

**Special/Thematic Issue for the journal Current Medical Imaging**

**Interactive Medical Image Analysis for Healthcare Informatics**

**Guest Editors:** J. Alfred Daniel, Awais Ahmad, Boris Tomaš

**Scope of the Thematic Issue:**

Healthcare informatics is gaining commerciality among researchers and healthcare professionals in today's century for its outstanding advantageous features. Interactive medical image analysis plays a crucial role in developing healthcare informatics to a greater extent and is expected to bring out profound changes in the healthcare industry. Implementation of such medical image analysis techniques leverages the development of healthcare informatics appreciably. Presently, their specifications deal with various aspects of health informatics to develop better organizational services and treatments to a considerable extent.

Interactive medical image analysis is a computer-aided segmentation technique that plays a pivotal role in studying medical images where user involvement is considered an added source of information. In addition, interactive medical image analyses are crucial for rapid and reliable data extraction. Various interactive medical image analyses have been broadly deployed in myriad medical imaging modalities such as CT (Computed Tomography), MRI (Magnetic Resonance Imaging) and Ultrasound. Accuracy is the critical criterion of indulging interactive medical image analysis in the evolution of healthcare informatics. Myriad study statistics reveal that accomplishing interactive medical image analysis involves less user interaction and is recognised as a dynamic research scope. It is due to the ability to provide acceptable results that are unachievable by the conventional state-of-art automated image segmentation techniques. Eventually, employing such medical image analysis in healthcare sectors is recognised to have appreciably profound changes in the healthcare sectors. Executing such technologies aids in enhancing the better health outcomes enriches the quality of healthcare services, saving money and saving time to acquire a quicker development of healthcare industries. Adequate knowledge of implementing interactive medical image analysis for healthcare informatics provides various opportunities for developing higher medical treatments and helps mitigate healthcare complexities.

The special issue provides various opportunities for scholars and academicians to discuss secure methodologies to implement higher interactive medical image analysis techniques to reduce the risks developing in the healthcare industries. Despite having more beneficial trends, it also holds certain limitations to be discussed deeply. Rules include privacy issues, technical failure, technological errors, power consumption, high-cost medical treatments, data vulnerability, data integrity, lack of adequate knowledge and less reliability. Future research relies on the factors that aid to overcome the limitations, as mentioned earlier. Researchers and practitioners are most invited to present theoretical research work against this context.

**Keywords:** Interactive Systems, Medical Image Analysis, Healthcare, Information Processing, CAD Applications, Medical Devices and Instruments, Emerging Techniques.

**Sub-topics:**

- The sub-topics to be covered within the issue should be provided:
- Emerging trends and application of interactive medical image analysis
- Interactive medical image analysis: Trends, applications and perspectives
- Applications and fundamentals of interactive medical image analysis for the development of healthcare informatics
- Limitations and drawbacks of interactive medical image analysis

- Practical approaches of medical image analysis for the development of healthcare informatics
- Challenges and objectives of medical image analysis
- Need of substantial policies for the development of image analysis in the development of healthcare informatics
- Frontier applications of medical image analysis in health sectors
- Insights of medical image analysis in healthcare industries
- Analytical methodologies for implementing interactive medical image analysis in health sectors

### **Schedule:**

- Deadline to submit the finalized proposal of Thematic issue: 15th June 2022
- Complete Thematic issue submission deadline: 05th September 2022

### **Details of Guest Editors:**

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