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图形、图像、模式识别

基于PCNN与LR的低对比度图像增强方法

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摘要 图像增强是指对图像进行加工，以获得更“好”的视觉效果的一种图像处理技术。由于图像的最终接收者是人，所以评价图像“好坏”的关键在于其是否符合人类视觉系统的特性。针对低对比度图像，结合人眼视觉神经系统的感知特性，提出了一种基于PCNN与LR模型的图像增强方法。分析和仿真结果表明，该法能够较好地突出图像的边缘细节信息，明显地改善图像的视觉效果。

关键词 脉冲耦合神经网络 人眼视觉特性 图像增强 对比度

分类号

Method of low contrast image enhancement based on PCNN and LR

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Abstract

Image enhancement is an algorithm which is performed on image to make it seemed “better”.Since human being is the final receiver of the image，the key point of the image assessment is that it should be in conformity with the characteristics of human visual system.In this paper，a new method of low contrast image enhancement is presented based on PCNN and LR models in conjunction with characteristics of human visual consciousness.Results of analysis and experiments show that this method strengthens the details of edges and ameliorates visual effect obviously.

Key words Pulse Coupled Neural Networks（PCNN） Human Visual System（HVS） image enhancement image contrast

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