

Tentative Outline Special Issue for The Open Biomedical Engineering Journal

Special Issue Title: **Advanced Algorithms for Medical Image Processing**

Lead Guest Editor: **Mr.Rajendran Thavasimuthu**

Objective and Scope

The main objective of this issue is to motivate the advancements in medical image processing algorithms. This special issue acted as a platform for Academic and Industrial research communities active in this domain and to enhance and share the advancements and innovations in algorithms used in medical image processing. It will generate a broadened scope for better association with experts and scholars from various Academic organizations and Industrial Research & Development Sectors. It focuses on advanced algorithms, developments and state-of-the-art research to focus the futuristic vision of the research community in the emerging fields of algorithms for medical image processing and its allied fields. The major topics are listed below, but are not limited too.

Key Words

Computer Vision for Biomedical Images, Biomedical Imaging Robotics, Biomedical Control systems, Imaging Sensors, BioMedical Instrumentation, Biomedical Imaging Soft Computing Techniques & Machine Learning.

1. Sub Topics of Computer Vision

Computing with Biomedical images, Biomedical image Analysis, formation and measurement, Biomedical image alignment and matching and Advanced neural networks.

2. Sub topics of Biomedical Imaging Sensors

camera modules and Digital cameras used in instruments, medical imaging equipment, night-vision equipment such as biomedical thermal imaging devices, sonar, and other Sensors used in various applications such as thermography, creation of multi-spectral images, video laryngoscopes, gamma cameras and sensor arrays for x-rays.

3. Sub topics of Bio-Medical Instrumentation

Bio Chips, Biometrics Based Authentication Systems, Biometrics, Carbon Nanotube Flow Sensors, CorDECT, Disease Detection Using Bio-robotics, Dual Energy X-ray Absorptiometry, Hybridoma Technology, Medical Imaging, Micro Electronic Pill, Nanorobotics, Nanotechnology, Robotic Surgery, Thermography

and Treating Cardiac Disease With Catheter-Based Tissue Heating.

4. Sub topics of Soft Computing Techniques and Machine Learning

Ant colony optimization, hybrid systems, evolutionary algorithms/computation, genetic algorithms, machine learning, neural networks/computing, particle swarm optimization/intelligence, probabilistic reasoning, Real Time Applications of Soft Computing Techniques and Soft computing methods include fuzzy systems/logic,

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