Abstract

Nano fibers are widely used in various industries, therefore knowing the morphology is important. Thresholding is a simple but effective technique for image segmentation. The goal of image segmentation is to cluster pixels into salient image regions, i.e., regions corresponding to individual surfaces, objects, or natural parts of objects. In this paper, a novel method is proposed for performing image segmentation. The purpose of this paper proposed an imperial competitive algorithm with the objective function from Kmeans clustering algorithm for Nano fibers image thresholding. Then, the algorithm used, with the algorithms such as: global threshold, local threshold, Kmeans clustering algorithm and FCM methods were compared. Finally, a powerful algorithm for image thresholding is found. The comparisons and experimental results show that the proposed algorithm is better than other methods particularly global and local thresholding, Kmeans, and even FCM.

References
Nano Fiber Images Thresholding based on Imperial Competitive Algorithm

Engineering, 26(1), 53-62.

Index Terms

Computer Science

Image Processing
**Keywords**

Imperial Competitive Algorithm  Segmentation  Thresholding  Kmeans Clustering  Nano Fiber.