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Keynote

Computational Museology: Interfaces to Cultural (Big) Data

Sarah Kenderdine

Full Professor, EPFL, Switzerland

Abstract

Computational museology is a scaffold that unites machine intelligence with data curation, ontology with visualization, and communities of publics and practitioners with embodied participation through kinaesthetic interfaces. Research into computational museology at the Laboratory for Experimental Museology (eM+) reaches beyond object-oriented curation to blend experimental curatorship with contemporary aesthetics, digital humanism and emerging technologies. This lecture explores key themes from the laboratory at the forefront of immersive visualization including: interactive archives and emergent narrative; deep mapping and carto-criticism; deep fakes and blockchain sovereignties; embodied knowledge systems and; performative interfaces.

Biographical Sketch

Professor Sarah Kenderdine leads a team of software engineers, artists, and curators, at the forefront of interactive and immersive experiences for galleries, libraries, archives and museums. She has created over 90 exhibitions and installations for museums worldwide. In 2017, Sarah was appointed professor at the École Polytechnique Fédérale de Lausanne (EPFL), Switzerland where she has built the Laboratory for Experimental Museology (eM+) , exploring the convergence of imaging technologies, immersive visualisation, digital aesthetics and cultural (big) data. Sarah is the inaugural director and lead curator of EPFL Pavilions, an art/science initiative located in a seminal Kengo Kumar building. The Pavilions blend experimental curatorship and contemporary aesthetics with open science, digital humanism and emerging technologies. In 2020 and 2022, she was named in the Museum Influencer List 2020 – The Power 10 by Blooloop and, Switzerland's Top 100 Digital Shapers by Bilanz in 2020 and 2021. In 2021, Sarah was appointed corresponding fellow of The British Academy (FBA).

Keynote

Transforming Cultural Heritage Preservation and Valorization: The contribution of Supercomputing, Artificial Intelligence, and the Digital Twin Paradigm - Insights from the CINECA Visit Lab experience

Antonella Guidazzoli

CINECA, Italy

Abstract

The Keynote talk will explore how synergies between Supercomputing (HPC), Big data analytics (HPDA) and Artificial Intelligence (AI), along with the application of the Digital Twin paradigm, can improve the preservation and enhancement of Cultural heritage. The talk will highlight the importance of this framework by presenting the experience of CINECA's VISIT Lab, where these technologies are being used in cutting-edge projects to support scholars in their research and to foster the creative reuse of digital Cultural heritage, building new bridges between research in the Digital Humanities, Creative industries and Arts.

Biographical Sketch

Antonella Guidazzoli graduated with honors in Electronics and History from the University of Bologna. Since 2007, she has been the head of the Visual Information Technology Laboratory (VISIT Lab - <http://visitlab.cineca.it>) at CINECA (www.cineca.it/en), one of the most important Supercomputing centers internationally. The Visit Lab is responsible for activities on advanced visualization methods ranging from scientific visualization to real-time 3D graphics and XR applications. She is also a lecturer and course director of the CINECA Summer School on Computer Graphics for Cultural Heritage. Antonella has published several papers in major international conferences such as the ACM SIGGRAPH conference and won awards for projects in the field of e-Culture and Digital Heritage. In addition, Antonella is an evangelist of Quantum computing.