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Enhanced honey bee-mating optimization – A critical survey

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ABSTRACT

Enhanced honey bee-mating optimization (EHBMO) gives the solution for optimization problems of four benchmark side sway frame. Comparing to other meta-heuristic optimization algorithms, EHBMO is highly competitive. EHBMO is the algorithm which is introduced newly. EHBMO gave so many ideas for the researchers, and they've learnt so many techniques on HBMO. This dissertation incorporates the transparency of honey bee-mating on author's outlook, which comprises the dissimilarity in the algorithm, present and occurring research, application and unbarred problems.

Keywords

Optimization, Enhanced honey bee-mating, Honey bee-mating, EBHMO, Swarm optimization, Meta-heuristic optimization method.

Introduction

Enhanced honey bee-mating optimization (EHBMO)is new method on honey bee-mating optimization (HBMO). This HBMO is swarm-based procedure that is inclined by some process on honey bee-mating. Comparing to other meta-heuristic optimization algorithms, EHBMO is highly competitive. EHBMO is the algorithm which is introduced newly. EHBMO gave so many ideas for the researchers, and they've learnt so many techniques on HBMO. An implementation of Enhanced Honey Bee Mating optimization algorithm (EHBMO) in order to reflection in plant growth is planned for solving the problem in the power system which has fault estimation. Here, Simulating and original power systems are not been wisely examined that can be pondered by different situations.[7] And the other application of EHBMO is a recent HBMOA for non-smooth economic send off. A basic concept of the HBMO conveys about the work of the honey bee, and they are social insects. They build their own hives and they toil in the extremely organized pecking order. There are three forms in the honey bee community: the queen, drones and workers. [8]. The flow chart in show in Fig.1.

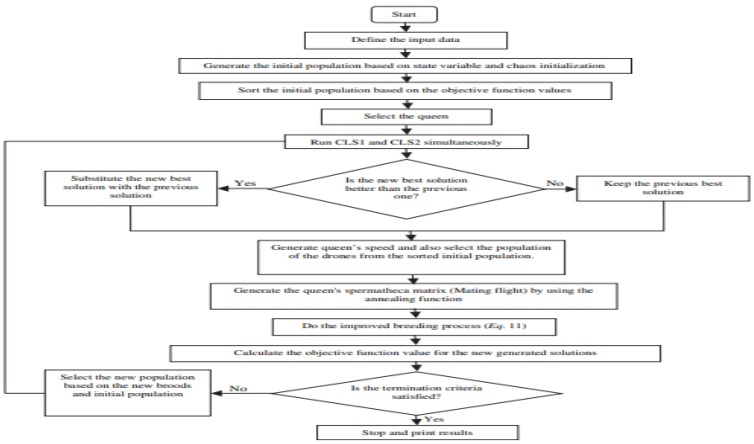

FIG.1. Flowchart on enhanced honeybee-mating optimization

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Table.1. Literature survey of papers

Paper	Title	Description	Year
Faithian, Amiri, Maroosi	Application of HBMO on clustering	HBMO describes the clustering method	2007
Haddad, Afsar, Marino	Design-operation of multi-hydropower reservoir HBMO approach	Multi-hydropower reservoir is proposed by solving HBMO	2008
Haddad, Afsar, Marino	HBMOA in deriving optimal operations rules for reservoir	Deriving the optimal operations by HBMOA	2008
Huwi, Jiang, Chen	Multilevel minimum cross entropy threshold selection based on HBMO	HBMO solves threshold problems	2009
Sabar, Ayob, Kendall	Solving the examination timetabling problems using HBMO	Examination timetabling problem is solved by HBMO	2009
Mohan, Babu	Optimal distribution network design with HBMO	Networking design solved by HBMO	2010
Magdalene, Yannis, Zopounidis	HBMOA for financial classification problem	It solves the financial problems	2010
Niknam, Dougou, Meymand, Firouzi	A new HBMOA for non-smooth economic dispatch	HBMOA solved for non-smooth dispatch	2010
Afsar, Shafii, Haddad	Optimizing multi-reservoir operation rules: an improved HBMO approach	Improved HBMO is solved for multi-reservoir operation rules	2011
Omar, Debbat, Stambouli	Null steering beamformer using hybrid algorithm based on HBMO and Tabu search in adaptive antenna array	Two methods are used to solve the antenna array	2012
Olamei, Niknam, Badali, Arefi	Distribution feeder reconfiguration for loss minimization based on MHBMOA	MHBMOA is used for solving the distribution feeder reconfiguration	2012
Huang, Liu, Su, Ou	Application of EHBMOA of fault section estimation in power syatem	Fault section estimation in power system is defined with EHBMOA	2013
Eskandari, Zadehbagheri, Rezazadeh, Sedighizadeh	Solution of security constrained optimal power flow using HBMO	HBMO solved the optimal power	2014
Chakaravarthy, Kalyani	A brief survey of HBMOA to efficient data clustering	Survey on HBMOA to data clustering	2015
Jin, Zhang, Shao	An effective hybrid HBMOA for integrated process planning and scheduling problems	HBMOA in hybrid for integrated process	2015

