maintenance of FUNCTIONAL abilities among seniors: Italian trial results](#)
Claudia Franceschetti, Marco Benaducci, Valentina Tombolesi, Elisa Casoni, Valentina Di Donna, Giovanni Renato Riccardi, Lorena Rossi, Rachele Alessandra Marziali
4. [Comparative Evaluation of Deep-Learning-Based Generative Methods for Material Generation in 3D Modelling Workflow](#)
Nejc Hirci, Nejc Lešek, Žiga Lesar, Ciril Bohak

11,00 - 12,00

Session 4 - Room Camelia

Transforming Research and Clinical Interventions with eXtended Reality (Thematic session #2)

Chair: Valentina Mancuso

1. [Design and Development of a Virtual Reality Prototype for a Smart Waiting Room Promoting Occupants' Well-Being](#)

- Sara Arlati, Elena Bellini, Atieh Mahroo, Selen Naz Saritas, Daniele Spoladore, Marta Mondellini
2. [Virtual Memory Ecological Battery \(V-MEB\): A Pilot Study on VR-Based Assessment for Early Detection of Cognitive Decline](#)
Valentina Mancuso, Arianna Tursi, Matilda Bardi, Sara Arlati, Selen Naz Saritas, Simona Gabriella Di Santo, Marco Cavallo, Elisa Pedrolì
 3. [Leveraging Biometric Measurements in Virtual Reality for Improving Public Speaking Skills](#)
Osama Halabi, Rabab Ali Abumalloh, Omar Amin, Karim Zayed, Ghazi Eldawi
 4. [Reduction in End-of-life Care Anxiety in Family Care-givers of Individuals in Palliative Care: Results of a Pilot Exploratory Study using a Canadian Virtual Reality Technology](#)
Alexander Moreno, Célia Rigoulat, Eugénie Côté, Pénélope Pelletier, Patrick O'Connor, Sandrine Galarneau, Mélan Dubois, Céline Turk, Adriana Dieumen
 5. [DUAL-REHB, a new 360° dual-task based app for rehabilitation in aging: usability study](#)
Francesca Bruni, Francesco Bigotto, Jonathan Panigada, Elisa Pedrolì, Silvia Serino, Marco Stramba-Badiale
 6. [Dilemma and conflict management in Virtual Reality for teacher education students](#)
Niels Christian M. Felix Iuel, Adelina G. M. Holmstrøm, Malthe O. B. Hartvigsen, Simon Ingemann Axelsen, Malthe K. Hansen, Halipha Ndikumana, Nathan S. Littlefield, Thorkild Hanghøj, Thomas Bjørner
 7. [Expanding Perception: The Metaverse as a New Frontier in Neuropsychology](#)
Milija Strika, Benedetta Capetti, Lorenzo Conti, Gabriella Pravettoni

12,00 - 13,00

Demo Session 2 - Room Camelia

Chair: Chiara Tagliaferri

Designing Human-Centered Spatial Experiences

Lunch

14,30 - 16,00

Session 5 - Room Ibiscus

AI-Driven XR Innovations in Healthcare: Bridging Technology and Ethics (Thematic Session #1)

Chair: Gerson Yoshinari

1. [Feasibility and Acceptability of Incorporating Artificial Intelligence into Simulation Education](#)
Beth Ann Swan, Sarah Febres Cordero, Laika Steiger
2. [Redefining Care and Work Practices: The Role of Autonomy in the Future of Nursing Homes](#)
Filippo Sanfilippo, Mariann Fossum, Michael Rygaard Hansen
3. [Transformer-enhanced Virtual Reality for Smart Anatomical Dissection Learning](#)
Daniel Arias Ruiz-Esquide, Miguel Ángel Rodríguez Florido, Jose Juan Reyes Cabrera, Agustín Trujillo Pino
4. [Enhancing Education Training with A Virtual Reality-Based Simulator Integrated Generative AI](#)
Meisam Taheri, Magdalena Cyma-Wejchenig, Ole Einar Flaten, Kevin Tan
5. [Augmented Reality in Robotic Mitral Valve Repair](#)
Valentina Brembilla, Ilona Malmivirta, Alejandro Lasa-Rivas, Darshan Devarmani, Christelle Grandvallet, Laura Giroletti, Ascanio Graniero, Alfonso Agnino, Ettore Lanzarone, Guillaume Thomann
6. [Reasoning Models And Decision-Making In Medicine - Are We Finally There?](#)
Gerson Hiroshi Yoshinari Júnior, Ana Lidia Correa da Silva Moreira, Luciano Magalhães Vitorino, Samantha Teófilo Valério Yoshinari
7. [Digital Twins in healthcare: An Opinion Poll and reflection on ethical aspects](#)
Ana Lúcia Corrêa da Silva Moreira, Sanderson Oliveira de Macedo, Luciano Magalhães Vitorino and Gerson Hiroshi Yoshinari Júnior
8. [Explore Unfamiliar Environments With Virtual Reality Applications](#)
Nancy Guerron

14,30 - 16,00

Session 6 - Room Camelia

Digital Twin: Innovative Approaches in Industry and Healthcare (Thematic Session #7)

