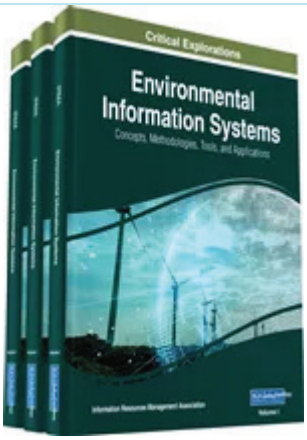
CRITERION 3 Research, Innovations and Extension	3.4 Research Publications and Awards
3.4.4 Number of books and chapters in edited volumes/books published per teacher during last five years	

Books and Chapters in edited volumes/books published and papers in national/ international conference proceedings

2019-2020



Sugeno Fuzzy-Inference-System-Based Land Cover Classification of Remotely Sensed Images

Jenicka S. (Anna University Chennai, India)

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Abstract

Accuracy of land cover classification in remotely sensed images relies on the features extracted and the classifier used. Texture features are significant in land cover classification. Traditional texture models capture only patterns with discrete boundaries whereas fuzzy patterns need to be classified by assigning due weightage to uncertainty. When remotely sensed image contains noise, the image may have fuzzy patterns characterizing land covers and fuzzy boundaries separating land covers. So a fuzzy texture model is proposed for effective classification of land covers in remotely sensed images and the model uses Sugeno Fuzzy Inference System (FIS). Support Vector Machine (SVM) is used for precise and fast classification of image pixels. Hence it is proposed to use a hybrid of fuzzy texture model and SVM for land cover classification of remotely sensed images. In this chapter, land cover classification of IRS-P6, LISS-IV remotely sensed image is performed using multivariate version of the proposed texture model.

Chapter Preview

Top

Background

Electrical Power Systems

Analysis, Security and Deregulation

P. Venkatesh
B.V. Manikandan
S. Charles Raja
A. Srinivasan

Materials Today: Proceedings • Volume 35, Pages 11 - 12 • 2019 • 2019 International Conference on Exploring Nanostractures for Enchanced Power Conversion Efficiency of Solar Cells, ICENES 2019 • Gandhigram • 7 January 2019through 8 January 2019 • Code 167196

Document type
Conference Paper

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Journal

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Study of phase transition in Cu-doped $La_{0.7}Sr_{0.3}MnO_3$ perovskite manganite materials by ultrasonic technique

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Abstract

$La_{0.7}Sr_{0.3}Mn_{1-x}Cu_xO_3$ perovskite manganite materials with a composition of x = 0.05, 0.10 and 0.15 were obtained using solid state reaction technique. The measurement of ultrasonic velocity over a wide range of temperature reveals the short range ferromagnetic to the antiferromagnetic transition temperature (T_C) at 358, 341 and 328 K for the perovskites with the composition x = 0.05, 0.10 and 0.15 respectively. Turning of T_C was achieved from 370 (x = 0) to 328 (x = 0.15) K which helps to obtain the

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Effect of Stir Casting Parameters on Properties of Cast Metal Matrix Composite

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Abstract

In the current investigation, aluminium matrix composite (AMC) was successfully fabricated by liquid melt method and the effect of stir casting (SC) parameters namely Temperature (Temperature), Stir Speed S (SS) and Stir Time (ST) on the properties was studied using Taguchi L9 orthogonal array experimental design. The melting temperature of SS and ST were selected as input parameters and the

Proceedings of the 3rd International Conference on Inventive Systems and Control, ICISC 2019 • Pages 336 - 341 • January 2019 • Article number 9036399 • 3rd International Conference on Inventive Systems and Control, ICISC 2019 • Coimbatore • 10 January 2019through 11 January 2019 • Code 158595

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Conference Paper

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Conference Proceedings

ISBN
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Design Implementation of Single Switch DC-DC Resonant Converter for Hybrid Vehicle

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Abstract

In this paper, a innovate single-switch resonant DC-DC power converter for a hybrid vehicle with renewable energy generation operations for the hybrid vehicle are developed. This circuit Scheme combines a innovate resonant DC-DC converter with energy-blocking diode with zero-current switching (ZCS) and zero-voltage switching (ZVS). The output level of the innovate single-switch DC-DC resonant converter was filtered by using direct-current(DC) output blocking diode. To decrease the price of the control circuits. For power energy conversion only one active power switch was provided. The PWM at a constant duty cycle, the fixed switching frequency is used to control the active power switch. When the DC-DC resonant converter works at irregular conduction mode. At that time inductor

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Age Invariant Face Recognition using Frangi2D Binary Pattern

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Abstract

The field of computer vision is devoted to discovering algorithms, data representations and computer architectures that embody the principles underlying visual capabilities. Computer vision is an interdisciplinary field that deals with how computers can be made for gaining high level understanding from digital images or videos. While very promising result has been shown on face recognition related problems, age invariant face recognition still relics a challenge. Facial appearance of a human varies over time, which results in substantial intra-class variations. In order to address this problem, we propose Frangi2D method for normalization, Linear Binary pattern (LBP) for feature extraction and Sparse Representation Classifier (SRC). Extensive results on a well-known public domain face aging dataset: MORPH. The experimental results show the superiority of our proposed method in age invariant face recognition.

