MIAR 2006
International Workshop on Medical Imaging and Augmented Reality

August 17-18, 2006
Jianguo Hotel, Shanghai, China
http://www.miar2006.ia.ac.cn

Rapid technical advances in Medical Imaging, including its growing applications to drug, gene therapy, and invasive/interventional procedures, have attracted significant interests in recent years. This is motivated by the clinical and basic science research requirement of obtaining more detailed physiological and pathological information of the body for establishing localized genesis and progression of diseases. Current research is also motivated by the fact that medical imaging is increasingly moving from a primarily diagnostic modality towards a therapeutic and interventional aid, driven by recent advances in minimal access and robotic assisted surgery.

Historically, medical imaging has been an important field of application for generic Computer Vision and Pattern Recognition techniques. Many of the methods developed by the vision community have now become the cornerstone of a wide variety of medical image analysis applications. For example, the active shape/appearance model has now been widely used for automatic image segmentation and building statistical atlas for different anatomical structures, the registration framework based on mutual information has enjoyed many fruitful applications in multi-modal image fusion, particularly in neuroimaging, where fMRI, DTI, perfusion MRI, fNIRS, PET are helping to provide insights into human brain function and mental disorders. Some of the techniques developed by medical imaging, on the other hand, have also find their generic use in Computer Vision and Pattern Recognition problems. The concepts developed in multi-planar contrast enhanced angiography, for instance, have been adopted for 2D/3D registration and integrating 2D video images with 3D models.

The aim of MIAR is to bring together researchers in computer vision, graphics, robotics, and medical imaging to present the state-of-the-art developments in this ever-growing research area. The workshop will be held on August 17-18, 2006, at Jianguo Hotel, Shanghai, China. This workshop has been held in Hong Kong and Beijing in previous years. Details of conference venue, paper submission, registration, and previous MIAR meetings can be found http://www.nlpr.ia.ac.cn/miar2004. The meeting will consist of a single track of oral/poster presentations, with each session led by an invited lecture from our distinguished international faculty members. Papers presenting original research in the following research topics are being sought.

- Intervention and Surgical Planning (robotics, pre-operative registration, image guided surgery)
- Patient Specific Modelling (vision based in situ soft tissue modeling, 2D/3D image registration, endoscopic/minimal access surgical simulation)
- Simulation and Augmented Reality (IBMR, virtual surgery, intraoperative navigation)

- Medical Image Understanding (techniques on image segmentation, registration, shape and lesion analysis)
- Neuroimaging (fMRI, DTI, perfusion MRI, fNIRS, PET)

Each paper will be reviewed by at least three committee members and the proceedings will be published as one issue of Lecture Notices in Computer Sciences by Springer-Verlag, which **will consist** of invited, oral and poster papers.

Important Dates

April 17, *Paper Submission*
May 26, *Notification to Authors*
June 9, *Camera-ready Papers Due*
August 17-18, *Workshop*