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Books > Emerging Computing Paradigms:...

Emerging Computing Paradigms: Principles, Advances and Applications

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Book Abstract

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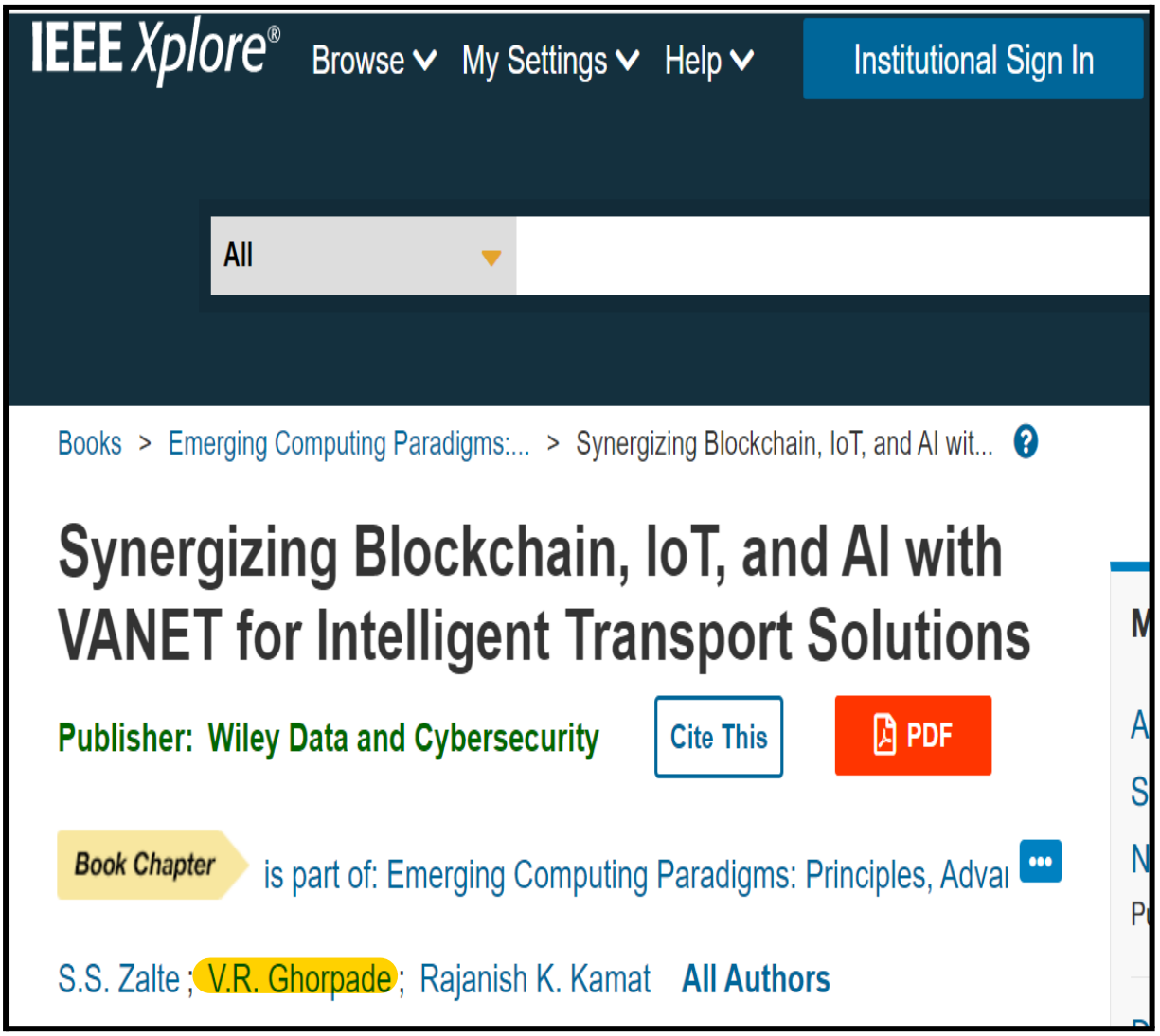
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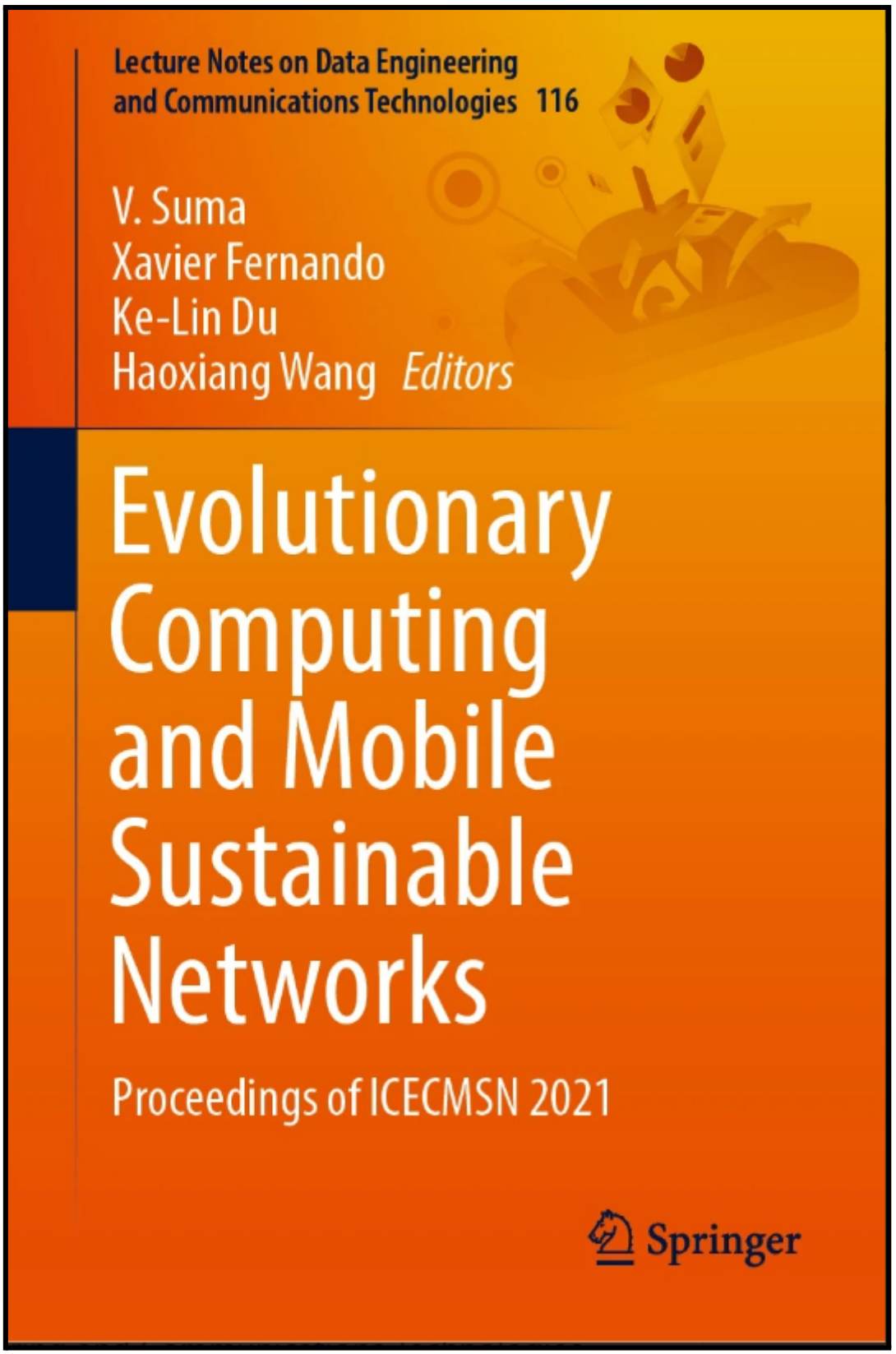

