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Front Matter: Volume 6431

, "Front Matter: Volume 6431," Proc. SPIE 6431, Multimodal Biomedical Imaging II, 643101 (22 February 2007); doi: 10.1117/12.727335

SPIE.

Event: SPIE BiOS, 2007, San Jose, California, United States

Multimodal Biomedical Imaging II

Fred S. Azar

Editor

**20 and 23 January 2007
San Jose, California, USA**

Sponsored and Published by
SPIE—The International Society for Optical Engineering

Volume 6431

The International Society
for Optical Engineering

Proceedings of SPIE—The International Society for Optical Engineering, 9780819465443, v. 6431

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Author(s), "Title of Paper," in *Multimodal Biomedical Imaging II*, edited by Fred S. Azar, Proceedings of SPIE Vol. 6431 (SPIE, Bellingham, WA, 2007) Article CID Number.

ISSN 1605-7422

ISBN 9780819465443

Published by

SPIE—The International Society for Optical Engineering

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone 1 360/676-3290 (Pacific Time) · Fax 1 360/647-1445

<http://www.spie.org>

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Printed in the United States of America.

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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.

Fred S. Azar