





Special Issue Reprint

Evolutionary Computation, Metaheuristics, Nature- Inspired Algorithms, and Symmetry

www.mdpi.com/books/reprint/11827

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ISBN 978-3-7258-5833-0 (Hardback) ISBN 978-3-7258-5834-7 (PDF)



Computational intelligence is an important branch of artificial intelligence. Nowadays, evolutionary computation as a part of computational intelligence is widely used to solve various numerical problems and real-world engineering problems. Its application and development bring a great contribution to the optimization domain. Thus, it is of great interest to investigate the role and significance of evolutionary computation, metaheuristics, and nature-inspired algorithms in optimizing distinctive problems.

This Reprint aims to bring together both experts and newcomers from either academia or industry to discuss new and existing issues concerning evolutionary computation and optimization. The research topics include cloud-edge-end collaborative task offloading, time-series analysis of brent oil price, high-efficiency and ultrawideband polarization conversion metasurface, many-objective optimization, imperative programs, maize water and fertilizer irrigation simulation, multi-objective vehicle routing problems with time windows, and short-term electrical load forecasting. Various optimization algorithms such as particle swarm optimization, genetic programming, and non-dominated sorting genetic algorithm are successfully applied to these topics and show superior performance. These algorithms not only greatly promote the development of evolutionary computation and community, but also effectively address some existing limitation of optimization problems.



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