

## Editorial

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In this issue, we have six selected papers from the Computational Visual Media Conference 2013 and three selected papers from the workshop on 3D Object Retrieval (3DOR) 2013. The first 3DOR paper deals with progressive 3D mesh compression using MOG-based Bayesian entropy coding and gradual prediction by Dae-Youn Lee, Sanghoon Sull, and Chang-Su Kim. This paper proposes a progressive 3D triangular mesh compression algorithm built on the MOG-based Bayesian entropy coding and the gradual prediction scheme. The second paper is entitled ‘A framework for implicit human-centered image tagging inspired by attributed affect’ by Konstantinos C. Apostolakis and Petros Daras. It introduces, a framework for implicit human-centered tagging. The third 3DOR paper, ‘XKin: an open-source framework for hand pose and gesture recognition using kinect’ by Fabrizio Pedersoli, Sergio Benini, Nicola Adami and Riccardo Leonardi targets real-time recognition of both static hand poses and dynamic hand gestures in a unified open-source framework. The remaining papers are described in the preface of the Computational Visual Media section.

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### Preface to the computational visual media 2013 papers’ section

Nowadays, visual data are widely used in the Internet, smartphones, 3D TV and so on. The diverse devices raise different demands on representation and processing approaches of visual data. On the other hand, the new-developed acquir-

ing devices such as kinect, stereoscopic camera provide researchers convenient way to get useful data. This makes great opportunities for the development of visual media.

The Computational Visual Media Conference 2013 (CVM 2013) brings together cross disciplinary research which amalgamates aspects of computer graphics, computer vision, machine learning, image processing, video processing, visualization and geometric computing. Following success of CVM 2012, CVM 2013 has attracted broad attention from researchers worldwide. A total of 104 technical papers were submitted and 21 papers were accepted for oral presentation.

Among those 21 papers, 6 outstanding papers are included in this special issue. The first paper proposes a novel non-linear video representation, SceneGraph, which enables users efficiently explore and access the video content by graphically revealing the scene structure of a video. The second paper provides a novel and efficient error-diffusion algorithm capable of preserving appreciable structures and tones with blue-noise property. The third paper shows how to improve the quality of depth data obtained from Kinect, using Markov Random Field methods which consider consistency between the color and depth data<sup>[3]</sup>. The fourth paper provides a novel non-photorealistic rendering method which enhances global structures such as lines, arcs, etc. The fifth paper proposes a new method for image copy-and-paste with optimized gradient, which improves the traditional image cloning in the gradient domain by creating a harmonic interpolation between the source patch and the target image. The last paper presents a model-based method for real-time hand tracking, which is robust against various skin color and lighting conditions.

We appreciate all the paper authors and paper reviewers for their contributions. We hope that the readers will enjoy the topics of this section and derive benefit from these works.

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