

Editorial

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In this issue, we have two regular papers and five selected papers from 3D Object Retrieval 2013. The three regular papers are the following: the first paper is entitled ‘Computer vision-based object recognition for the visually impaired in an indoors environment: a survey’ by Rabia Jafri, Syed Abid Ali, Hamid R. Arabnia and Shameem Fatima. In this paper, an overview of the various technologies that have been developed in recent years to assist the visually impaired in recognizing generic objects in an indoors environment is presented. The second paper is entitled ‘An effective scheme for image texture classification based on binary local structure pattern’ by Nishant Shrivastava and Vipin Tyagi. In this paper, an effective completed modelling of the Local Binary Pattern is proposed. The preface to the Special Issue on 3DOR can be found below.

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Editor-in-Chief

Preface to the special issue on 3DOR 2013

The Eurographics Workshop on 3D object retrieval (3DOR) series, founded in 2008, provides a forum for state-of-the-art research in this exciting research field that lies at the intersection of Computer Vision, Computer Graphics, Machine Learning, and Human–Computer Interaction. Fostered by recent advances in 3D shape modelling and data acquisition, including emergence of low-cost sensor techniques, large amounts of 3D data will become available in the near future. In this context, effective and efficient retrieval techniques will be an indispensable key component in supporting new application, e.g., for searching, exploring, authoring and reconstructing in large 3D data. The aim of this special issue is

fully compatible with the spirit of 3DOR events to stimulate researchers from different fields who work on the common goal of 3D object retrieval, to present high calibre state-of-the-art work in the field that will stimulate discussions on the next steps in this important research area.

The topics covered by the collection of five papers appearing in this special issue represent key state-of-the-art research issues in 3DOR. In particular, Boscaini and Castellani in ‘A sparse coding approach for local-to-global 3D shape description’ derive a dictionary from a set of local descriptors, which is used as global descriptor either for global and partial retrieval. Barra and Biasotti in ‘3D Shape retrieval and classification using Multiple Kernel Learning on Extended Reeb Graphs’ propose a method for automatic selection of the most relevant shape features by adopting a supervised learning technique based on Multiple Kernel Learning. Sfikas et al. in ‘Pose Normalization of 3D Models via Reflective Symmetry on Panoramic Views’ introduce a new approach for 3D pose estimation by exploiting panoramic representation derived from the shape. Berretti et al. in ‘Selecting Stable Keypoints and Local Descriptors for Person Identification using 3D Face Scans’ propose original solutions to improve keypoints stability and select the most effective features from local descriptors that were used for 3D face recognition purposes. Finally, Sipiran et al. in ‘A Benchmark of Simulated Range Images for Partial Shape Retrieval’ address the problem of evaluating algorithms for partial shape retrieval on common benchmarks, ground-truths and performance measures.

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