Chair: Vito Del Vecchio

1. [AI-Driven Virtual Construction Management: Enhancing Digital Building Interactions through Intelligent Assistants and Extended Reality](#)
Julius Emig, Dominik T. Matt, Dietmar Siegele
2. [NFTs opportunities and challenges for cultural heritage sector: insights from a multiple case study perspective](#)
Alice Affini, Valentina Ndou
3. [From Virtual to Reality: A Structured Framework to Training Humanoid Robots for Elderly Care Using Learning from Demonstration](#)
Armin Remenyi, Dai-In Danny Han, Ryan Johnston, Vladimir Kuts, Simone Pizzagalli, Filippo Sanfilippo, Aleksei Tepljakov
4. [Enhancing Industrial Workflows with Augmented Reality \(AR\): AR -Based Poka Yoke Visual Assembly Guide for a Smart Learning Factory](#)
Aleksandar Trendov, Tashko Rizov, Bojan Jovanoski and Katerina Mitkovska Trendova
5. [The Role of Data in Digital Twins: Value Creation and Interoperability](#)
Angelo Corallo, Massimiliano Gervasi, Mariasimona Miglietta, Giulia Pellegrino, Nicolò Gianmauro Totaro
6. [Extended Reality within Construction Digital Twin for Operators Safety Management: a Case Study](#)
Francesco Otello Buccoliero, Vito Del Vecchio, Mariangela Lazoi, Marco Moltisanti, Rocco Alessandro Scollo, Antonio Gianmaria Spampinato
7. [3D vision-based Digital Twin of a Mobile Robot for objects management in Intralogistics scenarios](#)
Alessandro Luchetti, Mattia Tavernini, Mariolino De Cecco
8. [Digitalizing Bank Branches with a New Multichannel Standard to Address Office Closures in Europe](#)
Roberto Vergallo, Adriana Caione, Luca Mainetti, Benedetta Maria Merico, Sara Matino
9. [Study of VR Application in Additive Manufacturing of Customized Orthopedic Products](#)
Jakub Gapsa, Filip Górski, Razvan Ioan Pacurar, Magdalena Żukowska, Emilia Smolarek

Coffee break

16,20 - 17,20

Demo Session 3 - Room Camelia

Chair: Chiara Tagliaferri

Abel, the robot child who reacts to human emotions

17,20 - 18,30

Session 7 - Room Ibiscus

Digital Twin: Innovative Approaches in Industry and Healthcare (Thematic Session #7)

Chair: Giulia Pellegrino

1. [XR-PALS: XR Tool for Loco Positioning System](#)
Dominik Grzelak, Victor Victor
2. [Digital Twin-Driven Radar for Human Monitoring Optimization](#)
Sebastian Ratto, Abdelrahman Elbadrawy, Omar Ramahi, Ahmed Sayed, George Shaker, Arien Sligar
3. [Leveraging Personal Digital Twins to Evaluate and Mitigate Cybersickness within the Industrial Metaverse](#)
Valerio Pulcini, Xinyi Tu, Gianfranco Modoni
4. [Application of Machine Learning and Digital Twin in Smart Farming for Space and Extreme Environments](#)
Van Duc Long Nguyen, Marc Escribà-Gelonch, Volker Hessel, Shu Liang
5. ["Virtual PVD": A Virtual Reality approach to explore PVD Magnetron sputtering](#)
Aurélien Besnard, Ruding Lou
6. [A Multisensory eXtended Reality Platform for Food Spoilage Detection](#)
Monica Bordegoni, Marina Carulli, Ahmed Hegazy, Paolo Maccarrone, Marco Rossoni, Beatrice Aruanno
7. [XCOP: an integrated solution for emergency management during incidents in critical infrastructures](#)
Fabio De Felice, Anna Rosa Cannito, Pietro Noviello, Paolo Secondo Crosta

17,20 - 18,30

Session 8 - Room Camelia

Extended Reality

Chair: Roberto Pierdicca

1. [Improving Situational Awareness During Natural Disasters Using XR Technologies](#)
Adrian Besimi, Nuhi Besimi, Lejla-Abazi Bexheti, Agron Caushi, Florije Ismaili, Shqipe Salii, Besnik Selimi, Visar Shehu, Xhemal Zenuni
2. [Application of Artificial Intelligence Models for Criminal Profiling](#)
Mariacarmen Sorrentino, Antonio Agliata, Giovanni Marco Di Vincenzo
3. [XROV: An Immersive eXtended Reality \(XR\) Interface for Lunar Rover Mission Control](#)
Alexandre Frantz, Sofia Coloma Chacon, Miguel Olivares-Mendez
4. [Extended Reality in Science Learning: A Comparative Study of Real, Virtual, and Mixed Environments](#)
Nikolaos Mitrakas, Charilaos Tsihouridis
5. [3D Digitization and Immersive XR Applications for Paleontology Education](#)
Florian Richter, Helen Böttcher, Daniel Eger-Passos, Johannes Vater, Thomas Wotte
6. [Enhancing Operator Understanding of Circular Production Facilities through Augmented Reality: A Comparative Study](#)
Zoltán M. Ferenczi, Steffen Hösterey, Linda Onnasch
7. [Language Learning in the XR Era: Possibilities and Challenges of Immersive Technology](#)
Arisa Yasuda, Yoshihiro Maruyama

