论文

一种辅助轮廓线的断层医学图像三维重建算法

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摘要：

针对轮廓线重建过程中的轮廓分叉问题，提出了一种改进的多轮廓线三维重建算法，通过构造辅助轮廓线将多轮廓线的连接转换为单轮廓线的连接，改进了利用多轮廓线进行三维重建的不足，利用可接受表面实现特征点的三角化，并根据曲率的变化拟合重建过程中的不光滑表面，进而实现断层医学图像的三维重建。实验结果证明，运用本算法在保证重建物体正确的同时，缩短了体数据的构造时间，加快了整个表面的重建速度。

关键词：　多轮廓线　辅助轮廓线　三维重建　可接受表面

Auxiliary contour algorithm for 3D reconstruction of medical slice images

Abstract:

An improved 3D reconstruction algorithm of multiple contours was presented in the paper in view of contour bifurcation in the process of contour reconstruction. By constructing auxiliary contours, the connection of multiple contours was converted to single contour and the defection of using multiple contours to 3D reconstruction was improved. The three keratinization of characteristic point using the acceptable surface was implemented, the rough surface in the process of reconstruction according to the curvature s change was fitted, and 3D reconstruction of medical slice images was realized. The experimental results show that the proposed algorithm can shorten the time of volume data structure, ensure the correction of reconstruction objects and accelerate the speed of the whole surface reconstruction at the same time.

Keywords: multiple contour   auxiliary contours   3D reconstruction   accepted surface

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参考文献：

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