GUEST EDITORIAL PREFACE

Special Issue on Advances in Creative Interfaces and Digital Arts

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Only two decades ago, interactive digital media seemed like a brand new research field and an emerging new industry. The Artech Conference was presented in 2004 with a clear objective of bringing the scientific, technological, and artistic community together, while promoting the interest in the digital culture and its intersection with art and technology as an important research field, a common space for discussion and exchange of experiences.

Today, more than a decade into the new millennium, the digital arts field has come of age and is closely connected with new digital media. We are proud to look back and see that in the last ten years the Artech Conference has successfully organized six editions, growing, evolving, and adapting itself within an ever-changing environment, and providing in-depth coverage of the important concepts, issues, and technology trends in the field of digital arts and media

technologies, techniques, and applications. Crossing digital boundaries and seeking to foster greater understanding about digital arts and culture across a wide spectrum of cultural, disciplinary, and professional practices was the purpose of the last edition of the Artech Conference in 2012.

In this special issue of the *International Journal of Creative Interfaces and Computer Graphics*, we are presenting contributions based on the best papers from this last Artech edition that address topics more aligned with the focus and mission of the journal. Authors were asked to significantly revise and extend their papers with the most recent results and materials, presenting their perspectives and future trends in the field. After thorough peer reviewing, we have included six papers in this issue.

The entries in this issue cover a selection of topics in digital arts and media applications that we reckon as relevant and pertinent in the scenario we are living, where the digital arts field has definitely come of age and is closely connected with new digital media: A framework in which the critical aspect of the digital media revolution is the formation of the new media industry, comprised of information, communication, entertainment, and global social networks. In particular, the selected papers were originally presented at the conference in sessions dedicated to: Web Art and Digital Culture, Generative and Algorithmic Art and Design, Visualization and New Perspectives, Enabling Technologies, Sound and Music Computing, and Technology-Mediated Dance.

In "Beyond the Visual in Urban Interactive Interfaces: Dialogue and Social Transformation," Baltazar, Arruda, Cabral Filho, Marques, and Almeida explore the core of interactivity through its applications in the current urban installations, proposing an approach that expands beyond the hegemony of visual interfaces by promoting the bodily engagement of people in a playful interaction.

In "Continuous Line Drawings and Designs," Li and Mould present an innovative algorithm to construct pictures consisting of a single closed non-intersecting line, with tone and structural information obtained from input images, maintaining the key aspects of the original source. This method is automatic, effective, and provides opportunities for variations.

In "Visualizations in Time for a New Look at the Movies," Jorge and Chambel present the design and evaluation of 2D and 3D time-based interactive visualizations that allow navigation through different layers of information present in and about movies. It is their aim to help provide access and insights through analytical, ludic, or artistic uses, whether the user wants to access movies to watch or to be aware of their properties and contents.

In "Detecting Bias on Aesthetic Image Datasets," Carballal, Castro, Perez, and Correia dive into the realms of the aesthetic value of the image and how it can be assessed from a computational perspective in order to obtain a digital classifier. In particular, they address how the indiscriminate selection of images

can affect the generalization capacity obtained by a binary classifier.

In "Virtual Reality as Analgesia: An Alternative Approach for Managing Chronic Pain," Nazemi, Gromala, and Karamnejad introduce a multidisciplinary and interactive approach to self-management of chronic pain using Virtual Reality (VR), meant to reduce the reliance on heavy use of medication. They also discuss additional technologies dealing with issues surrounding immersion, presence, and interface design with direct impact on the quality of treatment through VR therapy, including biofeedback and interactive sound, the main focus of their conference paper, and meditation practices.

In "NUVE: Resizing the Digital Gesture," Martinho Moura, Marcos, Branco, and Barros present an artistic project that shows how the digital artifact can expand the performer far beyond his or her physical body. They explore the artistic possibilities offered by fluid digital performances in real time through dance, regarded as a privileged form of body language in the interaction between the performer and a digital artifact, as the driving element of the whole scenic narrative.

Finally, we would like to thank the Editors-in-Chief of the *International Journal of Creative Interfaces and Computer Graphics* (IJCICG), Ben Falchuk and Adérito Marcos, for bringing us the opportunity to make a contribution to expanding the scope of this research field through this special issue, all the authors for their commitment and contributions, and the reviewers who have given their time and valuable advice to the authors.

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