Thursday June 19, 2025

8,30 – 9,30

Poster Session 2

Chairs: Carola Gatto, Maria Cristina Barba

1. [Opening the CAVE using OpenXR and Monado](#)
Doron Goldfarb, Lukas Riegler
2. [Virtual Reality meets Finance: Enhancing Understanding of Risk Diversification](#)
Bärbel Fürstenau, Lars Hornuf, Maximilian Meiler, Jessica Nitsch, Jacqueline Schmidt
3. [Spatialized Looming Sounds in Virtual Reality: Reaction Times and Localization Accuracy](#)
Roberto Barumerli, Alessandro G. Privitera, Andrea Fasolato, Xiang Liu, Giuseppe Scarfò, Paola Cesari, Michele Geronazzo
4. [Perspective-Aware AI in Extended Reality](#)
Marjan Alirezaie, Matti Gruener, Daniel Platnick, Hossein Rahnama
5. [The development of a no-code VR authoring platform for post-secondary educators](#)
Cole Craven, Andrei Torres, Bill Kapralos, David Chandross, Adam Dubrowski
6. [Bio-Adaptive Virtual Humans for Arousal Regulation: A Preliminary Study](#)
Mariano Alcañiz, Alberto Altozano Fernández, Pasquale Arpaia, Carmen Calero, Giovanni D'Errico, Lucio Tommaso De Paolis, Javier Marín Morales, Maria Eleonora Minissi, Nicola Moccaldi
7. [VR for Specific Phobias: A Perspective on Adaptive and Physiological Feedback-Based Exposure Therapy](#)
Maria Cristina Barba, Mattia Ciurlia, Giovanni D'Errico, Matteo Paiano, Giulia Pellegrino, Matteo Rubino, Lucio Tommaso De Paolis
8. [VR-Based Rehabilitation in a Virtual Home: a Perspective on Cognitive and Motor Recovery](#)
Maria Cristina Barba, Melissa Celino, Giovanni D'Errico, Giulia Pellegrino, Tatiana Perrucci, Lucio Tommaso De Paolis
9. [Towards a Mixed Reality Companion to Support Nurses in Medication Management](#)
Madeleine Blusi, Helena Norberg, Juan Carlos Nieves
10. [Acute leukemia\(LAML\) and artificial intelligence: predictive technologies for prognosis, recurrence and response to treatment](#)
Mariacarmen Sorrentino, Antonio Agliata, Antonio Pilato
11. [Design of a multi-user closed-loop architecture focused on Virtual Reality response to multimodal inputs: A multisensory environment use case](#)
Gabriel Ávila Muñoz, Miguel Ángel López Gordo
12. [An eye-controlled joystick with voice control for operating a simulated and real electric wheelchair](#)
Jendrik Bulk
13. [Extended Reality \(ER\) Applications in Banking and Finance: A Bibliometric Analysis](#)
Sivarethinamohan R, Christina Sheela S, Aranganathan P, Chithra M, Sujatha S.
14. [360° nature videos for nursing home residents with dementia: Protocol of a randomized controlled trial](#)
Giovanna Calogiuri, Thomas Martinus Gabrielsen, Lena Heyn, Sigbjørn Litlekare
15. [Multimodal cyber space for healing and human interaction for hospitalized patients](#)
Mieko Ohsuga, Yuma Tada
16. [Development and evaluation of an augmented reality tool for training left atrial appendage occlusion interventions](#)
Jordi Alfonso Poza, Ainhua M. Aguado, Oscar Camara, Jordi Mill
17. [MiRR \(Mixed Reality Rehabilitation\) – Preliminary Feasibility and Usability Study Using Mixed Reality for Motor and Cognitive Rehabilitation](#)
Paolo Meriggi, Luca Cagliani, Albino Spedicato, Mattia Randazzo
18. [SpatialFlow: Towards Interaction Design in Virtual Reality for People with Autism](#)
Claudio Mirabella, Agata Marta Soccini, Alessandro Clocchiatti
19. [Visualization of 3D Rockfalls Trajectories on Digital Ter-rain Models Using Virtual Reality Techniques](#)
Monica A. Buitrago Barrera, Nieves Lantada, Josep A. Gili
20. [Transforming Career Development Through Immersive and Data-Driven Solutions](#)
Nikolaos Tantaroudas, Ilias Karachalios, Andrew McCracken, Evangelos Papatheou, Vasileios Patrikakis
21. [User-Centered Design \(UCD\) for Virtual Reality in Digital Cultural Heritage: A case study of “Djerba View VR”](#)
Hela Ben Maalem
22. [Extending Cultural Heritage. A Touch-Free Mixed Reality System for Engaging Museum Spaces and Rapid Content Authoring](#)
Viktor Malakuczi, Miriam Saviano

23. [Applicability Parameters in a Digital Twin for Cultural Heritage](#)
Juan Jose Moyano Campos, Elena Cabrera Revuelta, David Marín-García, Pastora Revuelta-Marchena
24. [Designing the Ideal Mixed Reality \(MR\) Headset for Archaeological Fieldwork](#)
Peter Cobb, Hayk Azizbekyan, Elvan Cobb
25. [Dual-Camera System for AI Markerless 3D Lower Limb Motion Analysis](#)
CarlaIbeto Francia, Serena Chiosso, Lucia Donno, Manuela Galli, Marco Tarabini
26. [Effects of a Pilot Virtual Reminiscence Intervention to Promote Storytelling in Older Adults with Dementia](#)
Pedro Reisinho, Rui Raposo, Oscar Ribeiro, Nelson Zagalo, Juliana Silva
27. [Enhancing Healthcare with 3D Technologies: Motion Capture and Animation in the MoCASA Library](#)
Eleonora Lanfranco, Marcello Carrozzino, Erica Santaguida, Massimo Bergamasco
28. [Designing Inclusive Interfaces: Sign Language Interpreters in Digital Libraries](#)
Massimo Bergamasco, Marcello Carrozzino, Chiara Evangelista, Gaia Sasso
29. [Designing Cinematic Storytelling for Sustainable Cultural Tourism: The Anime Experience](#)
Alessandra Marasco, Alfonsina Pagano, Helga Sanità, Elisa Dalla Longa, Danilo Paolo Pavone, Augusto Palombini, Ivana Cerato
30. [Theatre of Contingency: Exploring New Paradigms for Extended Reality Theatre](#)
Jonathan Harth
31. [Moral dilemmas and VR: a review of studies and aims](#)
Margherita Pucci, Lorenzo Gagliardi
32. [Empowering SMEs through XR Technologies: Bridging Expertise Gaps and Promoting Sustainable Development](#)
Ian Drumm, Yashkumar Lalluwadia

9,30 - 10,30

Keynote Speaker 3 - Room Camelia

Patrick Bourdot - President of EuroXR Association

Immersive Collaboration: An Overview of Key Research Issues in XR Technologies and Use Cases

Coffee break

11,00 - 12,00

Session 9 - Room Ibiscus

Transforming Research and Clinical Interventions with eXtended Reality (Thematic Session #2)

