

Special Issue on
Medical Signal Processing in Biomedical and Clinical Applications

CALL FOR PAPERS

Despite advances in biomedical and clinical research, real-time acquisition and signal processing of many biological signals for point-of-care assessment are still a challenging task. Application of signal processing techniques for processing biosignals has received much attention in the recent past. In fact, this has opened up a new domain of research, popularly known as Medical Signal Processing. Many diseases (e.g., preeclampsia, cardiovascular abnormalities, and epilepsy) can be diagnosed at earlier stages by proper interpretation of the physiological and cellular signaling responses. Signaling response, thus obtained, may not be associated with a singular source of origin. Rather a collective response is often a frequent phenomenon. Signals are also obtained in two, three, and four dimensions for better representation of spatiotemporal responses of cellular masses.

Postprocessing techniques of Medical Signal Processing techniques involve recent state-of-the-art application of artificial intelligence (including but not limited to artificial neural network, support vector machine, and genetic algorithm) and component analysis for feature extractions and efficient redundancy of parameters. Optimization of signal processing techniques also improves both diagnostic interpretation and therapeutic solution for many critical diseases. Medical Signal Processing also involves processing of cellular signaling to various metabolic pathways associated with progression of cancer or neurodegenerative diseases.

We invite original papers, review articles, and clinical studies focused on various aspects of Medical Signal Processing.

Potential topics include but are not limited to the following:

- ▶ Biosignal (including EEG, ECG, EMG, and PCG) processing
- ▶ Multimodal signal analysis
- ▶ Processing and interpretation of cellular signaling pathways
- ▶ Univariate signal processing
- ▶ Time-frequency domain signal processing (includes wavelet, s-transform, WVD, Cohen class, and STFT)
- ▶ Multivariate signal processing
- ▶ Heart rate variability

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jhe/mspb/>.

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

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