研究简报

一种新的CT重建法

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摘要
本文提出一种新的CT重建法——非均匀反投影重建法。新方法与通常的均匀反投影重建方法不同, 它不是把投影差值均匀地分配给有关象素, 而是根据象素的灰度加权系数非均匀地分配投影差值。这种新的重建方法使重建象的质量有明显改善, 特别是在投影方向数较少的非完全投影情况下, 改善效果更加明显。

关键词　　CT　图象重建　图象处理

分类号

A NEW RECONSTRUCTION METHOD FOR COMPUTERIZED TOMOGRAPHY

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Abstract
A nonuniform back-projection reconstruction method for computerized tomography is presented. In the uniform back-projection reconstruction method the projection difference-between a measured ray sum and a computed ray sum is uniformly distributed to the cells in the ray, but in the nonuniform back-projection reconstruction method the projection difference is nonuniformly distributed to the cells based on the weighted grey coefficient of the cell. A qualitative improvement of reconstructed images by the new reconstruction method is evident, especially in the incomplete projection cases.

Key words　CT　Image reconstruction　Image processing

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