

عنوان مقاله:

Island Model based Differential Evolution Algorithm for Neural Network Training

محل انتشار:

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خلاصه مقاله:

There exist many approaches to training neural network. In this system, training for feed forward neural network is introduced by using island model based differential evolution. Differential Evolution (DE) has been used to determine optimal value for ANN parameters such as learning rate and momentum rate and also for weight optimization. Island model used multiple subpopulations and exchanges the individual to boost the overall performance of the algorithm. In this paper, four programs have developed; Island Differential Evolution Neural Network (IDENN), Differential Evolution Neural Network (DENN), Genetic Algorithm Neural Network (GANN) and Particle Swarm Optimization with Neural Network (PSONN) to probe the impact of these methods on ANN learning using various datasets. The results have revealed that IDENN has given quite promising results in terms of convergence rate smaller errors compared to DENN, PSONN and GANN

کلمات کلیدی:

Artificial neural network, Island Model, Differential Evolution, Particle Swarm Optimization, Genetic Algorithm

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