Special Issue

Engineering Applications of Optimization Algorithms: Heuristics, Metaheuristics, and Hyperheuristics

Message from the Guest Editors

Optimization algorithms are powerful tools for solving a wide range of complex real-world problems across various engineering domains. While exact search methods guarantee an optimal solution, their practicality is often limited when dealing with NP-complete/NP-hard problems due to time constraints. In such cases, heuristic, metaheuristic, and hyperheuristic algorithms become crucial, as they offer near-optimal solutions within a reasonable timeframe, balancing complexity and efficiency. The selection of these algorithms is generally guided by the specific application requirements, including the time available and the desired level of accuracy. The aim of this Special Issue is to bring together advanced research and innovative applications of heuristics, metaheuristics, and hyperheuristics to address complex optimization problems in engineering. We invite contributions from experts in both academia and industry to showcase recent advancements in optimization algorithms and their applications in solving real-world challenges across diverse engineering fields, including computer, electrical, mechanical, chemical, biomedical, civil, and industrial engineering.

Guest Editors

Dr. Mohammad Shokouhifar

Dr. Mehdi Hosseinzadeh

Prof. Dr. Frank Werner

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Algorithms
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
algorithms@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

Editor-in-Chief

Prof. Dr. Frank Werner
Faculty of Mathematics, Otto-von-Guericke-University, P.O. Box 4120, D-39016 Magdeburg, Germany

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