

CALL FOR PAPERS

Magnetic fields are used in everyday life and in specific occupational environments. Biomedical imaging has been an essential tool in daily medical diagnostics. For more than a century, biomedical imaging technologies have been developed to provide anatomical, functional and molecular information of internal organs. Optical imaging and ultrasound imaging have been two major modalities. Used in fundamental physics, optical imaging and ultrasound imaging have been explored by different research communities.

Magnetomotive photoacoustic imaging (mmPA) modalities have helped find a way to integrate optical and ultrasound merits, (e.g., rich optical contrast and deep ultrasound resolution). Photoacoustic imaging (PAI) has become increasingly popular in both research and industrial communities. The achievements of this method include but are not limited to: mmPA microscopy, mmPA tomography, mmPA endoscopy, mmPA intravascular probe, contrast-enhanced mmPA, related physics, system and algorithm design. Photoacoustic (or optoacoustic) imaging, including photoacoustic tomography (PAT) and photoacoustic microscopy (PAM), is an emerging imaging modality with great clinical potential. PAI's deep tissue penetration and fine spatial resolution is also a great solution for seeing physiology and pathology at the molecular level. PAI combines optical contrast with the ultrasonic resolution and is capable of imaging at depths of up to 7 cm with a real-time scalable spatial resolution of 10 to 500 μm . PAI has demonstrated potential applications in brain imaging and cancer imaging such as breast cancer, prostate cancer, oval cancer, etc.

The aim of this Special Issue is to attract original research articles about the current and novel pre-clinical and clinical biomedical applications of PAI. Review articles discussing the state of the art are also welcome.

Potential topics include but are not limited to the following:

- ▶ Brain imaging
- ▶ Electromagnetic bioeffects and field modelling
- ▶ Cancer imaging
- ▶ Image reconstruction
- ▶ Quantitative imaging
- ▶ Light source and delivery for PAI
- ▶ Photoacoustic detector
- ▶ Nanoparticles designed for PAI
- ▶ Photoacoustic molecular imaging and spectroscopy
- ▶ Biomedical imaging
- ▶ Photoacoustic imaging
- ▶ Thermo-acoustic imaging
- ▶ Optical and ultrasound imaging
- ▶ Acoustics
- ▶ Bio photonics

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=708194>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Yuvaraja Teekaraman, Vrije Universiteit
Brussel, Brussels, Belgium
yuvaraja.teekaraman@vub.be

Guest Editors

Ravi Samikannu, Botswana
International University of Science and
Technology, Palapya, Botswana
ravis@biust.ac.bw

Hamid Reza Baghaee, Amirkabir
University of Technology, Tehran, Iran
hrbaghaee@aut.ac.ir

Submission Deadline

Friday, 3 December 2021

Publication Date

April 2022