Chair: Giovanni D'Errico

1. [Cognitive Flexibility and Metaphorical Cognition in Aging: Unlocking Cognitive Adaptability through Virtual Reality](#)
Chiara Pupillo, Giulia Magni, Claudia Repetto, and Giuseppe Riva
2. [Cardboard VR games for rehabilitation of emotion recognition](#)
Noelia Gonzalez Sanchez, Marco J. Gomez Martinez, Arturo S. Garcia Jimenez, Patricia Fernandez Sotos, Antonio Fernandez Caballero, Jose Pascual Molina Masso
3. [Evaluating Usability and Immersion in a Virtual Reality Game for Fear of Flying: A Pilot Study with a Non-Phobic Sample](#)
Silvino Martins, Carolina Araújo, Filipa Diniz, Ana Félix, Sandra Soares, Mário Vairinhos
4. [VR Training for Corporate First Aid Responders](#)
Marcello Carrozzino, Matteo Caponi, Eleonora Lanfranco, Giovanni Giuliadori, Bruno Papaleo, Alda Mazzei, Rudy Foddìs, Massimo Bergamasco
5. [Component-Based Architecture for Vital Signs Training in Virtual Reality Nursing Education](#)
Marcelo Garcia, Josue Monge-Roque, Elizabeth Paulina Ayala Baño, Margoth Guaraca Moyota, Santiago Manzano Villafuerte
6. [A Bibliometric Study on Extended Reality \(ER\) in Human Resource Management \(HRM\)](#)
Aranganathan P, Sivarethnamohan R, Chithra M, Christina Sheila S

11,00 - 12,00

Session 10 - Room Camelia

XR for Art, Design, and Entertainment (Thematic Session #8)

Chair: Christian Geiger

1. [Intangible Heritage meets Virtual Reality: an explanatory study on the use of immersive technologies for live performances](#)
Flavio Tonetto, Luca Cinti, Filippo Antonini, Cristian Della Chiara Della Chiara, Stefano Murciano, Luca Modugno, Roberto Pierdicca
2. [Responsive Procedural Morphologies Adapting to Environmental Factors in XR](#)
Başak Çakmak, Aslı Çekmiş
3. [VR Enhanced Music Performance: Immersive Tools for Artistic Research. The experimentation of a VR Version of Tierkreis by K. Stockhausen](#)
Lamine Amour, Andrea Bareggi, Simonetta Sargenti
4. [VRStory - A Collaborative Virtual Reality Tool for Storyboarding](#)
Thomas Lüttich, Holger Reckter, Elif Şener
5. [Urban Augmentations: A Technical Framework for Implementing Large-Scale XR Experiences](#)
Narmeen Marji, Juho Hamari, Mattia Thibault
6. [From Tool to Space: Towards Classifying New Media Art](#)
Charlotte Triebus, Jonathan Harth, Ivana Druzetic-Vogel, Christian Geiger

12,00 - 13,00

Company Session - Room Camelia

Chair: Giulia Pellegrino

Lunch

14,30 - 15,40

Session 11 - Room Ibiscus

Exploring eXtended Reality for Serious Games: Design, Technology, and Applications (Thematic Session #6)

Chair: Eleonora Minissi

1. [Usability Evaluation of "Paint!" VR Game Designed for Frail Older Adults](#)
Lora Appel, Barbora Darmová, Anjena Inthiran
2. [Use of an interactive augmented reality concept map tool in education: a pilot study on teachers' opinions](#)
Clarissa Lella, Raffaele Di Fuccio, Erika Inderst
3. [Innovative Augmented Reality Applications for Cardiac Physiology and Pathophysiology Education: An Interactive Approach for Coronary Anatomy and Interventional Procedures](#)
David Buyck, MS, Madeline Wethington, MS, Amanda Devos, Paul Iaizzo
4. [Comparing Traditional and eXtended Reality-based Learning: Effects on Performance, Emotions, and Cognitive Aspects](#)
Marta Mondellini, Sara Arlati, Kashif Mahmood, Simone Pizzagalli, Walter Terkaj, Marcello Urgo
5. [ReplEye: An Open-Source Pipeline for Gathering, Analyzing, and Replaying Eye-Tracking Data with MRTK](#)
Deyrel Diaz, Samaneh Zamanifard, Matias Volonte, Andrew Duchowski
6. [Development of a Multi-User Virtual Reality System for Military Band Jump Training](#)
Rolando Marcelo Alvarez Veintimilla, David Rivas Lalaleo
7. [BabloAI: Generative AI for XR in Education](#)
María Lucia Barrón Estrada, Ramón Zatarain Cabada, José Antonio Garcia Serrano, Aldair Gonzalez Robles, Manuel Alberto Sotelo Rivas
8. [CrossNetVR: A Virtual Learning Environment for Teaching T568-A and T568-B Network Cabling Standards Using Unreal Engine](#)
Elizabeth Paulina Ayala Baño, Margoth Guaraca Moyota

14,30 - 15,40

Session 12 - Room Camelia

Crafting Virtual Humans for Immersive XR Applications (Thematic Session #3)

