Call for papers for a special issue of
Information Fusion
An International Journal on Multi-Sensor, Multi-Source Information Fusion
An Elsevier Publication
On
“Special Issue on Information Fusion in Medical Image Computing and Systems”

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The Information Fusion Journal is planning a special issue on Information Fusion in Medical Image Computing and Systems. Present day medical imaging research depends heavily on techniques involving image analysis, information extraction and classification. The main aim of this special issue is to help advance scientific research within the broad field of information fusion in medical image computing. This special issue focuses on major trends and challenges in this area, and presents work aimed at identifying new techniques for information retrieval and their applications to medical image acquisition and processing.

Manuscripts (which should be original and not previously published either in full or in part or presented even in a more or less similar form at any other forum) covering the use of Information fusion methods in the application domains of computer-aided diagnosis, computer modeling of medical image acquisition and modeling, medical image analysis, organ/lesion segmentation, image registration, and image-guided therapy are specifically invited. Absolutely no cut and pastes from prior publications (of text and/or figures or tables or other illustrations) will be permitted. All such reproduced material should be excluded from the manuscript by generous use of citations to the relevant prior publications wherever necessary within the text of the Journal submission. The manuscript will be judged solely on the basis of new contributions excluding the contributions made in earlier publications. Contributions should be described in sufficient detail to be reproducible on the basis of the material presented in the paper and the references cited therein.

Topics appropriate for this special issue include, but are not necessarily limited to:

- Information fusion in computer-aided detection/diagnosis
- New fusion architectures for applications to medical images with 2D, 3D, and 4D data
- Information fusion architectures for computer modeling of medical image acquisition
- Application of information fusion techniques in Medical image analysis (e.g., pattern recognition, classification, segmentation, registration, morphometry)
• Multimodality fusion (e.g., MRI/PET, PET/CT, X-ray/ultrasound) for diagnosis, and image-guided intervention
• Medical image registration (inter- and intra-modality, inter- and intra-patient)
• Novel information fusion techniques for image reconstruction (e.g., expectation maximization and other statistical methods) in the context of medical applications
• Medical image retrieval (e.g., context-based retrieval, lesion similarity) based on fusion
• Image fusion in Cellular image analysis
• Fusion techniques in biological image analysis
• Image fusion based hardware architectures for medical imaging (e.g., circuits for medical image processing)
• Bio-inspired circuits and systems for medical image fusion (e.g., Neural networks, Memory networks and HTM)
• Novel semiconductor sensors and devices for medical image fusion (e.g., for dual modality systems)
• Evolutionary algorithms for in medical image fusion
• Decision fusion systems in the context of medical imaging
• Web based knowledge searching and mining fusion systems for medical imaging

Manuscripts should be submitted electronically online at http://ees.elsevier.com/inffus
The corresponding author will have to create a user profile if one has not been established before at Elsevier. The Guest Editor(s) for this proposed special issue is (are):

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