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Applications of Advanced Imaging Technology in Biomedical Engineering

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Deadline for manuscript submissions:

closed (30 November 2021)



mdpi.com/si/62677

Message from the Guest Editors

This Special Issue aims to highlight recent progress in developing leading-edge advanced imaging technologies and their application in biomedical engineering. The scope will cover all aspects of advanced imaging, like instrumentation, methodologies, and image processing that provide novel applications and means to investigate disease progression and therapies at cellular and sub-cellular resolution on a molecular level in 3D.

Specific topics include (but are not limited to) biomedical applications in following areas:

- Advanced imaging technologies including but not limited to diffuse optical imaging, optical coherence tomography, photoacoustic imaging, microscopy, multiphoton microscopy
- Advanced imaging analysis for disease detection and monitoring, including but not limited to, MRI, CT, PET, ultrasound
- Spectroscopy-based imaging including fluorescence, Raman, elastic scattering, evanescent wave, diffuse optical spectroscopy, Terahertz spectroscopy, near and mid infrared spectroscopy, diffuse correlation spectroscopy
- Multi-modal imaging for diagnosis, treatment and prevention
- Image-guided surgery, intervention and therapy
- Emerging novel biomedical imaging technologies



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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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