Call for Papers for Thematic Series “Photoacoustic imaging: microscopy, tomography, and their recent applications in biomedicine” in Visual Computing for Industry, Biomedicine, and Art

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Summary
Since its introduction to the field in mid-1990s, photoacoustic imaging has become a fast-growing biomedical imaging modality with many promising potentials. By converting absorbed diffused light energy into not-so-diffused ultrasonic waves, the reconstruction of the ultrasonic waves from the targeted area in photoacoustic imaging leads to a high-contrast sensing of optical absorption with ultrasonic or even sub-ultrasonic resolution in deep tissue, overcoming the optical diffusion limit from the signal detection perspective. Currently, many different versions of implementation have been developed, ranging from whole-body tomography, mesoscopy, microscopy, and even to nanoscopy. Their applications, however, are mostly limited to tissue, small animal, preclinical, or translational stages. Therefore, there is great need for innovations in methodology and instrumentation to advance photoacoustics towards clinics.

Scope
In this Thematic Series, we solicit original contributions or reviews on “Photoacoustic imaging: microscopy, tomography, and their recent applications in biomedicine”. The topics will include but not limited to:

- Photoacoustic microscopy and its applications;
- Photoacoustic tomography and its applications;
- New photoacoustic imaging methodologies and instrumentation;
- Novel tomography reconstruction methods;
- Contrast agent-enhanced photoacoustic imaging;
- Photoacoustic imaging for disease diagnosis;
- Photoacoustics incorporated in dual or multimodal imaging;
- Photoacoustic imaging for treatment response and monitoring;
- Photoacoustics in neuron stimulation and imaging;
- Signal processing in photoacoustic imaging;
• Applications of Artificial Intelligence techniques in photoacoustic imaging.

**Key Dates:**
- Interest Indication: June 30, 2020
- Paper Submission: October 31, 2020
- Author Notification: November 30, 2020
- Revision Due: December 31, 2020
- Final Notification: January 31, 2021

**Submission Instructions**
Please express your interests to one of the Guest Editors via email and prepare to submit the manuscript(s) following the instructions at: [https://vciba.springeropen.com/submission-guidelines](https://vciba.springeropen.com/submission-guidelines); the complete manuscript should be submitted through: [https://www.editorialmanager.com/vico/default.aspx](https://www.editorialmanager.com/vico/default.aspx).

To ensure that you submit to the correct Thematic Series, please select the appropriate Thematic Series 'Photoacoustic imaging: microscopy, tomography, and their recent applications in biomedicine' 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 ‘Photoacoustic imaging: microscopy, tomography, and their recent applications in biomedicine’.

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