EDITORIAL PREFACE

Creative Processes in Art and Technology of the Cultural Production

Gianluca Mura, Politecnico di Milano University, Milano, Italy

This issue of the *International Journal of Art, Culture and Design Technologies* (IJACDT) which is dedicated to cross boundaries of art, design, science, and culture with emerging technologies will be publishing an issue on creative processes within cultural production. In this issue, we will aim to explore and to uncover a variety of creative and innovative insights arising from academic perspectives.

The first article *Phenomenologies of Practice: The Artist in Virtual Worlds* by Denise Doyle explores the creative process in the field of art and technology and its relationship to imaginative experience highlights a phenomenology of practice of artists working in virtual worlds. This article considers the implications of this methodological approach and presents the case for investigating artistic and imaginative experience through adapting phenomenological research methods.

The second article entitled *Towards multiple 3D bone surface identification and reconstruction using few 2D X-ray images for intraoperative applications* by Simant Prakoonwit discusses a possible method to use a small number, e.g. 5, of conventional 2D X-ray images to reconstruct multiple 3D bone surfaces intraoperatively. The reconstructed surfaces can then be visualised and manipulated by surgeons or used by surgical robotic systems.

The *District Resource: Culturally Creative Products Derived From a Local Legend* article by Weichen Chang analyses the design process of a cultural product, discussing the application of a legend from the perspective of an emotional value that reflects local features and local cultural values through local stories. The article investigates the introduction of a story into the design of culturally creative products and explore the problem-solving ability involved in a story by discussing the perspectives of consumers who buy story-based cultural products that create experiences regarding the 5 senses through story-based design.

The *Soniferous Architecture: From Archaeo-acoustics towards the Soundsculpture Aural era* article by Moustafa Ismail proposes an architectural study that utilizes two methodologies mapped to form an evaluation tool for a specific soundscape sonic environment. The first approach, named the Kano model, is usually implemented in quality of manufacturing

and product development. The other approach deals with the case in the form of a wider scope which relates the design of the soundscape, and the effect of sound sculptures to be used as a tool for understanding and assessing individual responses and evaluation.

The *Game-based Learning: Augmented Reality in the teaching of geometric solids* article by Rui Leitão, J.M.F. Rodrigues and Adérito Marcos presents the development of a game in a teaching and learning context through augmented reality real-time immersive experiences, aiming to help students acquire knowledge in the field of geometry. The game was intended to develop the following competences in primary school learners (8-10 years): a better visualization of geometric objects on a plane and in space; understanding of the properties of geometric solids; and familiarization with the vocabulary of geometry within the effective access to information.

The *Analyzing Art and Aesthetics,* a Smithsonian Institution Scholarly Press book (Artifacts series, Vol.9) by Anne Collins Goodyear and Margaret A. Weitekamp investigates the materiality of science and technology, focusing on art and aesthetics. As a collection of essays, a sourcebook for graduate or undergraduate seminars, and a resource for museum professionals, this book not only provides an in-depth framework for thinking about how to exhibit scientific and technological artifacts, art historians to rethink the ramifications of science and technology for the development of visual culture, and historians of science and technology to reconsider the aesthetic dimensions of the material they study. Above all, these essays, drawn from a broad range of disciplines, will demonstrate how science, technology, art, and aesthetics influence one another.

Gianluca Mura
Editor-in-Chief
IJACDT