

COMPUTATIONAL BIO- IMAGING AND VISUALIZATION

1800

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ABSTRACT

In recent years, extensive research has been performed in numerical modelling of objects and visualization for several distinct areas of science, namely, computer sciences, engineering, mathematics, medicine and physics. A major application of numerical modelling of objects and visualization can be found in medicine. For instance, it is possible to use computational procedures on medical imaging data to build numerical models and visualize human organs. These procedures can have different goals, such as shape reconstruction, segmentation, motion and deformation analyses, registration, simulation, visualization, etc.

The main goal of the proposed Minisymposium is to bring together researchers involved in the related fields (Image Acquisition, Image Analysis, Image Segmentation, Objects Tracking, Objects Matching, Shape Reconstruction, Motion and Deformation Analysis, Medical Imaging, Scientific Visualization, Software Development, Grid Computing, etc.), in order to set the major lines of development for the near future.

The proposed Minisymposium will consist of researchers representing various fields related to Biomechanics, Biomedical Engineering, Computational Vision, Computer Graphics, Computational Mechanics, Mathematics, Medical Imaging, Scientific Visualization, Statistics, etc., in order to contribute to the achieving of better solutions for more realistic computational “living” models, and attempts to establish a bridge between clinicians and researchers from these diverse fields.