

# Call for Papers

**ACM Transaction on Intelligent Systems and Technology (ACM TIST)**

**Special Issue on Visual Understanding with RGB-D Sensors**

Recent years have witnessed rapid growth of research in visual understanding with RGB-D sensors since the release of Microsoft's Kinect sensor in November 2010. For a long time, researchers have been challenged by many visual understanding problems such as detecting and identifying objects or human activities in real-world situations. Traditional segmentation and tracking algorithm are not always reliable when the environment is cluttered or the illumination changes suddenly. However, the effective combination of depth and RGB data is potentially capable of improving the accuracy of object identification and tracking by relaxing the negative effects of environmental changes.

The online free available SDKs and posture trackers for the Kinect modeling environments further encourage novel solutions to traditional visual understanding problems. However, Kinect sensors face a number of specific challenges such as correlation between per-pixel depth and RGB information when one of them is missing or corrupted, characterization of objects based on the RGB-Depth images etc. This special issue is specifically dedicated to new algorithms and applications based on the Kinect sensors. The key outcomes of the special issue will be a convincing forum for researchers and practitioners to disseminate their latest research on visual understanding with RGB-D sensors. The special issue covers all aspects of visual understanding using RGB-D cameras.

**Topics of interest include but are not limited to:**

- ◆ Sensor calibration and data pre-processing
- ◆ Object description, detection, tracking and recognition
- ◆ Depth fusion, 3D reconstruction and modeling
- ◆ Human detection, tracking and activity understanding
- ◆ Scene understanding and segmentation
- ◆ Intelligent computing for generating dense depth map
- ◆ Adaptive and learning techniques for a Kinect network

- ◆ HCI with Kinect as bridge
- ◆ Navigation, localization and semantic mapping
- ◆ Annotation and retrieval of RGB-D data
- ◆ Empirical studies and benchmark datasets
- ◆ Industrial applications

### **Submission Guideline:**

Authors should prepare their manuscript according to the Instructions for Authors available from the online submission page of the ACM Transactions on Intelligent Systems and Technology at <http://tist.acm.org/authors.html#format>. All the papers will be peer-reviewed following the ACM Transactions on Intelligent Systems and Technology reviewing procedures.

### **Important Dates:**

- ◆ Paper submission due: Jun. 30, 2013
- ◆ First notification: Aug. 15, 2013
- ◆ Revision: Sept. 30, 2013
- ◆ Final decision: Nov. 30, 2013

### **Guest Editors**

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