IEEE Transactions on Neural Networks and Learning Systems
Special Issue on
Visual Saliency Computing and Learning

Scopes:

A large number of researchers explore visual saliency models to address the problem of automatically inferring the user-attracted or interesting areas in an image or a video sequence. In recent few years, machine learning techniques, such as neural networks, probabilistic graphical models, and sparse coding have been successfully adapted to this field. More lately, an emerging machine learning technology called deep learning (a.k.a. deep neural networks, DNN) with the hallmark of utilizing many layers of non-linear information processing stages that are hierarchical may offer a new opportunity for saliency detection to tackle the challenging problems, because it has powerful modeling and representational capability.

The goal of this special issue is to invite original contributions reporting the latest advances in modeling visual saliency, DNN and its relation to visual saliency, and emerging vision and multimedia applications towards addressing these challenges. It will highlight the usage of advanced machine learning techniques, for example, DNN for interpreting the visual saliency. The topics of interest include, but are not limited to:

- Deep neural networks (DNN) (such as deep belief networks (DBN) and convolutional neural networks (CNN)) for visual saliency learning;
- Computational models for eye fixations prediction in image/video;
- Computational models for salient object detection in image/video;
- Extraction of new features or factors that influence visual attention;
- Saliency detection using multimodal data;
- Foundational issues;
- Visual saliency for various applications (e.g., object recognition, video surveillance, mobile robotics, computer games, human-machine interaction, content-based multimedia analysis, and satellite image analysis);
- Novel machine learning techniques for visual saliency;
- Saliency benchmark databases and evaluation metrics;

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Submission Instructions:

1. Read the information for authors at http://cis.ieee.org/tnnls
2. Submit the manuscript by Sept. 30, 2014 at the IEEE-TNNLS webpage http://mc.manuscriptcentral.com/tnnls and follow the submission procedure. Please indicate clearly on the first page of the manuscript and the Author's Cover Letter that the manuscript has been submitted to the Special Issue on *Visual Saliency Computing and Learning*. Send also an e-mail to junweihan2010@gmail.com with subject "TNNLS special issue submission" to notify the editors of your submission.