Lecture Notes on Data Engineering and Communications Technologies 116
V. Suma
Xavier Fernando
Ke-Lin Du
Haoxiang Wang Editors
Evolutionary Computing and Mobile Sustainable Networks
Proceedings of ICECMSN 2021
Springer

Applying ML on COVID-19 Data to Understand Significant Patterns

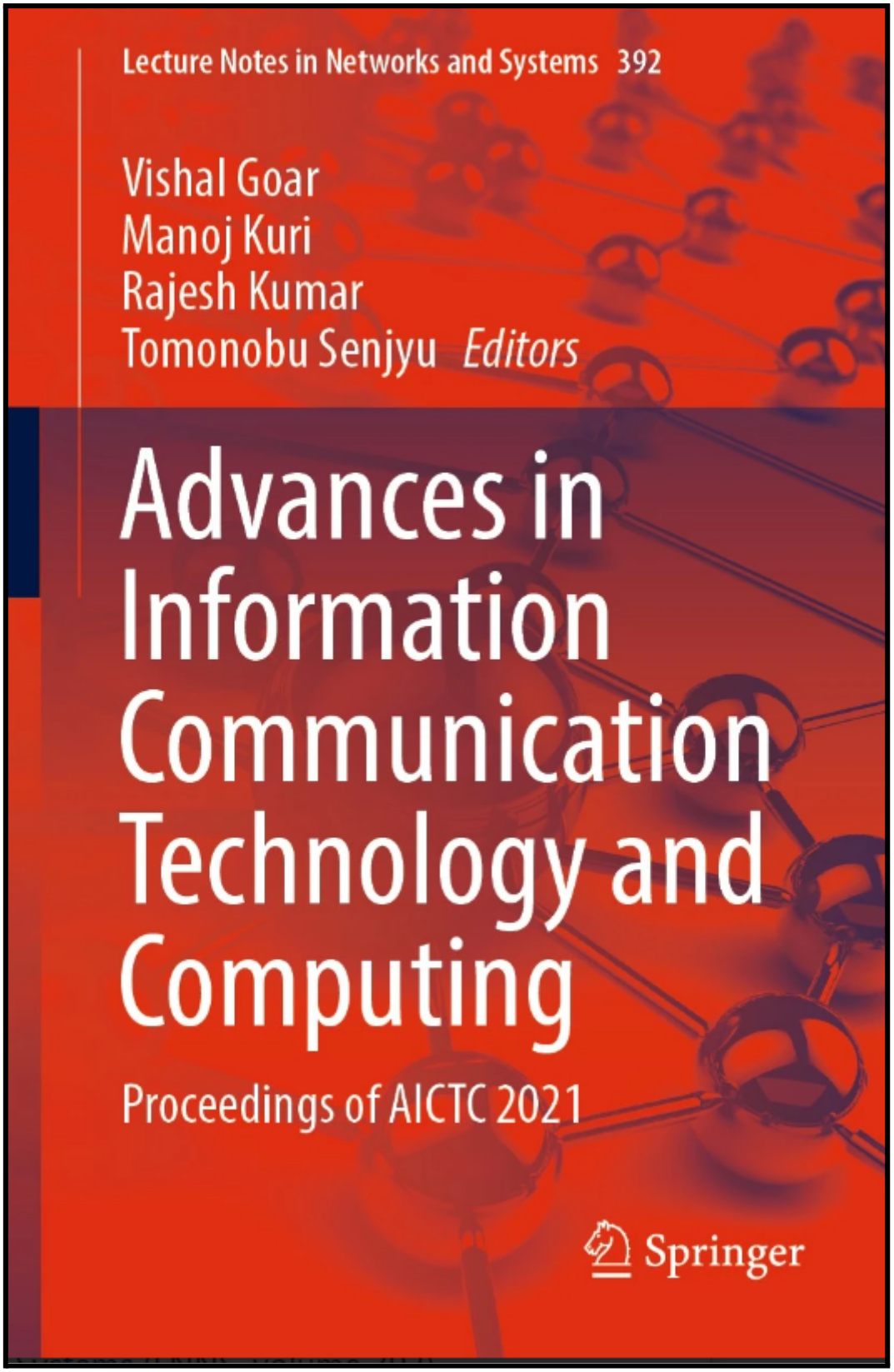
Amit Savyanavar, Tushar Ghumare & Vijay Ghorpade

Conference paper | First Online: 22 March 2022

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT,volume 116)

Abstract

Corona viruses are a genus of viruses that infect vertebrate and birds, causing a variety of diseases. They induce a variety of respiratory problems in people. This study investigates COVID-19 infection rates and estimates the pandemic's scope, recovery rate, and death rate. We used Support Vector Machine (SVM), Random Forest, Decision Tree, K-nearest neighbor, and other well-known machine learning and mathematical modeling approaches. For disease diagnosis, study used three unique disease data sets (Asthma, Diabetes, and AIDS) provided there in UCI machine learning repository. After getting positive results, we applied these algorithms on COVID-19 data set. We used several categorization algorithms, each with its own set of benefits. The study's findings support the use of machine learning in disease early detection.