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Motivation and benefits

A set of conversion in the state expanse condition which is considered as the mating flight in which the probability will be shown on the mating of drones with queen. The definition of the annealing function, the mating of drones with queen probabilistically. Enhanced honey bee mating optimization algorithm (EHBMO) is the advanced process, helps the notion laying weight reserved candidate which are moderately low achievable to the ongoing confined applicant.

Applications

Multi-Objective

The application of HBMOA is formed on Modified honey bee-mating optimization (MHBMO) perspective which is a well-organized algorithm for multi-objective distributed feeder reconfiguration. The Distribution feeder reconfiguration (DFR) will reduce the deprivation of the actual power and it also deviate the voltage of the node. [1] And by the HBMO the recent and current multilevel image thresholding scheme is introduced an it is based on particle swarm optimization (PSO).[2] Multi-reservoir Optimization operation rules on an EHBMO approach which presents a study among parameters of the algorithm in optimization in the first part and in the other parts is to solving the benchmark single-reservoir operation by improved HBMO.[3] In HBMO approach, the outline performance of multi-hydropower reservoirs are illustrated. The planning and managing of water resource by the HBMO algorithm was examined retaining a single-reservoir and multi-reservoir hydropower system. In this system is to be considered as non-linear, non-convex, particle optimization problem. [4]

HBMO on clustering

For solving the clustering problems, honey bee-mating optimization algorithm is introduced. They build their own hives and they toil in the extremely organized pecking order. The data clustering in the HBM algorithm can be put in use when the known of prior and crisp are in the number of clusters in nature.[5] Here, got a brief survey of HBMOA to efficient data clustering, in which cluster association using sustainable energy based on bees optimization (CASEBO) , Replacement in bees optimization algorithm (RIBO), Enhanced replacement in bees optimization algorithm (ERIBO) are the enhancing of Honey bee-mating optimization (HBMO) when it requires few adaption on the LP-clustering that is Load profile clustering.[6] The algorithm in pictorial form is shown in Fig.2 and representation is in Fig.3

