Special Issue

Hybrid Metaheuristic Algorithms for Portfolio Optimization and Its Applications

Message from the Guest Editors

The field of hybrid metaheuristics has flourished over the years due to the inherent vision of hybridization to combine different metaheuristics such that each of the combinations supplements the other in order to achieve the desired performance. Typical examples include fuzzy-evolutionary, neuro-evolutionary, neuro-fuzzy evolutionary, and rough-evolutionary approaches, to name a few. Quantum Metaheuristics enhance the real-time performance of the hybrid metaheuristics by resorting to the features of quantum mechanics. Recently, portfolio optimization has attracted attention for helping investors to balance the risks and returns. An optimized portfolio enables proactive management of application lifecycles, changes, and standards. Apart from financial transactions, it can be extended to other areas including the healthcare sector, and economic load dispatch, to name a few. Since portfolio optimization manifests real-world constraints, the problem becomes difficult to address via traditional methods. In contrast, several hybrid metaheuristic approaches have been developed of late, to tackle portfolio optimization while avoiding the limitations of traditional methods.

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