
Editorial

P. Karthigaikumar

Department of Electronics and Telecommunication Engineering,
Karpagam College of Engineering,
Coimbatore 641032, Tamil Nadu, India
Email: p.karthigaikumar@gmail.com

Anand Paul

School of Computer Science and Engineering,
Kyungpook National University,
Daegu, South Korea
Email: anand@knu.ac.kr

Jude Hemanth*

Department of ECE,
Karunya University,
Coimbatore 641114, Tamil Nadu, India
Email: judehemanth@karunya.edu
*Corresponding author

Biographical notes: P. Karthigaikumar is currently working as Professor in the Department of Electronics and Telecommunication Engineering at Karpagam College of Engineering. His areas of interests are medical image processing and image cryptography.

Anand Paul is currently working as Associate Professor in the School of Computer Science and Engineering at Kyungpook National University, South Korea. His areas of interests are big data analytics and artificial intelligence.

Jude Hemanth is currently working as Associate Professor in the Department of ECE, Karunya University, India. His areas of interests are Computer Vision and Computational Intelligence.

Medical imaging has become one of the significant application fields in today's scenario. With the increase in different types of diseases, the necessity for novel diagnosis techniques and treatment methodologies are increasing exponentially. However, it is not easy to develop various imaging systems due to the various pressing issues associated with them. This special issue is an ideal platform to bring out the innovative ideas and solutions associated with the various medical imaging problems. State-of-art methodologies are discussed in this special issue which can lead to the development of products/systems for practical medical imaging applications.

The first paper deals with a novel segmentation approach for efficient Region Of Interest (ROI) in various medical images. Modifications are performed in the conventional seed point selection method of medical image segmentation. The experiments are tested on various benchmark datasets. The results analysis has shown promising results for the proposed approach.

The second paper emphasises on abnormality detection techniques in Magnetic Induction Tomography (MIT) images. Stroke and Oedema are the diseases which are the focal points of this work. The application of various mathematical approaches in this research work has made the detection process much simpler and effective.

The prevalence of bone cancer among the human beings is on the rise in today's scenario. However, the conventional detection process is extremely complex. A combination of clustering, watershed segmentation and Support Vector Machine (SVM) are used in the third paper for detection of bone cancer. Experimental results show promising results for the proposed technique.

The fourth paper deals with a novel neural network for detection of Vestibular Disorder (VD) in human beings. This disease is related with vertigo and the proposed approach has efficiently diagnosed the abnormality.

The fifth paper deals with an efficient Positron Emission Tomography (PET) image reconstruction method. Expectation Maximization (EM) method is used in this work for the reconstruction process. A modified version of the conventional EM approach is also used in this work. The modified version has proved to be much effective than the conventional method.