Call for Papers for Thematic Series “Molecular Imaging, Neurophotonics, and AI in Medicine”

This Thematic Series is planned to collect original researches, reviewer articles and prospective opinions in the fields of molecular imaging, neurophotonics and artificial intelligence (AI) in medicine.

**Molecular Imaging**

In the past decades, the development of clinical and biomedical molecular imaging techniques/probes shows encouraging results in solving problems in biology and medicine such as single cell localization, cancer detection, cancer therapy, brain study and et al. The molecular imaging section of this special issue is scheduled to summarize the recent progress in the imaging fields and the prospects for the future. This section includes, but not limited to, the following topics:

1. Development of macro-scale molecular imaging techniques, such as positron emission tomography, single-photon emission computed tomography, X-ray computed tomography, magnetic resonance imaging, diffuse optical tomography, fluorescence molecular tomography, photoacoustic tomography et al.
2. Development of micro-scale molecular imaging techniques, such as fluorescence microscopy, multi-photon microscopy, photoacoustic microscopy, super-resolution microscopy et al.
3. Technology in design, synthesis and evaluation of molecular probes for both biological and medical imaging techniques.
4. Novel imaging reconstruction/processing and quantification methods/algorithms for both clinical and biomedical imaging techniques.

**Neurophotonics**

Optical techniques provide a unique opportunity to probe physiological properties of the brain from the micro- to the macro-scale. The neurophotonics section of this special issue invites research articles that report recent technological developments and clinical applications of imaging and monitoring of the brain. Topics for this special section include, but are not limited to:

1. Functional Near Infrared Spectroscopy of the brain – novel instrumentation, processing methods, and applications.
2. Diffuse Correlation Spectroscopy of the brain – instrumentation and clinical applications.
3. Diffuse Optical Tomography, Diffuse Correlation Tomography and imaging of the brain – including functional applications therein.
5. Instrumentation and cerebral applications of high resolution microscopy – including multi-photon fluorescence imaging, Optical Coherence Tomography, and Photo-Acoustic Tomography.
6. Optogenetics.
7. Low cost approaches to neurophotonics.
AI in Medicine

Artificial Intelligence provides a wide variety of interdisciplinary perspectives concerning the theory and practice in medicine, medically-oriented human biology, and health care. The AI in medicine section of this Thematic Series includes, but not limited to, the following topics:

1. The use of AI techniques in image feature extraction.
2. Disease identification/diagnosis.
3. Treatment planning/recommendation.

Key Dates
Paper Submission: July 30, 2019
Author Notification: August 30, 2019
Revision Due: September 15, 2019
Final Notification: October 15, 2019

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Submission Instructions
Prospective authors are invited to prepare and submit manuscripts following the instructions at: https://vciba.springeropen.com/submission-guidelines; the complete manuscript should be submitted through: https://www.editorialmanager.com/vico/default.aspx.

To ensure that you submit to the correct Thematic Series, please select the appropriate Thematic Series ‘Molecular Imaging, Neurophotonics, and AI in Medicine’ in the 'Additional Information'. In addition, indicate within your cover letter that you wish your manuscript to be considered as part of the Thematic Series on Molecular Imaging, Neurophotonics, and AI in Medicine.