Chair: Francesco Strada

1. [Exploration of Secure Attachment Priming in Immersive Virtual Environments](#)
Eleonora Lanfranco, Erica Santaguida, Massimo Bergamasco, Marcello Carrozzino, Federico Vanni
2. [3D Avatar Reconstruction System with Real-time Facial Expression for Teleconference Application in Augmented Reality](#)
Febrina Wijaya, Robin Fischer
3. [Transformation of MetaHumans for a Generic XR Workflow](#)
Christian Zimmer, Jürgen Gallinat, Christian Geiger, Lucie Kruse, Lara Rolvien
4. [From Words to Emotions: Evaluating Text-to-Motion Body Language for Believable Emotions in Virtual Humans](#)
Stefano Calzolari, Ciro Annicchiarico, Francesco Strada, Andrea Bottino
5. [A Survey of Memory Models for Virtual Humans: From Psychological Foundations to Computational Architectures](#)
Alessandro Emmanuel Pecora, Francesco Strada, Andrea Bottino
6. [A Framework for Enhancing Emotion Expression in Non-Playable Characters Using Large Language Models](#)
Marco Ligabue, Susanna Brambilla, Laura Anna Ripamonti, Francesco Bultrini, Andrea Zaniboni, Nunzio Alberto Borghese
7. [MoodyNPC: Personality & Facial Expressions for Virtual Humans](#)
Francesco Martinelli, Nunzio Alberto Borghese, Francesco Bultrini, Laura Anna Ripamonti, Andrea Zaniboni

Coffee break

16,00 - 17,00

Panel 2 - Room Camelia

Chair: Carola Gatto

Panelist: Serena Di Gaetano, Claudio Santangelo, Lucia Modesto, Giulia Severini and Barbara Davidde

Tradition and Innovation: Heritage Conservation in the Digital Era. The Transformative Impact of AI

17,00 - 18,00

Session 13 - Room Ibiscus

eXtended Reality for Cultural Tourism Sustainability (Thematic Session #4)

Chair: Ryan Yung and Alessandra Marasco

1. [Exploring the Impact of Virtual Reality Immersion on Visitor Experience and Learning in Museums](#)
Silvia Ceccacci, Thomas Agostinelli, Catia Giaconi, Maura Mengoni
2. [Integrating Extended Reality in Cultural Heritage: From Visitor Experience to Sustainable Engagement](#)
Lorenzo Arena, Lorenzo Barberis, Viktor Malakuczi, Vlasios Kasapakis, Ioannis Chatzigiannakis
3. [Experiencing digital travel vs. substituting physical travel with digital travel](#)
Ingvar Tjostheim
4. [Playing Through the Past: AR and Gamification in the Cultural Heritage Tour Meppen 1638](#)
Ivana Druzetic-Vogel, Patrick Kruse, Kim Tischer, Christoph Vogel
5. [Digital Twins for Extended Reality Tourism: User Experience Evaluation Across User Groups](#)
Maximilian Warsinke, Francesco Vona, Tanja Kojić, Jan-Niklas Voigt-Antons, Sebastian Möller

17,00 - 18,00

Session 14 - Room Camelia

Digital Twin and Smart Virtual Representations for Cultural Heritage (Thematic Session #5)

Chair: Matteo Greco

1. [Methodologies and Analysis of Work in BIM in Archaeology: Review and Future Perspectives](#)
Juan Jose Moyano Campos, Juan Enrique Nieto-Julián, Daniela Oreni
2. [A virtual learning experience in Sustainable Fashion: Escape Room](#)

Diana Sarai Hernandez Manzo, John Isaacs, Verda Munir

3. [Modeling Virtual Reality Adoption in Cultural Heritage: Identifying Key Constructs from Literature](#)

Tommasina Pianese, Piera Buonincontri, Domenico De Fano

5. [IoT-Driven Digital Twin based on VR for Smart Monitoring of Cultural Heritage Sites: La Grotta degli Animali in Florence Case Study](#)

Mohamed Emara, Marta Castellini, Cristiano Riminesi, Mohamed A. Jaziri, Andrea Pandurino, Alessandro Conti, Lidia Fiorini, Adele Meucci, Riccardo Colella, Francesco Taurino, Davide Zecca, Francesco Giuri, Matteo Greco, Alessandra Chirivì, Grazia Tucci, and Alberto Bucciero

6. [New Contributions to the Study of the Dolmen of Alberite, Villamartín \(Cádiz, Andalusia\)](#)

