



## Machine Learning and Data Analysis in Bioinformatics

Guest Editor:

**Dr. Ian Morilla**

1. Laboratory Analysis, Geometry and Applications (LAGA),  
University Sorbonne Paris Nord,  
93430 Paris, France  
2. Department Genetics,  
University of Malaga, 29010  
Malaga, Spain

Deadline for manuscript  
submissions:

**closed (31 January 2024)**

### Message from the Guest Editor

The field of biological research is generating vast amounts of high-dimensional data that require sophisticated analytical tools to uncover the hidden patterns and causal relationships that underlie biological processes. Unsupervised machine learning methods, such as clustering and dimensionality reduction techniques, have been widely used to identify subgroups within large datasets and to visualize complex data structures.

Recently, topological data analysis (TDA) has emerged as a powerful tool to analyze high-dimensional data and extract meaningful features. By focusing on the shape and structure of the data, rather than just the individual data points, TDA can identify topological features and structures in the data that traditional statistical methods may miss. Deep learning techniques have also shown great promise in identifying subtle patterns and relationships within large datasets.

In this Special Issue, we invite researchers to submit their original research articles, reviews, and perspectives on unsupervised machine learning methods, topological data analysis, and deep learning in the context of biological data.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Francisco Chiclana**  
School of Computer Science and  
Informatics, De Montfort  
University, The Gateway,  
Leicester LE1 9BH, UK

## Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

## Author Benefits

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

**High Visibility:** indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

**Journal Rank:** JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

## Contact Us

---

*Mathematics* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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

[mdpi.com/journal/mathematics](http://mdpi.com/journal/mathematics)  
[mathematics@mdpi.com](mailto:mathematics@mdpi.com)  
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)