Visual Saliency Computations & Applications

Overview
Visual saliency computation has been one of the most active research topics in the past decades, and has received growing attention across many disciplines including cognitive psychology, neurobiology, image processing, and computer vision. The ability of human visual systems to quickly locate important image regions and process them in priority has inspired a series of key research topics, including fixation prediction, salient object detection, and objectness proposal generation. One of the key forces behind these sub-topics is the vast amount of applications with diverse requirements and emphasis.

While significant progress on saliency modeling has been established in recent years, a large amount of open challenges still need to be further explored, e.g. novel applications to robustly explore the imperfect saliency predictions, exploring new multimedia sensors, relationship between fixation prediction, salient object detection, and object proposal generation. It is desirable to explore computational saliency detection algorithms in a variety of interesting applications for improving their performance, while effectively broadening the scope of saliency based methods and applications. Thus, we invite original research articles to report the latest advances in all related research areas to be published in the special issue of Multimedia Tools and Application and have a face to face communication in ICIG 2015. The topics of interest include, but are not limited to:

- Human fixations prediction in image/video;
- Salient object detection in image/video;
- Objectness proposal models;
- Saliency detection using multimodal data;
- Visual saliency for various applications;
- Saliency benchmark & evaluation metrics;

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