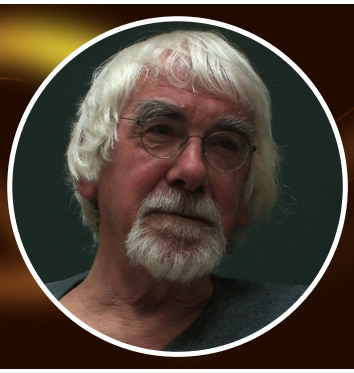
Anton Nijholt, J Comput Eng Inf Technol 2015, 5:4(Suppl)
http://dx.doi.org/10.4172/2324-9307.C1.007



3rd International Conference on

# Computer Graphics & Animation

November 07-09, 2016 Las Vegas, USA



**Anton Nijholt**
*University of Twente, Netherlands*

## Playful and artistic smart material interfaces

In this talk we draw attention to the emerging field of smart material interfaces. These novel composites, that in some cases are already celebrated as the answer for the 21st century technological needs are generally referred to as materials that are capable of sensing the environment and actively responding to environmental changes by changing their physical properties. That is, smart materials have physical properties that can be changed or controlled by external stimuli such as electric or magnetic fields, light, temperature or stress. Shape, size and color are among the properties that can be changed. Smart material interfaces are physical interfaces that utilize these materials to sense the environment and display responses by changing their physical properties. Some common smart materials appear in the form of polymers, ceramics, memory metals or hydro-gels. This talk aims at stimulating research and development in interfaces that make novel use of such smart materials. Smart material interfaces can be applied in different domains and used for different purposes: functional, communicative and creative. We will also discuss our own experiences with smart material interfaces. We will show examples of creative artifacts designed by students of the Fine Arts Academy in Venice and by primary school children using thermo-chromic and conductive ink for the design of 'electronic' Origami.

### Biography

Anton Nijholt received his PhD in computer science from the Vrije Universiteit in Amsterdam. He held positions at various universities, both inside and outside the Netherlands. In 1989 he was appointed Full Professor at the University of Twente in the Netherlands. His main research interests are Human-computer interaction with a focus on playful interfaces, entertainment computing, and humor generation. He edited various books, most recently on playful interfaces, social collective intelligence, and Brain-computer interaction. A new book on 'Playable Cities' will appear in 2016. Together with many of the more than fifty PhD students he supervised, he wrote numerous journal and conference papers on these topics. He did acted as program chair and general chair of many large international conferences, including ACE (Advances in Computer Entertainment), ICMI (International Conference on Multimodal Interfaces), ICEC (International Conference on Computer Entertainment), ACII (Affective Computing and Intelligent Interaction), CASA (Computer Animation and Social Agents), INTETAIN (Intelligent Technologies for Interactive Entertainment), FG (Faces & Gestures), and IVA (Intelligent Virtual Agents). Recent (2015-2016) keynote talks at various conferences have been on humor engineering in smart environments, playable cities and on the future of brain-computer interfaces for non-clinical applications. He is a Chief editor of the specialty section Human-Media Interaction of the journals Frontiers in Psychology, Frontiers in Digital Humanities and Frontiers in ICT. He is co-editor of the Springer Book Series Gaming Media and Social Effects. Since 2015 he is also Global Research fellow at the Imagineering Institute, Iskandar, Malaysia, where he continues his investigations in playfulness and humor in interfaces and smart environments.

a.nijholt@utwente.nl

**Notes:**