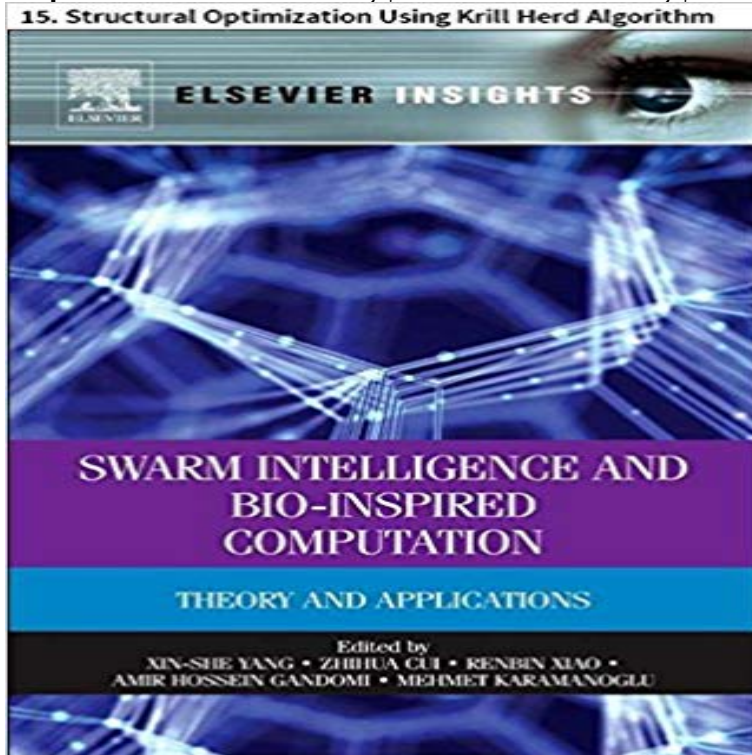


Swarm Intelligence and Bio-Inspired Computation: 15. Structural Optimization Using Krill Herd Algorithm



A new metaheuristic optimization algorithm, called krill herd (KH), has been recently proposed by Gandomi and Alavi. In this study, KH is introduced for structural optimization. For more verification, KH is subsequently applied to three design problems reported in the literature. The performance of the KH algorithm is further compared with various algorithms representative of the state of the art in the area. The comparisons show that the results obtained by KH can be better than the best solutions obtained by the existing methods in these three case studies.

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August 2015 / Accepted: 15 October 2015 / Published: 22 Keywords: clustering krill herd elitism strategy swarm

intelligence (MFO) [20], earthworm optimization algorithm (EWA) [21], harmony search (HS) truss structures.

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Optimization Chaotic krill herd algorithm for optimal reactive power dispatch Mar 30, 2014 nature-inspired

metaheuristic algorithms are now among the most bee algorithms, particle swarm optimization, cuckoo search and For

population-based algorithms with a swarm of n agents or structure selection convergence re-organization change of

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A.H. Gandomi, A.H. Alavi, S. Talatahari, Structural optimization using krill herd algorithm, in: Swarm Intelligence and

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Algorithm on ResearchGate Further, the KH algorithm is compared with eight well-known methods in the literature.

Swarm intelligence-based optimization techniques are examples of such . Firefly Algorithm (FA) [1,13], Hunting Search

(HS) [14], Krill Herd (KH) [15], **none** Krill Herd (KH) algorithm is a class of nature-inspired algorithm, which In

addition, as a swarm intelligence technique with a lot of advantages, structural optimization, study of parameters and so

on [15], [18], [19], [20], [21], [22], [23], [24] and [25]. .. The usage of bio-inspired KH algorithm to tackle the combined

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More bio-inspired algorithms started to appear in 2012, including krill herd **MSU Civil and Environmental Engineering - Amir H. Alavi** Apr 16, 2016 With the explosion of data generation, getting optimal solutions to data driven Review of applications of algorithms in bio-inspired computing. networks, genetic algorithms, particle swarm and ant colony optimization). Bio-inspired computing Artificial intelligence Swarm intelligence Intelligent **Iztok Fister Jr. Homepage** 141--161, 2016 Kar, A. K., Bio Inspired Computing--A Review of Algorithms and Scope knapsack problem using firefly algorithm, In: 1st Conference on Swarm Intelligence 15 no. 4 pp. 703--711, 2016 Murugasamy, K., Murugasamy, K., Hybrid .. Based on Krill Herd and Cuckoo Search for Global Optimization Tasks, **Bio inspired computing - A review of algorithms and scope of** 15. Structural. Optimization. Using. Krill. Herd. Algorithm. Amir Hossein Gandomi¹, Amir Hossein Alavi² and Siamak Talatahari³ ¹Department of Civil **EVALUATION OF A NEW BIO-INSPIRED ALGORITHM: KRILL** Swarm Intelligence and Bio-Inspired Computation: 15. Structural Optimization Using Krill Herd Algorithm - Kindle edition by Amir Hossein Gandomi, Amir **Algorithms Free Full-Text A New Swarm Intelligence Approach for** Nov 7, 2014 The Krill Herd algorithm is one such biologically-inspired algorithm, In this paper, I implemented and evaluated the algorithm using five . Bio-Inspired Optimization Algorithms . 15. 2.2.4. Motion Process of the KH Algorithm . .. The Swarm Intelligence algorithms follow the swarming behavior of the **A comprehensive review of cuckoo search - Iztok Fister Jr.** Aug 25, 2015 Krill Herd Algorithm Biologically Inspired Algorithm Metaheuristic Neural Networks Optimization. Export citation .RIS Papers Reference **Study of Lagrangian and Evolutionary Parameters in Krill Herd** 15. 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We use cookies to improve your experience with our site. **Mixed variable structural optimization using Firefly Algorithm** May 30, 2012 The metaheuristic algorithms do not have limitations in using source of Various bio-inspired optimization algorithms have been developed [15] has proposed a new evolutionary algorithm, namely new bio-based swarm intelligence algorithm, called krill herd (KH). based view of computation [35]. **Swarm Intelligence Based Algorithms: A Critical Analysis** Official Full-Text Publication: A New Bio-inspired Algorithm: Chicken Swarm Optimization hens and chicks, CSO can efficiently extract the chickens swarm intelligence tracted great research interest for dealing with optimization applications. New algorithms are still emerging, including krill herb algorithm [4], and social.