

Special Session for CAD for Medical Applications

There is a pressing opportunity to use information technology to improve the healthcare of an aging population. In this special session we will explore the possibilities of using knowledge developed in the engineering computer-aided design (CAD) and simulation communities to help enhance medical practice. In particular, it is becoming possible to build up models of parts of the body from MRI (and other) images, and these models are (in theory) amenable to simulation and analysis, using techniques to calculate properties such as potential overlap, clearance, stress/strain, deformation, or fluid flow.

Potential topics for the session papers include (but are not limited to):

- engineering simulation state-of-the-art
- modelling physical properties of bone or ligament
- constructing functional 3D models from images
- constructing a smooth surface representation from voxel models
- simulating properties of the spine
- simulating muscle
- modelling dynamics or change in properties over time
- modelling growth
- fluid modelling
- virtual surgery

A refereed paper will appear in one of the approved publications by the conference date:

Journal of Biomedicine and Biotechnology: A special issue of this journal is fully agreed *open to conference participants only* to accommodate a good number of high quality papers from the best accepted in RC4I and MWP for review. Appears by the conference date and details are in the conference pages (open access with I.F. 1.8 in SCIE).

Soft Computing journal: special issue of this SCIE listed journal for select papers with a significant soft computing technique content.

IEEE Conference Proceedings: E.I. listing, high quality proceedings

For further details visit <http://www.sersc.org/FBIT2007/page7.php>

Important Dates:

Paper Submission Deadline 20 June 2007

(click for [LaTeX](#) or [Word](#) style files)

Advance Registration Deadline 1 August 2007

Notification of Acceptance 30 June 2007

Final Program Announced 15 September 2007

Papers should be sent directly to the special session organizers

(preferably in PDF format):

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