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Editorial

Achieving 99% efficiency used to be a hypothetical thing. But, the design and analysis of DC-DC converters for low-power Photovoltaic (PV) energy harvesting applications such as Wireless Sensor Network (WSN) Nodes have realized the figures. The WSN nodes consume power due to their use in continuous monitoring and control applications. From simulation results for the same it is observed that in DC-DC converters the desired output voltage can be obtained by proper selection of component values of Inductor, capacitor and switching frequency.

An Artificial Neural Network (ANN) is an information processing paradigm that is inspired by the way biological nervous systems, such as the brain, process information. The key element of this paradigm is the novel structure of the information processing system. We have a proposal for a classification-based face detection method using Gabor filter features. Considering the desirable characteristics of spatial locality and orientation selectivity's of the Gabor filter, the design filter is used for extracting facial features from the local image. The effectiveness of the proposed method is demonstrated by the experimental results on testing a large number of images and the comparison with the state-of-the-art method. This increases its ability to generalize. The different structuring elements can be tested and verified for number of images for future researchers and scientists.

Face Recognition is a majorly required feature now- a days. We will represent a classification-based face detection method using Gabor filter features. Considering the desirable characteristics of spatial locality and orientation selectivity's of the Gabor filter, the design filter is used for extracting facial features from the local image. The feature vector based on Gabor filters is used as the input of the classifier, which is a Feed Forward neural network (FFNN) on a reduced feature subspace learned by an approach simpler than principal component analysis (PCA). The effectiveness of the proposed method is demonstrated by the experimental results on testing a large number of images and the comparison with the state-of-the-art method.

An innovatory product with user acceptance providing with serenity, convenience, timelines and efficiency in day-to-day life. People purchase different items from a supermarket and put them in trolley. After purchasing, one needs to go to billing counter for payments. At billing counter the cashier prepare the bill using QR Code Reader which is very time consuming process and results in long queue at billing counter. The idea for the project is to optimise this process of shopping at a retail store, by enabling the customer to handle the check-out process. The approach to automated shopping and billing until now has been more hardware-centric.

Depleting fossil fuels and alarming environmental concerns have propelled the mankind to explore for non- conventional energy source such as solar energy, wind energy, among others. Since, countries like India receive direct sunlight through out the year therefore, an approach emphasizes on use of solar powered energy to solve the energy crisis.

Coastal sediment data analyses play a role in understanding coastal habitat and help determine the extent, nature, and transport of pollutants. Sediment data assist in determining sources of appropriate material for beach replenishment, and are an integral data layer in GIS analysis of coastal environments for a variety of purposes."In addition to key environmental analysis and assessment roles, sea floor

studies have other economic value. Sediment properties are crucial in placement of seabed cables, data from exploratory wells are necessary to evaluate sites for offshore drilling, and geochemical studies are necessary for evaluation of offshore hard mineral resources.Accurate classification of seabed or riverbed is important in many more applications like dradging, study of marine biology, coastal engineering, hydrography etc. Numerous methods have already been proposed for seabed classification. In this issue, we presented a method to classify a given side scan SONAR images depending on type of sediment such as sand, mud, rock etc. We evaluated our proposed methods with four different kernels as linear, quadratic, polynomial, GRB and found that the GRB kernel achieves the highest classification accuracy as 99.67%.

Preface

Dear Researchers,

We take this opportunity to welcome you all to the Volume No 5, Issue No. 2 of International Journal of Communications & Electronics (KIET - IJCE). This journal will provide a forum for in depth and substantial discussions on the theory, design and implementation of the emerging technologies in Communications, Networking, Microwave and Electronics techniques, thus providing solutions and strategies for business resilience.

It gives us an immense pleasure to have an amalgam of researchers from the fields of Communication Engineering, Electronics, and related technologies. The purpose of the Journal is to provide a platform to foster interdisciplinary communication among the delegates and to support the sharing process of diverse fields in various concepts and principles related to these domains.

Our appreciation also goes to entire team whose dedication and timeless efforts have gone for number of days for the second issue of the Journal.

Editors

Message

I am delighted to note that the Department of Electronics and Communication Engineering, KIET Group of Institutions, Ghaziabad is introducing Volume No 5, Issue No. 2 of International Journal of Communications and Electronics (KIET - IJCE).

I appreciate the efforts on the part of the Editorial Committee in bringing out an issue on Communications, Networking, Microwave and Electronics techniques.

I understand that the papers contributed for publication in the Volume No 5, Issue No. 2 are on almost all the current aspects of Communication Systems, Electronics systems, Microwave Engineering, Signal Processing & Applications, Networking Technologies and several others.

I have great pleasure in congratulating the Editors of this issue of KIET - IJCE for their untiring efforts in bringing out this third Volume No 5, Issue No. 2 of KIET-IJCE which will be a valued treasure for all who pursue research in Communications, Networking, Microwave and Electronics Engineering areas.

Let me close with warmest regards.

Dr. Anil Ahlawat
Director
KIET

Message

It gives me immense pleasure in writing this foreword for the Volume No 5, Issue No.2 of the KIET International Journal on Communications and Electronics (KIET - IJCE). This journal is targeted towards researchers, professionals, educators and students to share innovative ideas, issues, recent trends and future directions in the fields of Electronics and Communication Engineering.

The Volume No 5, Issue No. 2 of the journal KIET-IJCE includes papers on the theory, design and implementation of the emerging technologies in the field of Communications, Networking, Microwave and Electronics techniques. Furthermore, it will enable the researchers in various domains to foster the exchange of concept, protypes, research ideas and the results of research work which could contribute to the academic arena and also befit business and industrial community.

Dr. Sanjay Sharma
Editor – in - chief
KIET - IJCE