Abstract

The increasing influence of segmentation in medical image processing requires great need to develop robust image segmentation method to eliminate the problem of traditional methods. Fuzzy c-means (FCM) is an effective fuzzy clustering technique for medical image segmentation but FCM is noise-sensitive and time consuming with large set of medical images. A penalized fuzzy clustering (PFC) is implemented for eliminating noise sensitivity of FCM. This paper presents the hybrid approach that employs Particle swarm optimization (PSO) to optimize the results of PFC for medical images segmentation.

References


**Index Terms**

Computer Science Image Processing

**Keywords**

Medical image segmentation, fuzzy c-means (FCM), penalized fuzzy clustering (PFC), particle swarm optimization (PSO).