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Multimodal Biomedical Imaging II

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Editor

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Introduction

Data generated by novel imaging technologies such as optical tomography are complex to analyze due to the inherent scattering of light through anatomical systems. Cross-validation and direct comparison with established methods in other imaging modalities are especially challenging. There is critical need for new computational techniques to provide rapid, accurate and cost-effective means for quantification and characterization of such data, either independently or integrated with other modalities. These computational methods will enable faster translation of experimental techniques into viable clinical and/or pre-clinical applications. The applications are diverse and range from imaging at the cellular level to the whole body while incorporating molecular, functional and anatomical information.

The objectives of the Multimodal Biomedical Imaging conference are to provide a forum (1) to review and share recent developments in novel multimodal imaging techniques, (2) highlight development of novel computational methods, and (3) bring together the optical imaging and image analysis communities from other modalities.

Topics include, but are not limited to:

- Multimodal imaging integrating structural and functional information,
- 2D, 3D, 4D, tomographic and/or multi-spectral imaging,
- Imaging and/or image processing techniques applied to optical imaging (e.g. visualization, segmentation, registration),
- Diagnostic analysis techniques which may provide better quantitative and/or diagnostic insight into clinical & pre-clinical imaging (e.g. methods for quantitative measurements, computer-assisted diagnosis...),
- Imaging and/or image processing techniques used to combine optical imaging with other modalities (e.g. MR, X-Ray, PET...),
- Image analysis, computational methods, and reconstruction approaches which may help bring optical imaging into the clinic.

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