Alejandro Muñoz Muñoz, Jesús Corrales Díaz

Friday June 20, 2025

8,30 – 9,30

Poster Session 3

Chairs: Carola Gatto, Maria Cristina Barba

1. [The Reality of Silk: an AR Try-On System for Traditional Chinese Costumes](#)
Jingxiang Lin, Xie Qichen, Nga-man Cheung, Yangping Zhou, Tracy Mok
2. [Enter the Hindenburg: Experiencing Cultural Heritage by Social Interaction in Hybrid Space](#)
Marius Butz, Daniel Hepperle, Wladimir Hettmann, Simon Janzer, Christian Felix Purps, Matthias Wölfel
3. [Integration of BIM and Augmented Reality for the recovery of historical built heritage: a research perspective](#)
Vincenzo Ambrosio, Elena Cantatore, Vincenzo Valente, Fabio Fatiguso
4. [A web-based interactive digital twin for marine robotics education](#)
Leonardo Bobadilla, Daniel Correa, Jose Fuentes, Tero Kaarlela, Paulo Padrao
5. [Getting Serious About Serious VR Games for People with Dementia: A Scoping Review of Applications Designed to Date](#)
Samantha Lewis-Fung, Jacob Loat, Krisha Malik, Lora Appel
6. [Development of VR Physics Labs at Metauniversity](#)
Yevgeniya Daineko, Madina Ipalakova, Akkyz Mustafina, Dana Tsoy, Umitkhan Turzhanov, Miras Uali
7. [Concentration in Learning: VR vs. Traditional](#)
Erik Sindonen, Olga Israelian
8. [Gamification strategies as a motivational factor for learning in high school students: a preliminary study](#)
Julio Alfonso Mocha Bonilla
9. [From 2D drawings to 3D representations in immersive environments: the Sketch to Pipe app](#)
Lorenzo Sommaruga, Nadia Catenazzi, Chiara Locatelli
10. [From Gamification to Virtual Reality: The Evolution of the Gamified Education Networking Learning Management System through Design-Based Research in Simulation-Based Education](#)
Sandy Abdo, Andrei Torres, Venkat Bhat, Adam Dubrowski, Bill Kapralos
11. [Science Dissemination in STEAM Projects - a Virtual Reality educational game on electrical circuits](#)
Daniela Gomes, Pedro Pombo, Mário Vairinhos
12. [Comparison of Digital Restoration and Reconstruction Techniques in Frescoes: two Apulian Case Studies](#)
Ileana Riera Panaro, Giorgia De Giuseppe, Laura Corchia, Federica Faggiano, Carola Gatto, Lucio Tommaso De Paolis
13. [Expanding the Stage: a preliminary discussion of the impact of Extended Reality on the Performing Arts](#)
Laura Corchia, Giorgia De Giuseppe, Federica Faggiano, Carola Gatto, Ileana Riera Panaro, Giovanna Ilenia Paladini, Lucio Tommaso De Paolis
14. [Pro-adaptive Cognitive Assistive Technology: Concept and Application in Reading Support for ADHD](#)
Sarah Büscher, Kyra Kannen, André Frank Krause, Christian Ressel, Nele Wild-Wall
15. [Sound Caption for Immersive Experience](#)
Chiara Evangelista, Marina Tanaka, Massimo Bergamasco, Marcello Carrozzino
16. [ChatGPT Voice as a Tool for Improving Pronunciation in English: A Case Study of Spanish-Speaking University Students](#)
Julio Mocha, Genesis Mocha Altamirano
17. [AI-based Services to Support Language-Learning for Deaf and Hearing Individuals in Immersive XR Settings](#)
Nikolaos Tantaroudas, Ilias Karachalios, Andrew McCracken, Evangelos Papatheou
18. [Autonomous Virtual Reality Integration for Active Thermography: Engineering Education and Experimentation](#)
Ilario Strazzeri, Camila Barros, Anthonin Demarbaix, Arnaud Notebaert, Julien Quinten, Florian Smets
19. [Information Systems and Digital Twin for Cultural Heritage preservation management](#)
Alberto Bucciero, Marta Castellini, Alessandro Conti, Lidia Fiorini, Adele Meucci, Marco Mozzo, Cristiano Riminesi, Grazia Tucci
20. [Addressing on-the field co-registration for AR assisted maintenance operation: the AURORA project](#)
Nazaro Aversano, Guido Bozzelli, Laura Bozzelli, Maurizio De Nino, Francesco de Pandi, Salvatore D'Onofrio, Francesca Matarese, Salvatore Musto, Stefano Ricciardi
21. [UAVs for the Study and Enhancement of Cultural Heritage: A Scoping Overview](#)

Federica Faggiano, Marco Calò, Laura Corchia, Giovanni D'Errico, Carola Gatto, Giovanna Ilenia Paladini, Lucio Tommaso De Paolis

22. [The Role of Social and Neural Synchrony in Enhancing Learning and Collaboration in VR Serious Games: a Two-Study Protocol](#)
Maria Eleonora Minissi, Mariano Alcañiz, Clara Garcia, Alejandro Trillo
23. [Virtual Reality Escape Room for Adolescents with Autism Spectrum Disorder](#)
Ersilia Vallefuoco, Elisabetta Ponticelli, Giovanna Gison, Alessandro Pepino
24. [Designing a Digital Twin of the Gut Microbiome: A Data-Driven Approach for Personalized Medicine](#)
Angelo Corallo, Massimiliano Gervasi, Matteo Minelli, Mauro Minelli, Giulia Pellegrino, Nicolò Gianmauro Totaro
25. [Cognitive Framing in Virtual Environments: How Experts Perceive and Evaluate Spatial Models](#)
Sinem Kirkan, Aslı Çekmiş Kanan
26. [Dynamic Training Environments in XR A User-Centered Adaptive System](#)
Michał Śliwicki, Mikołaj Maik, Jakub Ścieszka, Paweł Sobociński, Jakub Flotyński
27. [Using computer vision in Mixed Reality games](#) Michał Śliwicki, Jarogniew Rykowski, Julian Zieliński, Jakub Gromadziński
28. [Avateacher Enhancing Industrial Maintenance with private-Network LLMs and Retrieval-Augmented Generation](#)
Flora Amato, Nazaro Aversano, Francesco Bonavolontà, Salvatore D'Onofrio, Claudio Dotani, Mauro Galateo, Luciano Rosario Grimaldi, Salvatore Musto, Francesco de Pandi
29. [Hand Gesture Recognition for Virtual Reality: An LSTM-Based Approach for Multi-Class Classification](#)
Nazaro Aversano, Francesco Bonavolontà, Enzo Caputo, Annalisa Liccardo, Francesca Matarese, Salvatore Musto, Rosario Schiano Lo Moriello, Giorgio de Alteriis, Francesco de Pandi
30. [Detecting the Fingers of Adult Braille Readers Using Ultraleap's Virtual Reality Hand Tracking System](#)
Michael Trembl, Wolfgang Zagler, Mike Busboom

9,30 - 10,30

Keynote Speaker 4 - Room Camelia

Sofia Pescarin - National Research Council (ISPC-CNR), Italy

Concepts-based design of XR applications

Coffee break

11,00 - 13,00

Project Session - Room Camelia

Chair: Valerio De Luca

Lunch

14,30 - 15,30

Session 15 - Room Ibiscus

Virtual Reality

Chair: Ileana Riera Panaro

1. [Navigating Social Biases through Virtual Reality Perspective Taking: Exploring the Mediating Role of Outgroup Perspective Taking](#)
Caglar Yildirim, Sercan Sengun, D. Fox Harrell
2. [Technology for Situation Awareness Training: New Frontiers](#)
Stella Polikarpus, Jaanika Puusalu
3. [Embodiment Under Constant Force Applied by a Force Feedback Device for Spatially Augmented Forearm](#)
Ryunosuke Sawahashi
4. [Virtual Reality in Geoscience: An Overview](#)

