Editorial

In October 2013, Marseille, the European Capital of Culture, witnessed the world's first multidisciplinary global gathering on the application of digital technology to the documentation, conservation, and understanding of humanity's shared past: Digital Heritage 2013, the first International Congress on Digital Heritage. Spanning heritage in all of its rich variety—from the built to intangible traditions, museums, and collections, to documentary archives, creativity, and art—this unique Congress bridges research and practice, industry and government, and art and science by bringing the many exciting but disparate young events and communities around heritage and technology together. Forward-looking leaders from across the heritage and technology worlds came together and agreed to unite their respective communities under one roof in a shared experiment in Marseille.

Under the patronage of UNESCO, this unique Congress federates over a dozen Digital Heritage communities, encompassing three leading scientific events in the field:

—*VSM 2013*: The 19th International Conference on Virtual Systems and Multimedia

—*GCH 2013*: The 11th Eurographics Symposium on Graphics and Cultural Heritage

—*Memory of the World*: The 2nd UNESCO International Conference on Memory of the World in the Digital Age

plus two major public exhibitions:

—*ARCHEOVIRTUAL*: The 7th exhibition on Virtual Archaeology and Museums

—*DAW*: The 7th Digital Art Week

and complemented by a rich array of regional and special events:

—*ARQUEOLÓGICA 2.0*: The 5th International Meeting on Archaeology, Cultural Heritage, and Information

—*CAA Fall 2013*: The Computer Applications and Quantitative Methods in Archaeology Symposium

—*From Space to Place*: The 6th International Symposium on Remote Sensing in Archaeology

—*ICOMOS / ISPRS CIPA*: The Heritage Documentation International Scientific Committee Meeting

—*ICOMOS ICIP Panel*: The ICOMOS International Committee for Heritage Interpretation and Presentation

—*Museum and Technology*: A special session organized by V-MUST.NET

—*DISH*: A special workshop of the Digital Strategies for Heritage Conference

—*Heritage Policies and Digital Technologies*: A special event of the French Ministry of Culture and Communication

and multiple EU projects, such as v-must, Eagle, Archaeolandscapes, AthenaPlus, 3dIcons, Europeana Photography, 3nCult, emap, and LaCloud.

More than 600 submissions, the largest ever in this field, were received from nearly 70 countries in response to the scientific call. An international program committee of more than 150 experts from across the heritage and technology spectra read through this vast body of works, conducting more

than 1,500 reviews. Seeking to highlight the very best in this new domain, the Congress accepted 101 full papers, 110 short papers, and 82 poster abstracts for publication. In addition, the committee accepted approximately 50 Panel, Workshop, Tutorial, and Special Session presentations. The resulting 350-plus works are grouped in six thematic tracks: Digitization, Visualization & Interaction, Analysis & Interpretation, Policy & Standards, Preservation, and Theory, Methods & Applications; special sessions were included as well.

As partner of Digital Heritage 2013, the *ACM Journal on Computing and Cultural Heritage* (JOCCH) offered to the best papers selected during the Congress the opportunity to submit a revised, extended version of the full paper, to be reviewed and possibly published in this special issue. At the beginning of the Congress, the thematic Tracks Chairs proposed a short list of potential candidates from the list of accepted full papers by basing on the ranking resulting from the double-blind peer-reviewing process carried out by at least three referees per paper from the Scientific Committee. During the Congress, a small committee was in charge of attending the presentations of those short-listed papers to select the best six papers to be invited in JOCCH by taking into account the first reviews received, the overall scientific value of the paper, the quality of the oral presentation, and the potential of the paper in terms of possible extension.

After a year-long evaluation process of the submitted extended versions of these selected papers (a double review cycle), we are proud to introduce the six excellent papers that form this special issue of JOCCH:

- Tobias Nöll, Johannes Köhler, Gerd Reis, and Didier Stricker, “Fully Automatic, Omnidirectional Acquisition of Geometry and Appearance in the Context of Cultural Heritage Preservation”
- Fabio Bettio, Ruggero Pintus, Alberto Jaspe Villanueva, Emilio Merella, Fabio Marton, and Enrico Gobbetti, “Mont’e Scan: Effective Shape and Color Digitization of Cluttered 3D Artworks”
- Chiara Leoni, Marco Callieri, Matteo Dellepiane, Daniel O’Donnel, Roberto Rosselli Del Turco, and Roberto Scopigno, “The Dream and the Cross: A 3D Scanning Project to Bring 3D Content in a Digital Edition”
- David Lo Buglio, Vanessa Lardinois, and Livio De Luca, “What Do Thirty-One Columns Say about a “Theoretical” Thirty-Second?”
- Maarten Heerlien, Joostvan Leusen, Stephanie Schnörr, Suzanne de Jong-Kole, and Kirsten van Hulsen, “The Natural History Production Line: An Industrial Approach to the Digitization of Scientific Collections”
- Ruggero Pintus, Ying Yang, and Holly Rushmeier, “ATHENA: Automatic Text Height ExtractioN for the Analysis of Text Lines in Old Handwritten Manuscripts”

These papers are an excellent demonstration of how the international community working on the development, experimentation, and application of digital technologies for the documentation, analysis, and dissemination of cultural heritage is growing by forming an emergent interdisciplinary scientific domain based on an original knowledge hybridization process. This is the result of the convergence of two factors: the high number of scientific disciplines involved in the study of heritage artifacts and the “technological shake” introduced by information and communication technologies, which introduces a continuous renewal of the study methodologies that can be observed today in human and social sciences (archaeology, history of art, architecture, conservation, etc.), as well as a higher interest of the computer science (especially the computer graphics) community in finding new scientific challenges concerning the modeling and simulation of cultural objects. From humanities and social sciences to mathematics and computer sciences, this interest is first fostered by the main aspect that characterizes

cultural objects: their morphological, spatial, temporal, and conceptual complexity. Our heritage is thus a rich and infinite experimentation field for scientists interested in identifying interdisciplinary and transdisciplinary research paths bridging the past with the future.

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