

Call for Papers: Special Issue on Recent Advances in Saliency Models, Applications and Evaluations

The research on computational saliency models has been an active topic in the past decades, due to its broad applications in the fields of multimedia processing, computer vision, cognitive science, robotics, etc. Saliency models mainly target two genres of applications, i.e., human fixation prediction or salient object detection/segmentation. Although recent years have witnessed significant progress on saliency modeling for images/videos and the related applications, multimedia with new modalities such as RGB-D, stereoscopic, large-scale internet images/videos calls for tailored and effective saliency models, while images/videos with complex scenes need saliency models with higher performance. It is desirable to explore the use of saliency in a variety of interesting applications for improving their performances, and thus to effectively broaden the scope of saliency-based applications. Besides, new datasets, metrics, benchmarks and behavioral studies are expected to comprehensively evaluate and fairly compare the performance of state-of-the-art saliency models, as well as to shape the future research directions.

Modeling the way we perceive multimedia content is fundamental for offering the best technologies to the emerging multimedia applications. Bearing this objective in mind, we invite original research articles to promote the research on saliency from models, applications and evaluations.

About the Topics of Interest

In particular, the topics of interest include but are not limited to:

Models

- Saliency models for human fixation prediction in images/videos
- Saliency models for salient object detection/segmentation in images/videos
- Objectness estimation and object proposal methods for images/videos
- Saliency models using new modalities: RGB-D, stereo/multiview, HDR (High Dynamic Range) images/videos, light fields, point sets, etc.
- Co-saliency models for image/video sets and large-scale internet images/videos
- Multimodal saliency models with additional audio, text and metadata information, etc.

Applications

- Salient object detection/segmentation in images/videos
- Visual scanpath prediction in images/videos
- Saliency-aware image/video retargeting, retrieval, editing, advertisement, human-centric analysis, etc.
- Saliency-aware image/video compression, quality assessment, error concealment, transmission, etc.
- Saliency-aware visual tracking, scene understanding, active vision, navigation, robotics, etc.
- Societal applications of saliency models, such as patient diagnosis (e.g., Attention Deficit Hyperactivity Disorder, Parkinson and Alzheimer)
- Relations between saliency and memorability/aesthetics of images/videos

Evaluations

- New datasets with limited biases
- Metrics and benchmarks for performance evaluation of saliency models and fair model comparison
- Behavioral and psychophysics studies of explicit saliency judgments of humans
- Behavioral and psychophysics studies of visual attention to understand where people look in natural images/videos
- Behavioral studies addressing relationship of saliency, importance and interestingness

Submission Format and Guideline

All submitted papers must be clearly written in excellent English and contain only original work, which has not been published by or is currently under review for any other journal or conference. Papers must not exceed 30 pages (one-column, double-spaced, at least 11pt fonts) including figures, tables, and references. A detailed submission guideline is available at the Guide for Authors (<https://www.elsevier.com/journals/signal-processing-image-communication/0923-5965/guide-for-authors>).

All manuscripts and any supplementary material should be submitted through Elsevier Editorial System (EES) <http://ees.elsevier.com/image/> by selecting "SI: Saliency Models" as the type of article.

All papers will be peer-reviewed by three independent reviewers. Requests for additional information should be addressed to the guest editors.

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Important dates

Submission deadline:
30th November 2014

First notification:
by 28th February 2015

Revised manuscript deadline:
15th April 2015

Final decision notification:
by 15th May 2015

Expected publication date:
3rd Quarter 2015



*Note that the above call for papers (CFP) is available at the following link. You can scan the 2D code to open the following link on your mobile phone.

<http://www.journals.elsevier.com/signal-processing-image-communication/call-for-papers/special-issue-on-recent-advances-in-saliency-models-applicat/>

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