

Proceedings

3rd International Conference on Digital Interactive Media in Entertainment and Arts

DIMEA 2008

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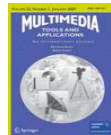
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Message from the DIMEA 2008 General Conference Chairs

Entertainment and Art are constantly evolving. They are tied to no particular platform, format or place in time, but shaped by the visionaries, innovators, entrepreneurs and brand developers who embrace technology, look to the future and inspire creativity. As a result, new ideas and art forms are brought to life. The recent significant advances in computer entertainment, multi-player/online gaming, technology-enabled art, culture and performance do create new forms of entertainment practices and artistic expression that attract, immerse and absorb their participants. The phenomenal success of such a “culture” to initiate a mass audience in patterns and practices of its own consumption has supported the evolution of an enormously powerful mass entertainment, digital art and performance industry extending deeply into every aspect of our lives, leading further to major societal and business contacting changes.

The ACM Special Interest Group on Computer-Human Interaction, Singapore Chapter, has recognized the major role of digital interactive media technologies towards such effect, and has recently initiated the annual International Conference on Digital Interactive Media in Entertainment and Arts (DIMEA) that spans these breath-taking emerging technologies and application areas and envisions bringing together both research and commercial communities, promoting digital interactive media research and practice in the technology-mediated entertainment and art worlds.

On behalf of the Organizing Committee of DIMEA 2008, we would like to welcome you to the 3rd ACM International Conference and Exhibition on Digital Interactive Media in Entertainment and Arts (DIMEA 2008), to be held on September 10-12, 2008, at Athens Information Technology in Athens, Greece. DIMEA 2008 is organized jointly by Athens Information Technology (AIT), The Singapore Chapter of ACM SIG on Computer-Human Interaction (SIGCHI, Singapore Chapter) and the Society for Excellence and Innovation in Interactive Experience Design (InExDe), in cooperation with ACM SIG CHI.

We would like to take this opportunity to extend our thanks and appreciation for their support to all members of the Organizing Committee and to the dedicated and timely efforts of the International Technical Program Committee. With the support and dedication of all of them, DIMEA 2008 has evolved to offer an outstanding program to its conference participants, including four keynote talks, high-quality oral sessions and interesting art work exhibits and demos, two Special Sessions and one Technical Workshop in focused technological areas, five Tutorials from distinguished speakers and two Hands-on Workshops.

Furthermore, we would like to thank our sponsors and supporters, without the help of which DIMEA 2008 would not be feasible: to INTRALOT, IT Services and Telmaco, our corporate sponsors, to the Editors of the Journals: Multimedia Tools and Applications, Springer and ACM Computers in Entertainment, our technical sponsors, to our communication sponsors for the wide publicity and awareness of the conference: PC Magazine, +design, onLine, ICTplus, Γραφίστας + Web Design, our communication supporters: Institute of Communication and ALLConference.COM, our creative sponsor: Linakis + Associates and our network infrastructure supporter: Hellas On Line.

We hope that you will enjoy the conference and wish you all have a great time in Athens! We look forward to welcoming you at Athens Information Technology in September!

The DIMEA 2008 General Conference Chairs

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Message from the Technical Program and Art and Demos Chairs

Douglas Englebart in 1997 said “*In 20 or 30 years, you'll be able to hold in your hand as much computing knowledge as exists now in the whole city, or even the whole world*”. A little more than ten years later, we are well onto our way to that goal. As we get closer to such a vision and dream, the way that we interact with such media and media art and culture will become even more critical. The scientific and research areas addressed by DIMEA pick up on this challenge. The development of media besides extending the limits of human capacity for representation and knowledge, is overcoming their own limits that defined them in their origin. Media form an expanded media of the human mind, and thus calls for a multi-disciplinary research in continual change. During DIMEA 2008, the third in a series DIMEA conference, we wish to present and discuss these radical transformations, and to fortify knowledge of digital entertainment, media art, media technology and interaction for humans.

We greatly appreciate the hard work, collaboration and timely feedback of all the authors who have contributed to DIMEA 2008 by submitting their papers, artworks, entertainment and other demos, of all the International Technical Program Committee members for their dedicated and timely efforts towards reviewing submissions and of all the Special Sessions and Technical Workshop organizers whose efforts have led to a much richer and outstanding DIMEA 2008 conference program. Overall, DIMEA 2008 has attracted 77 regular paper submissions and 42 artworks and entertainment or other demo submissions, 2 Special Sessions and 1 Technical Workshop. Based on a thorough review and selection process carried out by international experts from academia and industry as members of the DIMEA 2008 international technical program committee, a high-quality and outstanding program has been compiled. Regular papers as well as short descriptions of artworks, entertainment and other demos were reviewed by the international technical program committee which consists of 58 experts from all over the world. All the regular papers and artwork short descriptions have been peer-reviewed by three independent international program committee members. Final decisions, after dedicated discussions, were made by the DIMEA 2008 conference chairs, art and demos chairs, technical program chairs and art and demos program committee chairs based on the reviewers' feedback available online via the conference management system. Through earnest and fair discussions, 59 regular papers were accepted as full papers out of the 77 regular paper submissions and 16 artworks and entertainment or other demos were accepted out of the 42 initial submissions. Furthermore, two Special Sessions have been further selected by the Special Session Organizers for organization during DIMEA 2008, which led further to the selection of 8 Special session papers to be presented after peer-review and selection. Finally, one Technical Workshop has been selected for co-organization with DIMEA 2008, hosting 8 selected after a peer review process papers. Overall, 135 submissions were made, 91 of which were selected.

