

Special Issue

Stochastic Optimization with Industrial Applications

Message from the Guest Editors

Stochastic optimization has emerged as an essential tool for addressing real-world industrial challenges characterized by intrinsic uncertainty in processes, demand, supply, and system performance. This Special Issue, “Stochastic Optimization with Industrial Applications”, aims to bring high-quality contributions that advance both the theory and practice of stochastic optimization, emphasizing industrial applicability. We invite submissions of papers that introduce innovative models, algorithms, and computational methods for addressing uncertainty in complex systems, along with case studies demonstrating successful applications across various sectors, including manufacturing, energy, logistics, supply chains, transportation, healthcare, and finance. Submissions that highlight the integration of stochastic optimization with cutting-edge technologies, such as artificial intelligence, machine learning, big data analytics, and digital twins, are particularly encouraged. This Issue also investigates advanced methods such as simulation-based optimization, robust and chance-constrained programming, stochastic dynamic programming, and decomposition techniques.

Guest Editors

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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

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