Lecture Notes in Networks and Systems 392
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Rajesh Kumar
Tomonobu Senjyu Editors
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Proceedings of AICTC 2021
Springer

Blockchain-Based Secure File Storage with Hybrid Cryptography and Machine Learning for Malware Detection

Ahmed Mohammed Ali, Vijay Ghorpade, Nitish Pathak & Neelam Sharma

Conference paper | First Online: 10 May 2022

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 392)

Abstract

Storing your data on hosted servers is made possible through cloud storage. With each organization using the cloud to save their data, there is a significant risk of data misuse. For added security, there is an urgent need to safeguard user data. We are here to store information on the cloud, and our main goal is to make sure data confidentiality, integrity and availability are maintained. Instead of keeping data on our local server, we have developed a model that saves data on cloud-based servers. Encrypted data will be protected. Additionally, it will check for malware attack policy while exchanging data. Finally, it will feature two layers of protection. The first is an implementation of hybrid cryptography, and the second is to avoid malware-based attacks. Incorporating machine learning will find all of the various possible malware attack methods and look for ways to prevent similar attacks in the future.


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Paper ID: ICCIASH-2022/896

EPILEPTIC SEIZURE CLASSIFICATION USING INTRACRANIAL ELECTROENCEPHALOGRAM

Sanjay Shamrao Pawar,
Manik Sadashiv Sonawane,
Kamalakar Ravindra Desai,

Department of Electronics and Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur

Satish Sayanna Kotwal

Department of Civil Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur

Abstract:

Epileptic seizure is a major neurological brain disorders and which has affected about two percentage of world's population. A medical test knows as Electroencephalography, which records brain signal is used to diagnosis seizure. Intracranial Electroencephalography is a method where electrodes are implanted over the cortex of brain with help of surgery and is used to measure or record brain signal. Epileptic Seizure classification is still challenging areas of research. Epileptic Seizures are classified as focal seizure, generalized and secondary generalized seizure depending upon the area of brain from which it is generated and how it spreads. Classification of Epileptic seizure helps in during brain surgery and treatment of seizure to understand which part of is responsible for generation of seizures. Developed Epileptic seizure classification algorithm classifies seizures as focal Seizure, generalized Seizure and secondary generalized seizure. The classification depends on the percentage of implanted electrodes detecting presence of seizure activity. Epileptic Seizure Classification helps in brain surgery and with proper drug management can improve the quality of life of Epileptic patients.

Key words: *Brain Surgery, Epileptic Seizure, Epileptic Seizure Classification, Focal seizure, Intracranial Electroencephalography.*

*Corresponding Author
E-mail Address: sanjaypawar832@gmail.com

Paper ID: ICCIASH-2022/878

SMART AGRICULTURE MANAGEMENT SYSTEM FOR GRAPES USING IOT

Priyadarshani S.Mali,
Aarti H.Tirmare
Ranjeet R.Suryawanshi

Department of Electronics and Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra

Hemant A.Tirmare

Department of Technology Shivaji University Kolhapur, Maharashtra, India

Abstract:

Grapes are a wonderful subtropical fruit contains full of pulp, vibrant color and having a huge health benefits. It has huge Phytochemicals content which reduces the growth of chronic diseases. An attempt was made to fulfill the requirement of the world with best superiority of Indian grapes. In this study, Sangli district scored top grape producing regions in Maharashtra. Grape exports to Asia and European countries. In the proposed study, attention has been given on increasing production as well as tonnages of export of superior grapes with the help of efficient and effective use of technology, so that it can play an important role in feeding the world with Indian grapes according to consumer's demand worldwide.

Key words: *Agriculture, sensors, Neural Network, Back Propagation, Prediction, Internet of Things.*

*Corresponding Author
E-mail Address: priyadarshanimali@gmail.com

Paper ID: ICCIASH-2022/884

Comparative Analysis & Implementation of Static & Dynamic Wired Network using NS2 with NAM, Xgraph, Gnuplot Utility

Mr. Ranjeet R. Suryawanshi,
Mrs. Aarti H. Tirmare ,
Ms. Priyadarshani Mali

Department of Electronics & Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, India

Mr. Hemant A. Tirmare

Department of Technology, Shivaji University, Kolhapur, India

Abstract:

These days Communication assumes crucial part in different aspects of person life as it gives the data of new innovation, advancements, research happening all over the world. All important sectors like government, corporate, education, entertainment etc are moving on online platform. Also there is huge rise in concept of work from home, online shopping, e-commerce, online banking etc. In today's world, use of computer network and its components have been increased tremendously. We now have the ability to communicate and retrieve data thanks to the Internet, which has also had a big impact on how we work and live.