Together we look forward to an exciting future empowered by new digital media devices and interactive media services in digital entertainment and art areas.

Welcome to DIMEA2008!

September 2008

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Keynote Talks

Interacting with Virtual and Augmented Worlds

Nadia Magnenat-Thalmann

MIRALab-University of Geneva, Switzerland

Abstract

For more than three decades, the main focus was to be able to model realistic decors, lights and living beings, particularly humans that should look realistic. Actually, we are aiming for interacting with these worlds in a sensitive and meaningful way. In this talk, the research that is developed on many aspects at MIRALab is presented: interactive modelling of virtual humans, interactive clothes modelling and animation, touching textiles, haptic interaction with hair, gaze interaction with Virtual Humans in Augmented Reality, talking and being recognized by virtual humans with memory and personality models. We will describe what the problems are, what the solutions now are and what the next step to come is. We will show plenty of examples we have developed in our several European Projects in which we are participating.

Biography

Prof. Nadia Magnenat-Thalmann has pioneered research into Virtual Humans over the last 25 years. She obtained several Bachelor's and Master's degrees in various disciplines (Psychology, Biology and Chemistry) and a PhD in Quantum Physics from the University of Geneva in 1977. From 1977 to 1988, she was a Professor at the University of Montreal where she founded the research lab MIRALab. She was elected WOMAN OF THE YEAR in 1987 in Montreal for her pioneering work on Virtual Marilyn, work that has been shown in the MODERN ART MUSEUM in New York in 1988.

She moved to the University of Geneva in 1989, where she founded the Swiss MIRALab, an international interdisciplinary lab composed of about 25 researchers. She has received several scientific and artistic awards for the films she has directed. More recently, she has been elected to the SWISS ACADEMY OF TECHNICAL SCIENCES, selected as a pioneer of Information Technology at the HEINZ NIXDORF MUSEUM'S Electronic Wall of Fame in Germany (www.hnf.de) and has received the CGI'2007 award and the Space'2007 award in Sofia for the film HIGH FASHION IN EQUATIONS, film also selected at the electronic theater at SIGGRAPH'2007.

She is presently taking part in more than a dozen of European and National Swiss research projects and is the coordinator of the Network of Excellence (NoE) INTERMEDIA, the coordinator of the European Research Project HAPTEX and the coordinator of the Marie Curie European Research training network, 3D ANATOMICAL HUMAN. She is editor-in-chief of the VISUAL COMPUTER JOURNAL published by Springer Verlag and co-editor-in-chief of the COMPUTER ANIMATION AND VIRTUAL WORLDS journal published by Wiley.

Overview of the European Commission Research Lines in the Creative and Cultural Sectors in support of Media Content

Roberto Cencioni

Unit INFSO.E2 Content and Knowledge, European Commission

Abstract

Over the last ten years the European Commission has provided sustained support for the creative and cultural sectors through a number of programmes designed to promote creativity, stimulate innovation and develop new technology in support of media content.

The purpose of this talk is to present a broad overview of the main research lines pursued in the last few years, highlighting the most significant developments and outlining future directions and priorities in the coming years.

Biography

Roberto Cencioni is a 1974 graduate from the University of Rome with a degree in statistics and mathematics. Project leader in charge of software development and computer operations within a major telecommunications company, he joined the European Commission in 1977 and worked initially on a large-scale machine translation project. He then managed several teams developing distributed office and communication systems until the early 1990s, when he was entrusted with the co-ordination of R&D programmes in the area of language and speech technologies. Mr. Cencioni's responsibilities included non-research programmes such as eContent and MLIS until 2001, when he was appointed as the head of the DG INFSO unit managing the Safer Internet Action Plan and European projects in the field of information access and multimedia content management. Mr. Cencioni heads the unit entrusted with R&D activities in the area of online content, interactive media and knowledge technologies since January 2003.

