Special Issue

Application of Machine Learning Using Ultrasound Images, 3rd Edition

Message from the Guest Editor

Ultrasound imaging is indispensable in global hospitals, providing real-time, radiation-free images. Systems range from USD 10,000 for portable devices to over USD 300,000 for advanced models, supporting various medical applications. Challenges include low tissue contrast, image artifacts, and user variability. Despite these, ultrasound aids in disease diagnosis, therapy assessment, biopsies, and surgeries across fields like obstetrics, gynecology, and cardiology. Although deep learning is widely applied in CT and MR imaging, its potential in ultrasound remains underexplored. Recent advancements show promise in reducing variability, enhancing biopsy guidance, and improving pathology detection and therapy monitoring. Contributions are sought on machine learning algorithms to enhance ultrasound's reliability in disease detection, pathology quantification, and image-guided interventions. We are seeking contributions that present machine learning algorithms, techniques, and applications that will contribute to making ultrasound imaging more robust for disease detection, diagnosis, pathology quantification, image-guidance minimal interventions, and image-guided surgery.

Guest Editor

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Message from the Editor-in-Chief

The imaging term, specific with journal, is to be considered in its broadest sense. Image processing, image understanding and computer vision are all terms related to imaging acquisition, its processing and the extraction of relevant information from the scene to obtain the underlying knowledge. All tasks related to the above items are oriented toward specific applications in a broad range of areas and topics. The *Journal of Imaging* is conceived as an efficient vehicle in the scientific community for the communication and transmission of the progress and research results in the topics covered.

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