In this paper we have implemented static and dynamic wired networks designed with different node scenario and topologies along with NAM, Xgraph & Gnuplot utility of NS2.35.

Key words: *NS2-Network Simulator Version 2, NAM- Network Animation, XGRAPH, GNUPLOT, DV-Distance Vector Routing.*

*Corresponding Author
E-mail Address: rrs.bvcoek@gmail.com


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Smart Electric vehicle charging Station for Residential Complex

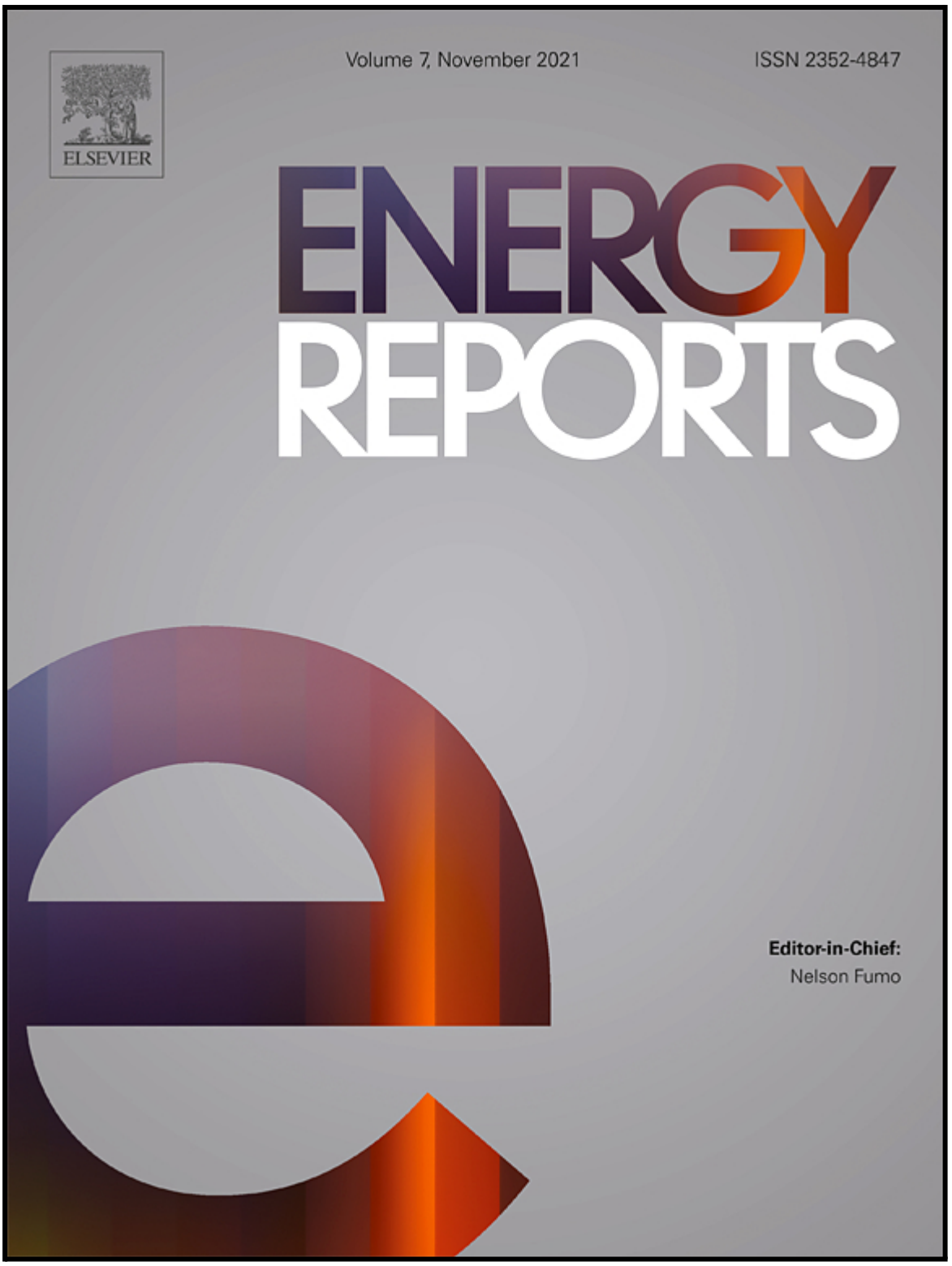
Publisher: IEEE Cite This PDF

E. Kannapiran ; Kapil Joshi ; Rajkumar K. Chougale ; Naveen Rana ; Neeraja B ; Chamandeep Kaur All Authors

Abstract:

We are very sophisticated in technology, living in a new era where artificial robots have reached Mars and some have also reached the solar system, but this is how humans survive until another Earth like a planet is no longer found. Means our responsibility to keep our planet clean and safe from global warming. When we talk about global warming, cars play an important role in increasing global warming, as they produce a lot of toxic gas that is harmful to our ecosystem. B. CO2, N2O. As shown in Figure 1 of India, the rate of air pollution by vehicles is 27%. That's quite a few, and most importantly, the fossil fuel supply is limited. Therefore, one needs to look for alternative fuels. Alternatively, using an electric vehicle (EV) is the best option. It is safe and does not generate gas. Also, there is no loud noise. The Government of India has also taken some steps to control pollution. They started several programs to promote the vehicle. Vehicles are already in use in some big cities, and their numbers are increasing every day. But the main problem is that there is no public charging station that can charge the vehicle. This article describes the concept of an intelligent charging system for unmanned aerial vehicles.

Published in: 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)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2022 International Conference on Energy Storage Technology and Power Systems (ESPS 2022), February 25–27, 2022, Guilin, China

An approach to the utilization of grid integration to analyze the performance and quality of solar photovoltaic model

Syed Hamim Jeelani[a,*], R. Puviarasi[b], Chilambarasan M.[c], Sarita Santaji Shinde[d], Raviteja Surakasi[e], Vipin Sharma[f], S. Madhavarao[g], M. Sudhakar[h], V. Mohanavel[i,j]

[a] Department of Civil Engineering, Koneru Lakshmaiah Education Foundation, Deemed to be University, Vaddeswaram 522502, Andhra Pradesh, India
[b] Department of Robotics, Institute of Electronics and Communication Engineering, Saveetha School of Engineering, Chennai, Tamil Nadu 602105, India
[c] Department of Electrical and Electronics Engineering, St. Joseph's College of Engineering, Chennai, Tamil Nadu 600119, India
[d] Department of General Science, Bharati Vidyapeeth's College of Engineering, Kolhapur 416013, Maharashtra, India
[e] Department of Mechanical Engineering, Lendi Institute of Engineering and Technology, Jonnada, Vizianagaram 535005, Andhra Pradesh, India
[f] Department of Mechanical Engineering, Sagar Institute of Research and Technology, Bhopal, Madhya Pradesh 462041, India
[g] Department of Mechanical Engineering, Sagi Rama Krishnam Raju Engineering College, Bhimavaram, Andhra Pradesh 534204, India
[h] Department of Mechanical Engineering, Sri Sai Ram Engineering College, Chennai 600044, Tamil Nadu, India
[i] Centre for Materials Engineering and Regenerative Medicine, Bharath Institute of Higher Education and Research, Chennai 600073, Tamilnadu, India
[j] Department of Mechanical Engineering, School of Technology, Glocal University, Delhi-Yamunotri Marg, Uttar Pradesh, 247121, India

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Abstract

Photovoltaic power is most important cause of energy subsequently it is simultaneously clean and limitless. PV power conversion devices must be maintained at MPP there to maximize the energy production of Solar array. To get the most energy out of the Solar array, MPPT monitoring is necessary. In recent times, a slew of strategies for controlling the voltage was presented. Power electronic devices developments for the combination of wind and solar power generation are discussed. Based on the dependability and development of each technology, conversations concerning developments and trends in sustainable source systems are provided. The consumption of electricity generated is increasing exponentially, and as a result, the incorporation of photovoltaic panels into distribution companies is increasing rapidly as well, even though it has a substantial impact on the show"s voltage stability. The purpose of this report is to look at how solar PV integration affects distribution transmission energy reliability. The analysis is carried out using RSCAD software, with one of the radial distribution networks with the lowest voltage profile accessible during the maximum of linked loads. Furthermore, the influence of current and voltage on the transmission or distribution system is compared by analyzing distribution system configuration with various solar PV system penetration rates. The simulated findings show that as the penetrating capability of the PV system increases, large harmonic distortion levels are injected, indicating that the solar photo system should only integrate corresponding to the highest capability the connection can sustain. When a PV technology is connected further than this maximum penetration of renewable energy sources, it produces considerable harmonic components, which harms the system that improves. Total voltage output frequency and current consumption distortion are determined to be 4.98 percent and 14.99 percent, correspondingly, at

* Corresponding author.
E-mail address: hamim.syed@gmail.com (S.H. Jeelani).

