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图形、图像、模式识别

CT图像的分形特征和Facet边缘检测

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摘要 Facet模型能够获得准确的图像边缘信息，但运用Facet模型对目标进行分割时，时间复杂度比较高。针对该问题，从CT图像目标特征的角度，将分形维数特征引入Facet模型。首先利用图像边缘分形维数较大的特点，获得大致的边缘候选点，然后对边缘候选点集运用Facet模型进行分割，得到边缘点的准确位置。实验结果表明，该方法不仅能获得准确的边缘，而且提高了处理速度。

关键词 分形维数 Facet模型 边缘定位 边缘检测 CT图像

分类号

Fractal feature of CT image and facet edge detection

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Abstract

Facet model can obtain accurate image edge，but the time complexity is greatly high while be used to segment target.Against this question，from the perspective of target feature in CT images，fractal dimension characteristics are introduced into Facet model in this paper.Firstly rough candidate point set is obtained on the basis of truth the fractal dimension on the edges is larger than other part，and then obtains the exact edges by using Facet model in the candidate point set.Furthermore，the experimentation results indicate that this method can not only be accurate on the edge，but also improve the processing speed.

Key words fractal dimension Facet model edge localization edge detection CT image

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