

Special Issue

Machine Learning in Ultrasound Imaging

Message from the Guest Editors

Ultrasound imaging has long been a cornerstone of diagnostic medicine owing to its safety, portability, cost-effectiveness, and real-time imaging capabilities. With recent advances in machine learning (ML) and artificial intelligence (AI), ultrasound is undergoing a transformative shift toward more automated, accurate, and intelligent applications.

Despite these advances, ultrasound imaging poses unique challenges for ML applications, including high variability in image quality, speckle noise, operator dependence, and limited annotated datasets. This Special Issue seeks to gather cutting-edge research studies that advance the field of ML in ultrasound imaging, with the goal of fostering cross-disciplinary collaboration between computer scientists, engineers, and clinicians.

We invite high-quality original research articles on all aspects of machine learning applied to ultrasound imaging. Topics of interest include, but are not limited to:

- Image Processing and Enhancement
- Segmentation and Detection
- Quantitative Analysis and Biomarkers
- Clinical Applications
- Methodological Advances
- Emerging Directions

We look forward to receiving your contributions.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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