

عنوان مقاله:

A new method based on particle swarm optimization algorithm for digital images edge detection

محل انتشار:

اولین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مهندسی برق و کامپیوتر (سال: 1395)

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خلاصه مقاله:

Edge detection is one of the most practical image processing. Due to the extensive use of digital images, edge detection of the images is of particular importance. There are different ways to detect edges in an image that, often are facing with problems such as the loss of original image data and the inability to edge detection of on different aspects. Edge detection using Metaheuristic Algorithms has been the attention of many researchers in recent years. Particle swarm optimization is a population-based meta-heuristic method, so that mimics from birds' exploratory behavior to find solutions to optimization problems. In this paper, a method based on particle swarm optimization algorithm (PSO) is provided to detect digital images edges. Edge detection is done in the proposed method using block variance calculation and image segmentation. Proposed method has been implemented to increase the accuracy of edge detection. In the proposed algorithm, fuzzy systems can be also used. The proposed method has been done in MATLAB environment and several samples have been tested. The results indicate good and remarkable performance proposed method in edge detection.

کلمات کلیدی:

;particle swarm optimization; digital images; edge detection; Metaheuristic

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