



Machine Learning Algorithms for Biomedical Image Analysis and Applications

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Deadline for manuscript
submissions:

31 December 2024

Message from the Guest Editors

In recent years, the infusion of architectural and algorithmic innovations within the realm of machine learning has revolutionized medical image analysis. Despite these advancements, the assimilation of these models into clinical practice bears challenges. The wide availability and heterogeneity of open data offer the opportunity to train increasingly ambitious models, but which harbor a myriad of pitfalls.

Such challenges include the need for multimodal training, data harmonization, training small dataset scenarios, etc. Additionally, stringent requirements for explainability and reliability imposed by regulatory agencies add further complexity to the integration of machine learning models in clinical settings. Addressing these challenges holds immense potential for transformative impacts on healthcare, particularly in advancing the concepts of precision and personalized medicine.

This Special Issue provides a forum to publish original research papers covering algorithms, methodologies, and applications of computational methods for biomedical image analysis and quantification, as well as to implement predictive models for precision medicine and clinical decision support systems.





Editor-in-Chief

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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.

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