

Tentative Outline

Special Thematic Issue for Current Medical Imaging

Title: Learning and Computational Approaches for Medical Imaging

Guest Editors: Dr. B. B. Gupta, Dr. Dharma P. Agrawal and Deepak Gupta

Aims & Scope:

In the new digital world, the advancement towards computing and the Artificial Intelligent made it significant, which outflows result in promising and outstanding performance addressing the uncertain conditions. Many issues in medical imaging can be handled and answered by Computational intelligence. In the view of the statistical data processing and analysis the data for further processing such as diagnostic an issue, research for the treatment based on the computation patterns and its results. Furthermore, adaptive learning can be added as the new generation of intelligent computing as it combines principles from previous generations based on machine intelligence.

Some demanding soft computing techniques for Machine Learning and Global Optimization include Artificial Neural Networks, Fuzzy logic, Genetic Algorithms (GA), Differential Evolution (DE), Ant Colony Optimization (ACO), Particle Swarm Optimization (PSO), Artificial Bee Colony (ABC), Firefly Algorithm (FFA) algorithm, etc., can be applied to a wide range of benchmark and real-world application problems in medical imaging.

This special issue aims to provide an overview of medical imaging, its methods and algorithms for processing and also to highlight recent developments in this field independently and combined. Contributions are dealing with the all the aspects of Medical Images, Pattern analysis, technologies, applications, algorithms, and security issues.

Keywords: Artificial Intelligent, computational intelligence, machine Learning, differential evolution, medical images.

Subtopics:

The topics relevant to this special issue include but are not limited to:

- Image analysis of anatomical structures/functions and lesions;
- Computer-aided detection/diagnosis;
- Multi-modality fusion for analysis, diagnosis, and intervention;
- Medical image reconstruction;
- Medical image retrieval;
- Molecular/pathologic/cellular image analysis;
- Dynamic, functional, and physiologic imaging.
- AI technologies for Healthcare: Applications and Challenges
- 3D printing in medical applications
- Advanced Computational and Learning Approaches for Diagnostic Imaging
- Computational Algorithms on Medical Image Processing
- Medical Imaging Technologies for IoT based Wireless Patient Monitoring
- Medical Data Assessment with Traditional, Machine-learning and Deep-learning
- Techniques
- Flexible, wearable and implantable sensors and devices for cerebro-cardiovascular health

- Body sensor networks (BSN)/Body area networks (BAN)/body net for cerebrocardiovascular 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

Schedule:

- ✧ Manuscript submission deadline: April 25, 2020
- ✧ Announcement of acceptance by the Guest Editors: July 15, 2020
- ✧ Final manuscripts due: November 15, 2020

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