



A comparative approach to modelling of hard tissues

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In recent years biomedical engineering has opened a new window to CAD and this technology has been extensively used in many appli cation areas. Among these, modelling hard tissues has been of interest to some researchers [1-4]. The main objective has been to produce thr ee-dimensional (3D) CAD models since it is difficult to visualize hard tissues from conventional two-dimensional (2D) medical images. 3D m odels may provide a better visualization of the patient's anatomical structure and virtually expose damaged bones and hard tissues to surgeon s and physiotherapists before a surgery begins. This provides the surgeon with the possibility of necessary consultations and preparations fo r an easier and more successful surgery. 3D models provide the possibility of rotating and viewing damaged bones from different direction s and produce cross-sections from any position and at desired orientations. It is also possible to use these 3D models for many other purpose s. For instance, Wang et. al. [5] transferred the geometrical data of these 3D models to finite element software systems for further analysis s uch as stress-stain analysis.

存档文本

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