

CALL FOR PAPERS

Computer Vision and Image Understanding Special Issue on Similarity Matching in Computer Vision and Multimedia

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Submission Procedure:

Papers should be full journal length versions of the conference/workshop paper with analysis and evaluation appropriate for journal publication. Submissions should follow the guidelines set out by CVIU.

Important Note for Authors:

When submitting papers, the authors should select the specific article type indicated AND include a line in their cover letter as a failsafe [example: "This manuscript is submitted to the Special Issue on Similarity Matching in Computer Vision and Multimedia"].

All papers should be submitted via the CVIU web-site with Article Type '**Special Issue: Similarity Matching**'

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Summary

Comparing two images, or an image and a model, is the fundamental operation for any retrieval systems. The similarity matching of two images can reside in the hierarchical levels from pixel-by-pixel level, feature space level, object level, and semantic level. In most systems of interest, a

simple pixel-by-pixel comparison won't do: the difference that we determine must bear some correlation with the perceptual difference of the two images or with the difference between two adequate semantics associated to the two images. Similarity matching techniques are developed mostly for recognition of objects under several conditions of the distortion while similarity measures, on the other hand, are used in applications like image databases. Matching and dissimilarity measurement are not seldom based on the same techniques, but they differ in emphasis and applications.

In recent years, there are an increasing number of papers and people in workshops like Multimedia Information Retrieval (MIR), and major conference like CVPR or CIVR addressing the similarity matching and similarity measurement issues. The role of this special issue is to fill the need of a comprehensive overview of the new approaches and advances of similarity matching under the broad perspective of computer vision. It is hoped that such a systematic and up-to-date overview of the field, including tutorials to well established or new techniques, can bring the awareness and applications of similarity matching closer to the general multimedia community.

Scope

The scope of this special issue is to cover all aspects of similarity matching in computer vision and multimedia.

Topics of interest include (but are not limited to):

- Similarity matching in content-based image retrieval
- Similarity matching in video analysis and retrieval
- Similarity matching in image registration
- Multimodal similarity matching
- Change detection, e.g., audio, video, web documents, using similarity measure
- Similarity search on the web
- Content identification, e.g., copyright violation, digital right management
- Quantitative measures and evaluation of the similarity search
- Clustering analysis and grouping
- Embedding methods for similarity search (e.g. image, DNA, documents)
- Similarity metrics and invariant analysis
- Psychovisual and human-perceptual similarity measures

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