



## Numerical Optimization and Algorithms

Guest Editors:

**Prof. Dr. Dunhui Xiao**

School of Mathematical Sciences,  
Tongji University, Shanghai  
201804, China

**Prof. Dr. Shuai Li**

Faculty of Information  
Technology and Electrical  
Engineering, University of Oulu,  
Oulu, Finland

Deadline for manuscript  
submissions:

**closed (31 December 2023)**

### Message from the Guest Editors

Dear Colleagues,

Numerical algorithms and optimization are widely used in fields of science and engineering, such as physics, environment, mechanics, biology, data science, economics, finance, and so on. These problems are complex, highly nonlinear, and difficult to predict. Over the last decade, computational problems have become popular and have gained much attention due to the improved computer performance, computing methods, and the rapid development of data science technology. However, these developments have also raised various issues and challenges, such as high non-linearity, the curse of dimensionality, uncertainty, complexity, and so on. Therefore, these challenges urgently need to be addressed by developing new numerical algorithms such as graph theory, optimization algorithms, algebra, uncertainty, data science or analysis, new differential equations solving algorithms and methods, probability, and statistics algorithms and methods.

This Special Issue deals with various numerical algorithms in the fields of both science and engineering.

Prof. Dr. Dunhui Xiao

Prof. Dr. Shuai Li

*Guest Editors*





## Editor-in-Chief

### Prof. Dr. Frank Werner

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

## 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.

## Author Benefits

**Open Access :** free for readers, with **article processing charges (APC)** paid by authors or their institutions.

**High Visibility:** indexed within **Scopus**, **ESCI (Web of Science)**, **Ei Compendex**, and **other databases**.

**Journal Rank:** CiteScore - Q2 (*Numerical Analysis*)

## Contact Us

---

*Algorithms* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/algorithms](http://mdpi.com/journal/algorithms)  
[algorithms@mdpi.com](mailto:algorithms@mdpi.com)  
[X@Algorithms\\_MDPI](https://twitter.com/Algorithms_MDPI)