EDITORIAL

Dear readers,

Virtual reality and Augmented Reality have invaded our life within a few years, from the smallest (Smartphones) to the largest (Cinema) through the immersive systems such as "Cave". Mark Bolas, from Institute for Ceative Technologies - USC United States (Where Oculus Rift idea was born), said: “Augmented Reality is Crossing the Chasm from research to Widespread adoption”.

Laval Virtual - www.laval-virtual.org - since 1999, has been presenting the very best in the world in the context of these innovative technologies. In 16 years we have rewarded international industries and researchers for their major innovations like Wiimote, the Kinect, Oculus Rift and multi-touch screens.

Included in this IJVR issue, an excerpt of what's best in 2014 in the field of real-time 3D. Indeed, we have selected the best papers of the 2014 International Congress VRIC Laval Virtual - Virtual Reality International Conference - to give you an overview of the advanced technology of virtual reality.

You will discover, thanks to the authors of talent spread all over the world:

- An interactive museum application dedicated to historical scale models that comes from a joint work between multidisciplinary teams;
- An interface that helps understand the correspondence between the patient and medical tomographic images;
- Two artworks, *Recognition*, an outdoor interactive installation and *Instrumental,* a live dance performance. In both works a performing agent has learnt sequences of movement from a dancer and uses these to stand in for a human performer;
- A Markerless 3D Interaction system in an Unconstrained Handheld Mixed Reality Setup;
- An innovative approach, called “the I2I method”, aiming to design compelling Virtual Reality or Augmented Reality experience;
- The potential role of Virtual Agents in neurofeedback (NF) systems, which constitute an important paradigm for Brain-Computer Interfaces (BCI).

I hope you’ll enjoy reading and I look forward to seeing you in 2015 to extend the adventure.

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The papers you’ll read in that IJVR special issue :

- *Museum Augmented Interface for Historical Scale Models: Towards a New Way for Cultural Heritage Promotion*, Benjamin Hervy & al., LUNAM Université, Ecole Centrale Nantes, IRCCyN UMR CNRS 6597, France
- *Virtual Slicer: Visualizer for Tomographic Medical Images Corresponding Handheld Device to Patient*, Sho Shimamura & al., Graduate School of Science and Technology, Keio University, Yokohama, Japan
- *Learning to Replace a Human: a Virtual Performing Agent*, John McCormick & al., Deakin University Australia
- *Markerless 3D Interaction in an Unconstrained Handheld Mixed Reality Setup*, Daniel Fritz & al., Vienna University of Technology, Austria
- *How to design compelling Virtual Reality or Augmented Reality experience ? Simon* Richir & al., Arts et Metiers ParisTech, LAMPA, France
- *Virtual Agents in Brain-Computer Interfaces*, Marc Cavazza & al., School of Computing, Teesside University, Middlesbrough, United Kingdom