Douglas Bazo de Castro, Diego Fernando Ducart, Ítalo de Sena, Gabriel Santos da Mota, Jefferson Picanço, Christian Silva

14,30 - 15,30

XR Competition - Room Camelia

Chair: Giovanni D'Errico

Coffee break

15,50 - 16,50

Panel 3

Chair: Paolo Baldi

Panelist: Fabio Aurelio D'Asaro and Corrado Claverini

XR: Ethics, logics, representation

16,50 - 17,30

Conference Closing - Room Camelia

Keynote Speakers



Immersive Collaboration: An Overview of Key Research Issues in XR Technologies and Use Cases

Patrick **Bourdot**

PRESIDENT OF EUROXR ASSOCIATION

ABSTRACT

This talk presents an overview of several research projects conducted with my team in the field of immersive collaboration using XR technologies. Depending on the use cases, we will explore various challenges associated with immersive collaboration in Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) systems. Our general focus is on co-located user immersion during collaborative tasks, spanning a range of setups—from multi-stereoscopic CAVE-like system to VR and AR headsets.

These research efforts address key questions related to user co-habitation, dual presence, spatial consistency, and workspace partitioning. These challenges are examined through two primary use cases: immersive training for collaborative assembly and collaborative immersive analytics of complex data. For each project, we present the main outcomes as well as the limitations, and from these, we draw several challenging research perspectives for the future of immersive collaboration.

SPEAKER BIOGRAPHY

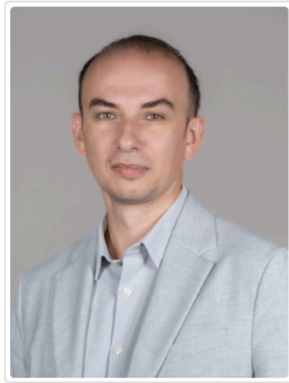
Research Director at CNRS, the French National Centre for Scientific Research, Dr. Bourdot is the founding leader of the VENISE team (www.limsi.fr/venise), a Virtual & Augmented Reality research group he established in 2001 within the former CNRS/LIMSI lab, now part of the LISN lab at the University of Paris-Saclay.

His primary research interests in eXtended Reality include levels of detail, virtual navigation, 3D reconstruction, multimodal and collaborative XR interactions, and associated user perception and cognition challenges. In terms of XR applications, his work focuses on fields such as Design and Engineering, Bioinformatics, Computational Fluid Dynamics, Science Education, and Autism Spectrum Disorder.

Dr. Bourdot has coordinated scientific partnerships and led numerous research projects funded by the French government (RNTL, ANR) or regional and national research institutes (CNRS, DIGITEO). He is the founding secretary of AFRV, the French association for Virtual & Augmented Reality.

He coordinated the participation of CNRS labs in the INTUITION network on VR/AR under the 6th IST European Framework (2004–2008) and is a founding member of EuroVR. A member of its Executive Committee since its inception in 2009, he served as Vice-President for “Academic Issues & Conferences” from 2016 to 2021. After the association was renamed EuroXR (European Association for eXtended Reality - www.euroxr.org), he became its third President, a position he held for the past three years.

Dr. Bourdot has published extensively in international journals and conferences on Virtual & Augmented Reality and Human-Computer Interaction, contributing significantly to these research domains.



The Future of XR Healthcare: Bridging the Gap Between Technology and Personalized Medicine

Filip **Górski**

POZNAŃ UNIVERSITY OF TECHNOLOGY, POLAND

ABSTRACT

The integration of XR technologies into healthcare has dramatically altered the landscape of medical practice, patient treatment, and medical engineering. This keynote will explore practical applications across three pivotal areas: XR for doctors, where anatomical visualizations help in preparation and smooth realization of complex surgical procedures and training; XR for patients, such as phobia treatment, orthopedic rehabilitation and personalized product configuration; and XR for medical engineers, showcasing the use of digital twins and virtual try-ons for innovative medical solutions. Several case studies will be reviewed, demonstrating the real-world impact of these technologies. The presentation will also address technical aspects of XR application development, particularly the creation of flexible, dynamic content with help of AI, ensuring adaptability and personalization in healthcare settings. This exploration illustrates how XR can transform healthcare into a more intuitive, effective, and patient-centric field.

SPEAKER BIOGRAPHY

Filip Górski, DSc., PhD., BEng., serves as an Associate Professor at the Faculty of Mechanical Engineering at Poznań University of Technology, Poland. He leads the Division of Additive Manufacturing and Virtual Reality and acts as Vice-Dean for Science within the Faculty. His expertise lies in 3D scanning and printing technologies for medical and biomedical engineering, as well as virtual and augmented reality for both industrial and medical applications. He is also proficient in automating design processes in CAD systems and employing reverse engineering techniques.

Dr. Górski has been involved in numerous research projects, often in a managerial role, collaborating with industrial companies and national research centers. His international collaborations extend to scientists from countries like Great Britain, Mexico, Ukraine, Romania, Slovakia, India, and Spain. He has received multiple prestigious grants and awards, notably for his development of the AutoMedPrint technology, which focuses on the automated design of affordable 3D printed prosthetics and orthotics for patients of all ages. He has authored or co-authored nearly 150 publications, including five books, and has developed several software solutions that are now implemented in industries, hospitals, and patient care facilities.



