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ISSN: 2210-6502

DESCRIPTION

Introduction:

To tackle complex real world problems, scientists have been looking into natural processes and creatures - both as model and metaphor - for years. **Optimization** is at the heart of many natural processes including Darwinian evolution, social group behavior and foraging strategies. Over the last few decades, there has been remarkable growth in the field of nature-inspired search and optimization algorithms. Currently these techniques are applied to a variety of problems, ranging from scientific research to industry and commerce. The two main families of algorithms that primarily constitute this field today are the **evolutionary computing** methods and the **swarm intelligence** algorithms. Although both families of algorithms are generally dedicated towards solving search and optimization problems, they are certainly not equivalent, and each has its own distinguishing features. Reinforcing each other's performance makes powerful hybrid algorithms capable of solving many intractable search and optimization problems.

About the journal:

Swarm and Evolutionary Computation is the first peer-reviewed publication of its kind that aims at reporting the most recent research and developments in the area of **nature-inspired intelligent computation** based on the principles of **swarm** and **evolutionary** algorithms. It publishes advanced, innovative and interdisciplinary research involving the theoretical, experimental and practical aspects of the two paradigms and their hybridizations. *Swarm and Evolutionary Computation* is committed to timely publication of very high-quality, peer-reviewed, original articles that advance the state-of-the-art of all aspects of evolutionary computation and swarm intelligence. Survey papers reviewing the state-of-the-art of timely topics will also be welcomed as well as novel and interesting applications.

Topics of Interest:

Topics of interest include but are not limited to: Genetic Algorithms, and Genetic Programming, Evolution Strategies, and Evolutionary Programming, Differential Evolution, Artificial Immune Systems, Particle Swarms, Ant Colony, Bacterial Foraging, Artificial Bees, Fireflies Algorithm, Harmony Search, Artificial Life, Digital Organisms, Estimation of Distribution Algorithms, Stochastic Diffusion Search, Quantum Computing, Nano Computing, Membrane Computing, Human-centric Computing, Hybridization of Algorithms, Memetic Computing, Autonomic Computing, Self-organizing systems, Combinatorial, Discrete, Binary, Constrained, Multi-objective, Multi-modal, Dynamic, and Large-scale Optimization.

Applications:

Furthermore, the journal fosters industrial uptake by publishing interesting and novel applications in fields and industries dealing with challenging search and optimization problems from domains such as (but not limited to): Aerospace, Systems and Control, Robotics, Power Systems, Communication Engineering, Operations Research and Decision Sciences, Financial Services and Engineering, (Management) Information Systems, Business Intelligence, internet computing, Sensors, Image Processing, Computational Chemistry, Manufacturing, Structural and Mechanical Designs, Bioinformatics, Computational Biology, Mathematical and Computational Psychology, Cognitive Neuroscience, Brain-computer Interfacing, Future Computing Devices, Nonlinear statistical and Applied Physics, and Environmental Modeling and Software.

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[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59. <https://doi.org/10.1016/j.Sc.2010.00372>.

Reference to a journal publication with an article number:

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