Innovations in Electronics and Communication Engineering pp 3–14

Detection and Classification of Exudates and Non-exudates in Retinal Images

R. Tamilselvi, M. Parisa Beham, A. Merline & V. Parthasarathy

Conference paper | First Online: 08 February 2019

630 Accesses

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 65)

Abstract

The retina of human eye plays a key function in the vision, and it is a light-sensitive layer. The optics of eye produces an image figure in the retina. The various eye diseases like diabetic retinopathy, myopia, macular pucker, and macular hole have an effect on the retina. The retina is affected by these diseases which are vascular disease and cause vision mutilation and blindness. These diseases happen due to diabetics, aging, and nearsightedness. Exudates are the pathological condition of the retina. So the early detection of

2019 | OriginalPaper | Chapter

Role of X-Rays in Assessment of Bone Mineral Density—A Review

Authors : S. M. Nazia Fathima, R. Tamilselvi, M. Parisa Beham

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Conference Paper

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Conference Proceedings

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Motion Artifact Removal for Bio Signals using Regularized Autoencoder

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Abstract

The advancements in wireless communication technology and micro electro mechanical system (MEMS) based sensor technology led to the rise of body area communication in healthcare field. The bio signals acquired through this on-body communication mainly suffers from motion artifacts caused by shadowing due to the body shape and body movement. These noises may lead to wrong prediction on data. Therefore, it is important to consider denoising the bio signals in order to perform accurate diagnosis and analysis. This paper proposes regularized denoising autoencoder (DAE) to reconstruct the clean signal from its noisy form. Here two regularization terms L1 and L2 which updates the cost function to avoid over fitting problem. This paper proves that L1 is better than L2 in terms of recovering the signal quality and it is measured by Signal to Noise Ratio (SNR). The dataset used here are taken from a neurokit a python tool box for statistics and neurophysiological signal processing. © 2019 IEEE.

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Classification of MR brain images for detection of tumor with transfer learning from pre-trained CNN models

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Abstract

Magnetic resonance imaging is one of the non-invasive imaging techniques widely employed to diagnose brain diseases. Early diagnosis and treatment of brain tumors is essential. It is a time consuming process for the radiologists to manually classify MR brain images into normal and images with tumors. In this paper, an automated method based on Convolutional Neural Network (CNN) is proposed for detection of tumor in brain images. The CNN model pre-trained on the huge image database of ImageNet, is used to train the input brain images. The high level features extracted are given as input to the fully connected layer followed by softmax activation. The method is tested on MR brain images from database of Harvard medical school. An analysis is done with utilization of three

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Conference Proceedings

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Performance Study of Fetal ECG Mining and Heart Rate Measurement

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Abstract

Arena of electrocardiography (ECG)has been in presence for over a span, however regardless of noteworthy progresses in grown clinical electrocardiography, information analysis methods and advanced devices, the examination of unborn ECGs is silent in bud stage. This picture is, somewhat because of an absence of accessibility of unique databases, incompletely because of the abstemiously minimal signal and noise factor of the ECG signal derived from the fetus is contrasted with the maternal ECG which is measured by the electrodes and partially due to the fewer data of the clinical information, in relation to fetal cardiac function and improvement. Motivated by this above issues, in this paper we survey a scope of various preprocessing, extraction and assessment of Heart rate for unborn ECG examination that have been produced in the recent forty eons, and confer about their deficiencies and plusses. © 2019 IEEE.

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Implementation of Environment Parameters Monitoring in a Manufacturing Industry using IOT

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Abstract

To Design and develop a low cost real-time monitoring, alert to workers, notified data of polluted area has been checked for the immediate surroundings. A various parameter such as Air Quality, Temperature Humidity, and Sound intensity sensors with PIC controller which collects and upload data into the cloud using ESP8266 Wi-Fi module. Then transmit to the cloud platform using MQTT protocol to perform Digital Dashboard on Smartphone checks anomaly notification and alert to the user through a web page. If the industry doesn't take any step to reduce the pollution within a certain period, the pollution control board will shut down the industrial electricity power until they pay a penalty amount of polluting the city according to the government rules and regulation. © 2019 IEEE.

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Estimation of T-score and BMD values from X-ray images for detection of osteoporosis

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Abstract

Biomedical engineering concepts are related to biotechnology that is used for various healthcare purposes. Osteoporosis is a bone disease that is characterized by decrease in the Bone Mineral Density (BMD) which results in the fracture risk in the bone. Osteoporosis can be competently identified by computing various parameters like Bone mineral density (BMD), numerical features such as T-score and Z-score from various regions such as spine, femur etc. The proposed paper involves a challenge to relate digital image analysis methods to the evaluation of bone mineral density based on the X-ray images. In present scenario, more research is carried out in diagnosis of osteoporosis and it is a major challenging task in the medical field. So motivated by this, a X-Ray database is created and Images of spine, knee, hip and clavicle bones are considered for our study. Shock filter is included in the image preprocessing to improve the image intensity. The impact of image noise is investigated through the Peak Signal to Noise Ratio (PSNR) and thus demonstrating the necessity for image preprocessing before analysis. The Bone Mineral density can be realized by various segmentation methods such as Active