Concepts-based design of XR applications

Sofia **Pescarin**

ISPC - NATIONAL RESEARCH COUNCIL, ITALY

ABSTRACT

Although culture is generally not perceived as a priority, it is recognised as a transformative process, triggering of emotions, that in turn can drive motivation, and motivation can inspire action and behavioural change. Promoting culture is therefore crucial, especially if digital technologies are used to strengthen and support this active process, designing XR applications on three pillars: interaction, embodiment and storytelling. Unfortunately, these elements are not enough to let culture provoke its effects. Users might be too far from the historical and artistic context, moreover, they might find it irrelevant. For this reason, designing Digital Heritage applications, taking as reference cognitive and emotional goals and adopting Universal Concepts as guidelines could reconnect users, providing awareness and motivation. Concepts such as love, death, and similar ideas are called "universal" because they refer to experiences or emotions that transcend cultures and are similarly recognized by people worldwide. Some are stronger, immediately recognized and not only activate curiosity and emotions, but they also solicit action, leading to a behavioural change. Examples of Interactive Applications with and without the adoption of Universal Concepts will be described, demonstrating the potential of this approach for the design of Digital Heritage applications.

SPEAKER BIOGRAPHY

Sofia Pescarin is senior researcher at CNR ISPC (Istituto di Scienze del Patrimonio Culturale), in Florence, where she is chairing the group of the Digital Heritage Innovation Lab (DHiLab). She has a degree in Humanities (Topography of Ancient Italy), a master in Exhibition Design and PhD in History and Computing. She has been a researcher from 2000 to 2019 at CNR ITABC (Istituto di Tecnologie Applicate ai Beni Culturali) where she has co-chaired the Virtual Heritage Lab (VHlab). She teaches "Interaction Media Design" (INF 01) at the Master "Digital Humanities and Digital Knowledge" of the University of Bologna. She is since 2017 Chief Editor of the Journal Elsevier "Digital Application in Archaeology and Cultural Heritage" (DAACH). She has been the technical coordinator of the project "virtual museum of the Scrovegni Chapel" Padova (2003). She has obtained the e-content award with the open source web3d project "Virtual Rome". Between 2008 and 2017, she was the scientific director of "Archeovirtual", an exhibition of interactive projects applied to Cultural Heritage, within the Mediterranean Expo BMTA in Paestum. She has also chaired the national summer school of "Virtual Archaeology", supported by CNR and University of Padova, until 2017. Between 2011 and 2014 she has been the scientific coordinator of the FP7 Network of Excellence V-MUST.NET, dedicated to Virtual Museums. During V-MUST, she has been curating the international exhibition "Keys To Rome" (Le chiavi di Roma) in 2014, organised parallelly in 4 museums. She has coordinated the Italian research unit of the H2020 REVEAL project, dedicated to Videogames and Game Based Learning, during which she has worked at the game design of "A Night in the Forum" (Una notte nel Foro) for Playstation VR. Currently she is the scientific coordinator of the EU project PERCEIVE (Perceptive Enhanced Realities of Colored collEctions through AI and Virtual Experiences) and WP leader of the PNRR project CHANGES. She has written more than 100 scientific papers. She has published the books: "Roma. Guida alla città eterna" Whitestar (1997), "Reconstructing ancient landscape" (Ed. Archaeolingua, 2009), "ARCHEOFOSS" (Archeologia e Calcolatori: 2010), 2013 Digital Heritage Congress Expo Vol 3 (ed. CNR 2013), "Keys to Rome: Roman culture, virtual museums" (ed.CNR, 2014), editing the special issues: "Digital Heritage Interactive Applications" (2019), and "Digital Heritage Science and Infrastructures". Her last book "Videogames, Ricerca, Patrimonio culturale" (ed. open access Franco Angeli 2020).

Conference venue



HOTEL BASILIANI - RESORT & SPA

Via Renis 11, 73028 Otranto LE, Italy

Located just 800 meters from the heart of Otranto, one of Salento's most famous seaside resorts, the Basiliani Hotel offers a perfect blend of comfort and charm. Built using traditional local stone and featuring spacious pergolas and terraces, the hotel is surrounded by picturesque paths and avenues.

The hotel boasts a stunning wellness center, Il Melograno, the largest of its kind in Salento. Thanks to its prime location, guests can easily explore nearby attractions, including the Bauxite Quarry, Otranto's historic center with its castle and medieval cathedral, the pristine white beaches of Alimini, the Punta Palascia lighthouse (the easternmost point of Italy), and Lecce, the capital of Italian Baroque.

Guests also have access to a private beach, Lido Balnearea – Alimini, complete with beach umbrellas and sunbeds, reachable via a shuttle service operating at scheduled times.

Social events

WELCOME COCKTAIL AT THE HOTEL BASILIANI TERRACE TUE JUNE 17, 19:30 - 20:30

We are delighted to welcome all conference participants to a **Welcome Cocktail** on the beautiful terrace of Hotel Basiliani, overlooking the historic town of Otranto. Join us on this special occasion to enjoy light refreshments, stunning views, and informal networking in a relaxed atmosphere. We look forward to sharing this convivial moment with you as we begin our days of exchange and discussion.

TOUR OF OTRANTO WED JUNE 18, 19:30 - 20:30

As part of the XR Salento 2025 program, we are pleased to invite participants to a **guided cultural tour of Otranto**. This experience will offer a unique opportunity to explore the city's rich historical and cultural landscape—from the Romanesque Cathedral to the Aragonese Castle and the atmospheric old town. Situated at the easternmost point of Italy, Otranto has long been a crossroads of civilizations, shaped by Greek, Byzantine, and Norman influences. We look forward to sharing with you the stories and heritage that make this city a true meeting point between East and West.

GALA DINNER THU JUNE 19, 19:30 - 23:00

We are pleased to invite conference participants to a **Gala Dinner** at [La Grotta del Conte](#), a renowned seaside restaurant in Castro, just a short distance from Otranto. The evening promises a refined culinary experience in a stunning coastal setting, showcasing the rich flavors of the local tradition.

Please note that the dinner is not included in the conference registration fee and costs €70 per person.

The menu is available [for download](#).

For any allergies or dietary restrictions, do not hesitate to contact us at info@xrsalento.it.