

# Preface

This book contains the written contributions to the First International Conference on Augmented and Virtual Reality (SALENTO AVR 2014) that has held in Lecce (Italy), during September 17–20, 2014.

The aim of the SALENTO AVR 2014 has been to bring a community of researchers from academia and industry, computer scientists, engineers, physicians together in order to share points of views, knowledge, experiences and scientific and technical results, related to state-of-the-art solutions and technologies on virtual and augmented reality applications for medicine, cultural heritage, education, industrial sectors, as well as the demonstration of advanced products and technologies.

The papers spans topics from virtual/augmented/mixed reality (VR/AR/MR) to 3D user interfaces and the technology needed to enable these environments to a wide range of applications (medical, entertainment, military, design, manufacture, maintenance, arts, and cultural heritage).

The topics of the SALENTO AVR 2014 Conference were:

- input devices for VR/AR/MR
- 3D interaction for VR/AR/MR
- computer graphics techniques for VR/AR/MR
- advanced display technology
- haptic interfaces
- audio and other nonvisual interfaces
- tracking and sensing
- distributed VR/AR/MR
- VR toolkits
- modelling and simulation
- physical modelling
- perception and presence in virtual environment
- human-computer interface
- human-computer Interaction
- teleoperation and telepresence
- intuitive interactions and interfaces
- artificial life art
- interactive art
- navigation
- natural user interface
- gestural-based interaction
- interaction techniques for AR/MR
- collaborative learning environment
- augmented and mixed reality
- augmented visualization on mobile
- real-time 3D body reconstruction

- real-time capturing, compression, and rendering
- real-time gesture reconstruction
- body and facial animation
- behavioral simulation
- game design and development
- immersive gaming
- serious games
- VR/AR in minimally invasive surgery
- medical imaging processing, analysis, and visualization
- VR in preoperative surgical planning
- VR in surgical training
- VR in rehabilitation
- virtual patient
- VR/AR in education
- VR/AR in cultural heritage
- virtual museums and exhibitions
- VR in military simulation
- VR in spatial simulation
- VR in industrial simulation

We received 76 submissions from 15 countries. Each was been evaluated by at least two members of the Program Committee and external reviewers. Based on these reviews, 28 papers were selected for long oral presentations and 9 for poster talks. In addition to the contributed papers, 2 tutorials and 3 keynote speaker presentations were included in the conference program.

The geographical spread of the different institutions presenting their research was: Belgium, Brasil, Canada, Estonia, Italy, Kazakhstan, Latvia, Lithuania, Mexico, Pakistan, Poland, Sweden, Taiwan, UK and USA.

We are very grateful to Program Committee members for volunteering their time to review and discuss the submitted papers and doing so in a timely and professional manner. We extend our thanks to University of Salento and other sponsors for providing support in the organization of the event. Last but not least, we would like to thank all authors for presenting their work at the conference and we hope that all participants enjoyed the stimulating discussion as well as the opportunity to establish fruitful interactions.

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