Abstract

Fuzzified optimization based data clustering is one of the important data mining tool which is active research of real world problems. This paper proposed Fuzzified Particle Swarm Optimization and K-Harmonic Means algorithm (FPSO+KHM) for clustering the electrical data systems. The partitioned clustering algorithms are more suitable for clustering large datasets. The K-Harmonic means algorithm is center based clustering algorithm and very insensitive to the selection of initial partition using built in boost function, but easily trapped in global optima. The proposed algorithm uses Fuzzified PSO and K-Harmonic means to generate more accurate, robust, better clustering results. This algorithm can generate the solution in few number of iterations, and get faster convergence when compare to K-Harmonic Means and hybrid PSO+ K-Harmonic Means algorithms. This algorithm is applied for two different set of IEEE standard electrical bus data systems.

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An Efficient Intelligent Clustering Tool based on Hybrid Fuzzified Algorithm for Electrical Data

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**Index Terms**

Computer Science  
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**Keywords**

Clustering  
Fuzzified PSO  
K-Harmonic means algorithm  
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local optima

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