



New Horizons in Time-Domain Diffuse Optical Spectroscopy and Imaging

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Message from the Guest Editor

Dear Colleagues,

In 1977, Jöbsis first described the in vivo application of near-infrared spectroscopy (NIRS), which is also called diffuse optical spectroscopy. NIRS was originally designed for clinical monitoring of tissue oxygenation, and it has also become a useful tool for neuroimaging studies (functional near-infrared spectroscopy, fNIRS). A wide range of NIRS instruments have been developed, including commonly commercially available instruments for continuous wave (CW) measurement based on the modified Beer–Lambert law (steady-state domain measurement). To overcome the problems with quantification, time-domain (TD) and frequency-domain (FD) measurements have been developed. Recently, however, the technology has advanced, and TD measurement is now increasingly implemented in research and practice in various clinical settings. This upcoming Special Issue aims to demonstrate the cutting edge of TD diffuse optical spectroscopy and imaging. It covers all aspects of TD measurement, including advances in hardware and instrumentation, methodology, theory of light propagation, and practical implementation.

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Guest Editor





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Message from the Editor-in-Chief

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