Low contrast image enhancement is the task of applying certain transformations to an input image such as to obtain a visually more recovered, more detailed, or less noisy output image. In this paper image enhancement is considered as an optimization problem and the algorithm Particle Swarm Optimization (PSO) along with DWT is used to solve it. The objective of the proposed algorithm is to maximize an objective fitness criterion in order to enhance the contrast and detail in an image by adapting the parameters of a novel extension to a local enhancement technique. The Entropy Gain and objective criterion has been used as a comparison parameter for proposed image enhancement method.

References


Index Terms

Computer Science  Image Processing

Keywords

Particle swarm optimization, discrete wavelet transform, Low contrast enhancement, fitness function, entropy gain
Low Contrast Gray Image Enhancement using Particle Swarm Optimization (PSO) with DWT