Call for Papers

"Multimedia Medical Data-driven Decision Making" [1214]

Data-driven decision-making solutions are under increasing demand in healthcare for development, testing, and trials, with the intention of such solutions being available in both hospitals and homes. This special issue will offer valuable perceptions to researchers and engineers on how to design robust multimedia medical data analytics systems and how to improve patient's information delivery care remotely. The end-to-end health data delivery involves the development of multiple technologies that should enable reliable and faster communication between a patient and a medical provider.

This large volume of health data, often called big data, cannot readily be processed by traditional data processing algorithms and applications. By intelligently investigating and collecting large amounts of healthcare data, image analysis associated with Internet of medical things can enhance the decision-making process and early disease diagnosis. Hence, there is a need for scalable machine learning: deep learning and intelligent algorithms that lead to more interoperable solutions and make effective decisions in emerging medical data-driven solutions. In line with these efforts, the central theme of this special issue is to report novel methodologies, theories, technologies, techniques, and solutions for medical data analytics techniques for multimedia applications.

This special issue will focus on recent advances and different research areas in healthcare technologies, medical imaging and signal processing, computational intelligence and bioinformatics, security and data analysis under the intelligent decision-making framework and will also seek out theoretical, methodological, well-established and validated empirical work dealing with these different topics. The title covers a very vast audience from basic science to engineering and technology experts and learners. This special issue aims at bringing together the latest industrial and academic progress, research, and development efforts within the rapidly maturing decision-making data analytics ecosystem. We welcome contributions to the emerging biomedical data analytics topics that support prospective medical applications.

This special issue aims at addressing these topics across multiple abstraction levels, ranging from architectural models - the provisioning of services, protocols and interfaces to specific

implementation approaches, in addition to computer vision solutions and deep learning based methods for early diagnostic and medical pattern recognition. It aims to present the most important and relevant advances to overcome the challenges related to artificial intelligence, data analytics, Internet of medical things, and health informatics. We seek original and high-quality submissions on, but not limited to, one or more of the following topics:

- Artificial intelligence and computer vision for biomedical engineering
- Machine learning and deep learning for advanced healthcare systems
- Machine learning and deep learning for early diagnosis
- Curriculum learning in training deep networks for medical databases
- Medical data analysis and visualization
- Intelligent Internet of medical things
- Multimedia medical imaging and signaling informatics
- Real-time health data analytics
- Wireless body area networks
- Cost and optimization
- Resolution enhancement of THz imaging
- Medical data communication system
- Optimal scheduling and routing for health data delivery
- High performance computing for multimedia medical data
- Healthcare data analytics
- E-Health, m-Health, telemedicine, big data
- Android app for medical use
- Secure multimedia medical data analytics

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Important Dates

Paper submission deadline: 10 January, 2021
Authors' first notification: 01 March, 2021
Submission of revised manuscript: 20 April, 2021
Final notification: 30 May, 2021

Submission Guidelines

Authors should prepare their manuscript according to the Instructions for Authors available from the Multimedia Tools and Applications website. Authors should submit through the online submission site at https://www.editorialmanager.com/mtap/default.aspx and select "**SI 1214 - Multimedia Medical Data-driven Decision Making**" when they reach the "Article Type" step in the submission process. Submitted papers should present original, unpublished work, relevant to one of the topics of the special issue. All submitted papers will be evaluated on the basis of relevance, significance of contribution, technical quality, scholarship, and quality of presentation, by at least three independent reviewers. It is the policy of the journal that no submission, or substantially overlapping submission, be published or be under review at another journal or conference at any time during the review process.

The special issue will consider papers extending previously published conference papers, provided the journal submission presents a significant contribution beyond the conference paper. Authors must explain in the introduction to the paper the new contribution to the field made by the submission, and the original conference publication should be cited in the text. Note that neither verbatim transfer of large parts of the conference paper nor wholesale reproduction of already published figures is acceptable.