

IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on

“Flexible Sensing and Medical Imaging for Cerebro-cardiovascular Health”

Cerebro-cardiovascular diseases include a variety of medical conditions that affect the blood vessels of the brain, the cerebral circulation, and the heart. The common presentations of cerebro-cardiovascular diseases include an ischemic stroke or mini-stroke and sometimes a hemorrhagic stroke, heart attack, heart failure, hypertensive heart disease, etc. The important contributing risk factors include high blood pressure, smoking, diabetes, lack of exercise, obesity, high blood cholesterol, poor diet, and excessive alcohol consumption, among others. Cerebro-cardiovascular diseases are the leading cause of death globally. A rapidly-growing field, biomedical and health engineering research for cerebro-cardiovascular diseases is unique in that it involves a variety of specialties such as neurology, internal medicine, surgery, radiology, epidemiology, cardiology, hematology, psychology and rehabilitation, and must meet the growing need for sophisticated, up-to-date biomedical and health informatics on clinical data, diagnostic testing, and therapeutic issues.

The goal of this special issue is to publish the latest technology advancement in flexible sensing and medical imaging for cerebro-cardiovascular health. The special issue focuses on the cross-disciplinary approaches, solutions, and initiatives in imaging informatics, sensor informatics, and medical informatics. The application scenarios can cover single or multiple scenarios of health engineering such as unobtrusive physiological sensing, preventive care, multi-modal fast biomedical imaging and processing, health informatics for precision medicine. While review papers are not excluded, only unpublished original articles will be accepted.

Topics include but are not limited to:

- Flexible, wearable and implantable sensors and devices for cerebro-cardiovascular health
- Body sensor networks (BSN)/Body area networks (BAN)/body net for cerebro-cardiovascular health
- Multi-modal biomedical imaging for cerebro-cardiovascular health
- Nano-sensing and nano-technologies for bio-marker detection in cerebro-cardiovascular health
- Multi-scale modeling and information fusion for cerebro-cardiovascular health
- Machine learning and artificial intelligence (AI) for cerebro-cardiovascular disease detection

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