Aer()sculpture, Art made out off threatened sky

Ioannis MICHALOU(di)S

Visual Artist

Abstract

Between mountains and clouds meeting each other, nearby a lake changing colors every day, this is the place visual artist Ioannis MICHALOU(di)S has chosen to have his atelier/lab. This first cloud-hunter follows Centaurs' and Nymphs' footprints, lies in wait of air streams, grasping pieces of sky... shaping them, molding them, creating "images of forms" and baptizing them as aer()sculptures. 99,9% air and 0,1% glass is the composition of every aer()sculpture. In Space Technology, this same composition is named silica aerogel. This immaterial material is the lightest solid on planet Earth – with three Guinness Prizes - and is used also by NASA as an excellent heat insulator for spacecrafts and for stardust collection, <http://www.jpl.nasa.gov/stardust/photo/aerogel.html>. MICHALOU(di)S is the first visual artist worldwide bringing this ethereal material in Art, choosing to hunt with it skies and dreams. Despite the fact that the space technology required for the creation of the aer()sculptures costs inevitably a lot in time and money, the results are always amazing: weightless sculptures having the ability to hover or float opening, this way, new paths towards a Space Art era where the light and immaterial opens a dialog or replace the heavy and voluminous.

Each aer()sculpture is - at the same time - a "ready made" but also a masterpiece. And that because the inner world of every aer()sculpture is different thanks to the microcosmos seen throughout the sculpture: airy clouds, fragments of gold, orbits of planets creating "spaces in between". Light and shadow is one more dialogue opened when a light beam transpierces each blue aer()sculpture projecting their transparent goldhue shadow in orbit. If humans are (organic) carbon based representations then every aer()sculpture is an (inorganic) silica based representation. We know that silica -the natural glass, other than the chemical silicone- is a basic component for the industrial fabrication of data storage devices for computers, cf. Silicon Valley, CA. If we accept now the hypothesis that one day silica will be the Bank of all human memory then we can surely say that every aer()sculpture travels also as a Memory Ark.

Past, Present and Future are melted together into an unknown infinity where Space and Time become Logos. Into an endless beginning...

Biography

Ioannis MICHALOU(di)S had received his Ph.D in Visual Arts at the University of Paris I, Panthéon-Sorbonne in 1998. His artistic work till then was characterized by the use of elastic fabric in site specific installations (in situ), environmental art and public art projects. With his work he had participated in a lot of exhibitions and conferences around the world. In 2001 had received the Fulbright Award in order to achieve a post-doc research titled "(IM)material Sculpture" at the Center for Advanced Visual Studies of Massachusetts Institute of Technology. The aer()sculpture project is an Art&Science research concerning the creation of sculptures using silica aerogel, a material used by NASA in space exploration, an immaterial material having the appearance of a fragment of sky. The aer()sculpture project had been presented in a number of international conferences and exhibitions.

Computer Games-based Learning: Research and Initiatives

Michael Meimaris

New Technologies Laboratory, Department of Communication and Media Studies
University of Athens, Greece

Abstract

Besides the long-ago established importance of gameplay as a privileged framework for learning and socialization, which promotes equality alongside with acceptance of differences, motivation through challenge and absence of punishment in the case of errors, modern digital games enjoy a number of additional features such as their enhanced capability to simulate real-world and everyday-life situations in a straightforward fashion, as well as their ability to attract player's engagement through augmented playability mechanisms and balanced game feedback. All these features make digital games a most promising learning tool, in both formal and informal settings and for general and special education alike.

This keynote talk will revolve around research practices and initiatives in the area of computer-based learning, conducted by the New Technologies Laboratory in Communication, Education and the Mass Media of the University of Athens. Major emphasis will be placed on the defined learning framework for a specialized formation program for primary, secondary and special education teachers supporting students with mild mental retardation (MMR) and on the research and development, along the lines of this framework, of digital games-based learning (DGBL) material for MMR students deployed and tested within the special classroom, as part of practical seminars and hands-on activities. This work is conducted in the context of the EPINOISI R&D project (<http://www.media.uoa.gr/epinoisi>).

The digital games-based material for MMR students currently under development within the EPINOISI project is based on game applications already available as well as developed from scratch, covering subject matter relevant to language and mathematics skills for everyday life, interpersonal relations and communication, acquaintance with adult life, selected topics from the curriculum of secondary special education, as well as digital creative activities.

Biography

Professor Michael Meimaris is the founder and director of the New Technologies Laboratory in Communication, Education and the Mass Media of the Faculty of Communication and Media Studies of the University of Athens. He is currently the Director of the University Research Institute of Applied Communication. He has studied Mathematics in the University of Athens and Statistics and computer based Data Analysis in Paris (University Paris VI Pierre et Marie Curie).

His scientific interests involve the application of New Technologies in Communication, Education and the Mass Media, Graphics and Computer Animation, the New Technological Communication Environment and its design, Visual Communication, Multimedia, Open and Distance Education, as well as the training of educators in the New Technologies field.

He is a member of the International Committee and President of the National Committee of the Möbius Awards, member of the Scientific Board of the Maison des Sciences de l'Homme Nord of France, as well as of C.I.T.I. of the University of Lisbon.