Medical Image Analysis

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Description

Medical Image Analysis provides a forum for the dissemination of new research results in the field of medical and biological image analysis, with special emphasis on efforts related to the applications of computer vision, virtual reality and robotics to biomedical imaging problems. A bi-monthly journal, it publishes the highest quality, original papers that contribute to the basic science of processing, analysing and utilizing medical and biological images for these purposes. The journal is interested in approaches that utilize biomedical image datasets at all spatial scales, ranging from molecular/cellular imaging to tissue/organ imaging. While not limited to these alone, the typical biomedical image datasets of interest include those acquired from:

- Magnetic resonance
- Ultrasound
- Computed tomography
- Nuclear medicine
- X-ray
- Optical and Confocal Microscopy
- Video and range data images

The types of papers accepted include those that cover the development and implementation of algorithms and strategies based on the use of various models (geometrical, statistical, physical, functional, etc.) to solve the following types of problems, using biomedical image datasets: representation of pictorial data, visualization, feature extraction, segmentation, inter-study and inter-subject registration, longitudinal/temporal studies, image-guided surgery and intervention, texture, shape and motion measurements, spectral analysis, digital anatomical atlases, statistical shape analysis, computational anatomy (modelling normal anatomy and its variations), computational physiology (modelling organs and living systems for image analysis, simulation and training), virtual and augmented reality for therapy planning and guidance, telemedicine with medical images, telepresence in medicine, telesurgery and image-guided medical robots, etc.

Audience

Academic and industrial researchers in the area of medical and biomedical image analysis, researchers in the general computational vision, graphics and robotics communities interested in problems that involve medical and biomedical images, and those involved in other areas of clinical and biomedical science that utilize data will find *Medical Image Analysis* the premier publication for important results in the field.