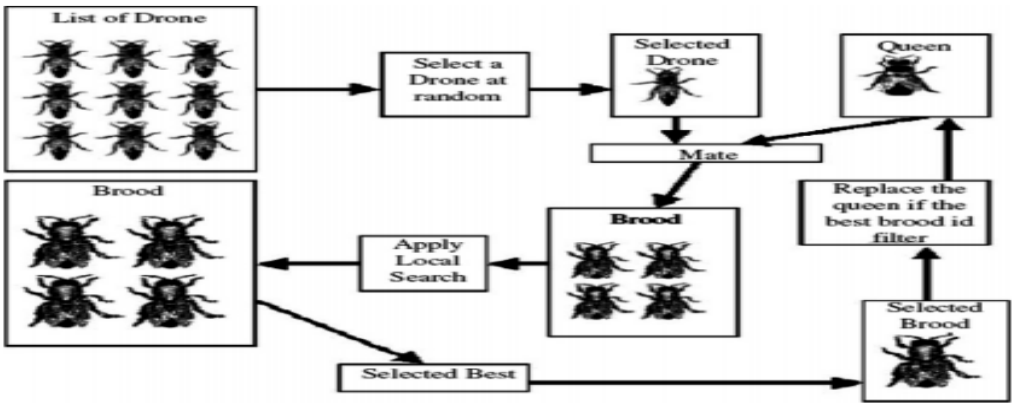

FIG.2. The Honey Bee-Mating Algorithm

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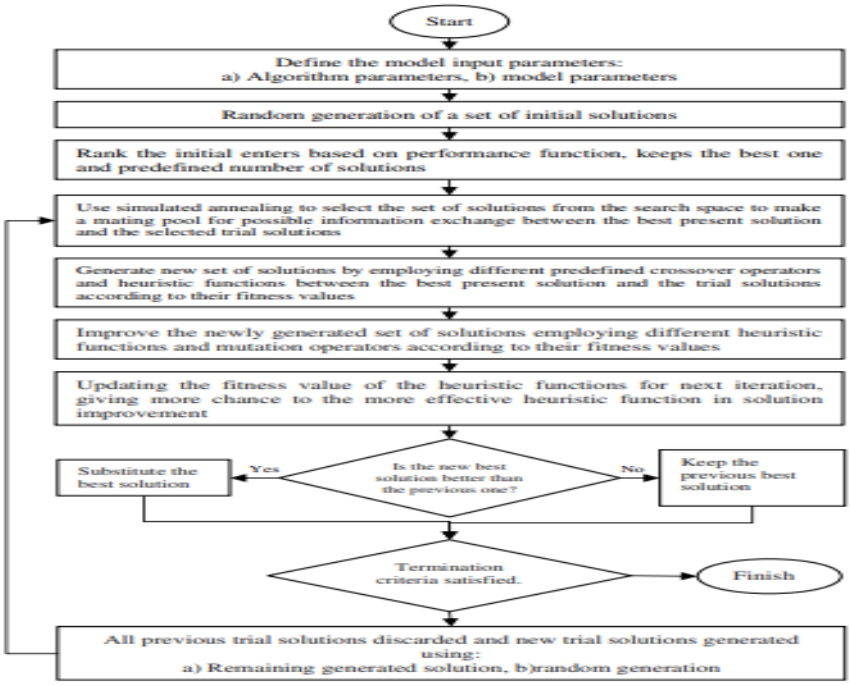

FIG.3. Honey Bee-Mating Algorithm Representation

Other methods of HBMO

The application, solution of security constrained optimal power flow using HBMO is the one of the prime power system problems which can be solved effectively in need of superior techniques in optimization.[9] HBMO can be retained in the optimal water distribution network design which shows the capacity of the optimal pipe diameters disclose the HBMO were the choices of the discrete has the lower the number of assess.[10] There is the rules for reservoir for deriving the optimal operation with HBMO, in this system which is to be considered as non-linear, non-convex, particle optimization problem.[11] HBMO can also retained to solve examination timetabling problems (ETP). Here the drone follows the queen when it leaves the nest for performing the mating, with this process the ETP can be solved. [12] Financial classification problems can be solved by HBMO algorithm in which the feature subset selection problem is solved and financial data in which credit risk assessment is involved can be tested [13] a recent HBMOA for non-smooth economic send off. A basic concept of the Honey bee mating optimization conveys about the work of the honey bee, and they are social insects. They build their own hives and they toil in the extremely structured pecking order. There are three forms in the honey bee community: the queen, drones and workers.[8] In an application, some implementation of HBMO in which least mean squares (LMS) and genetic algorithm (GA) can be approached. [14] An constructive hybrid HBMOA for desegregated procedure arranging and organizing problems is the one of the application in which the hybrid HBMOA is suggested. Here it tested the benchmark system. [15].

Conclusion

In this Paper we discuss about the review on EHBMO. EHBMO is the process which is introduced newly. Honey bee-mating is stimulated by the action of mating in honey bee which a meta-heuristic optimization method. EHBMO gave so many ideas for the researchers, and they've learnt so many techniques on honey bee-mating optimization. This Paper incorporates the transparency of honey bee-mating on author's outlook, which comprises the dissimilarity in the algorithm, present and occurring research, application and unbarred problems.

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