Call for Papers | **MICCAI** Workshop on

Medical Computer Vision 2010: Recognition Techniques and Applications in Medical Imaging

http://groups.csail.mit.edu/vision/mcv2010/

Scope

This workshop aims at exploring the use of modern **image recognition technology** in tasks such as semantic anatomy parsing, automatic segmentation and quantification, anomaly detection and categorization, data harvesting, semantic navigation and visualization, data organization and clustering, and general-purpose automatic understanding of medical images. We are especially interested in **modern, scalable and efficient algorithms** which can be applied e.g. to large longitudinal studies, high-resolution n-dimensional datasets and in hospital-scale databases.

The focus is on principled approaches which go **beyond the limits of current model-driven image analysis**, are provably efficient and which generalize well to previously unseen images; we are also interested in **emerging applications** which go beyond the analysis of individual clinical studies and specific diagnostic tasks. We encourage the submission of original papers at the **interface of computer vision, machine learning, and medical imaging analysis**, to push the boundaries of what current medical software applications can deliver in both clinical and research medical settings.

We encourage the submission of **full papers describing original research** (max. 8 pages). Papers will be peer-reviewed in a double-blind fashion. Successful submission will either be presented as plenary talk, or during a poster session. All accepted papers will be published in workshop proceedings. Details on paper submission are available on the workshop web site.

The best submission will be awarded the Best Scientific Paper Prize sponsored by Microsoft Research Cambridge.

Topics of interest include but are not limited to:

- Approaches generalizing computer vision methods to medical applications, specifically from 2D natural images to 3D medical images.
- General purpose approaches for increasing the degree of automation in segmentation and quantification (possibly complementing model-driven methods).
- Computer vision and machine learning methods using 3D atlases / spatial prior in object recognition and categorization.
- Low level local or global image descriptors / interest points and their application in medical image modeling and object localization.
- Learning approaches for registration, calibration and related image transforms.
- Applications of web-driven techniques to medical datasets.
- Semantic anatomy parsing, semantic navigation and visualization.
- Image indexing, data organization, data harvesting.
- Supervised and unsupervised anomaly detection.
- Automatic anatomical structure localization.
- Real-time medical image applications.

Important Dates:

- Submission of papers (8 pages): June 8th, 2010
- Notification of acceptance: July 5th, 2010
- Camera ready paper: July 15th, 2010

People:

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