

Tentative Outline

Special Thematic Issue for Current Medical Imaging

Title: Big Data Analytics for COVID-19 Multimodal Medical Images

Guest Editors: Dr. Chinmay Chakraborty, Dr. Rabie A. Ramadan, Dr. Aboul Ella Hassanien (Abo), Dr. Syed Ahmad Chan Bukhari

Aims & Scope:

With coronavirus disease 2019 (COVID-19) pandemics, the healthcare systems are gradually adapting to the new normal. The whole healthcare ecosystem needs to be revamped in order to adapt to the conditions arising from COVID-19. The Chest X-ray, Computed Tomography (CT), and Ultrasound are the most important areas of COVID-19 and the clinicians can trace up the patients efficiently by observing these parameters. The integration of wireless body sensor networks and Internet of things is predominantly being used in healthcare domain and is termed as Internet of Medical Things (IoMT). It generates large volume of multimodal imaging data. With IoMT technology, the care providers are able to make much better and informed decisions than ever before. IoMT technology provides remote diagnosis, near real-time decision making, preventive, predictive, affordable healthcare, etc. At the same time, International organizations are expected to gain approximately 280.5 billion USD revenue from big data analytics. In particular, health care big data analytics is one of the emergent topics of the next century. It is one of the data-driven in the United States, Europe, and Asia. Despite the potential benefits, there are many issues associated with medical image analysis, including scalability, platforms, security, and real-time analysis.

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. It aims to present the most important and relevant advances to overcome the challenges related to data analytics, and effective solutions in Internet of Things based COVID-19 Imaging.

Keywords: COVID-19, Image Processing, Biomedical Image Processing, Image Analysis, Machine Learning, Deep Learning, Wireless Body Area Networks, Internet of Medical Things

Subtopics:

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

- COVID-19 Diagnostic imaging
- Ultrasound for COVID-19
- Chest X-ray and CT for COVID-19
- Magnetic resonance COVID-19
- Intelligent IoMT for COVID-19 Imaging
- Deep learning and Machine Learning for COVID-19
- Intelligent Decision Making Systems for better diagnosis
- Smart healthcare for COVID-19
- AI-driven medical imaging for COVID-19
- Performance metrics for COVID-19 imaging
- Imaging based COVID-19 e-Diagnosis
- Big data platforms and techniques for COVID-19 imaging analysis

Schedule:

- ✧ Manuscript submission deadline: April 30, 2021
- ✧ Announcement of acceptance by the Guest Editors: June 30, 2021
- ✧ Final manuscripts due: August 20, 2021

Contacts:

Guest Editor: Dr. Chinmay Chakraborty
Affiliation: Birla Institute of Technology, Mesra, Jharkhand, India
Email: cchakrabarty@bitmesra.ac.in

Co-Guest Editor: Dr. Rabie A. Ramadan
Affiliation: Cairo University, Giza, Egypt
Email: rabie@rabieramadan.org

Co-Guest Editor: Dr. Aboul Ella Hassanien (Abo)
Affiliation: Cairo University, Giza, Egypt
Email: aboit-cairo@fci-cu.edu.eg

Co-Guest Editor: Dr. Syed Ahmad Chan Bukhari
Affiliation: St. John's University New York
Email: bukharis@stjohns.edu

Any queries should be addressed to cmim@benthamsience.net