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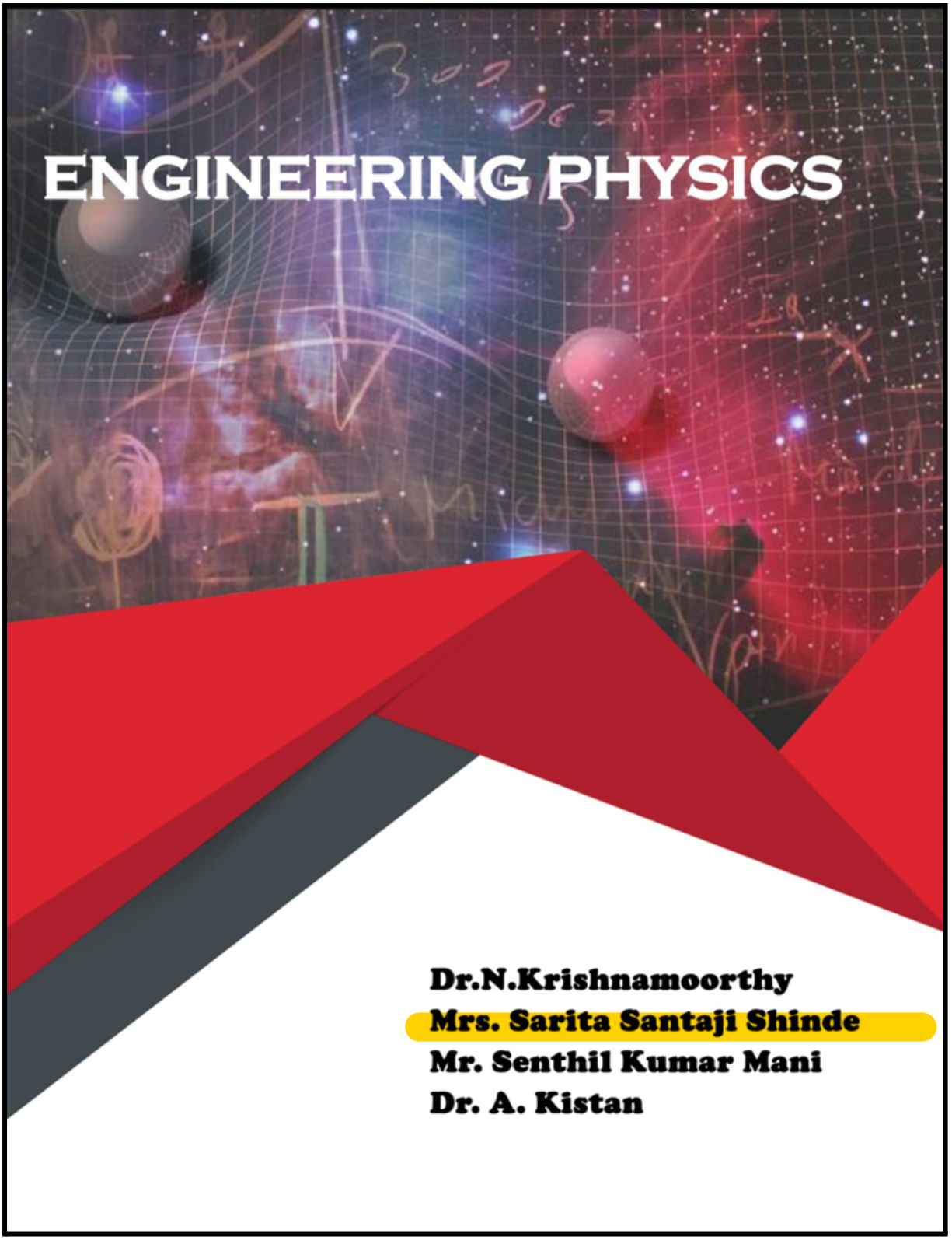
Peer-review under responsibility of the scientific committee of the International Conference on Energy Storage Technology and Power Systems, ESPS, 2022.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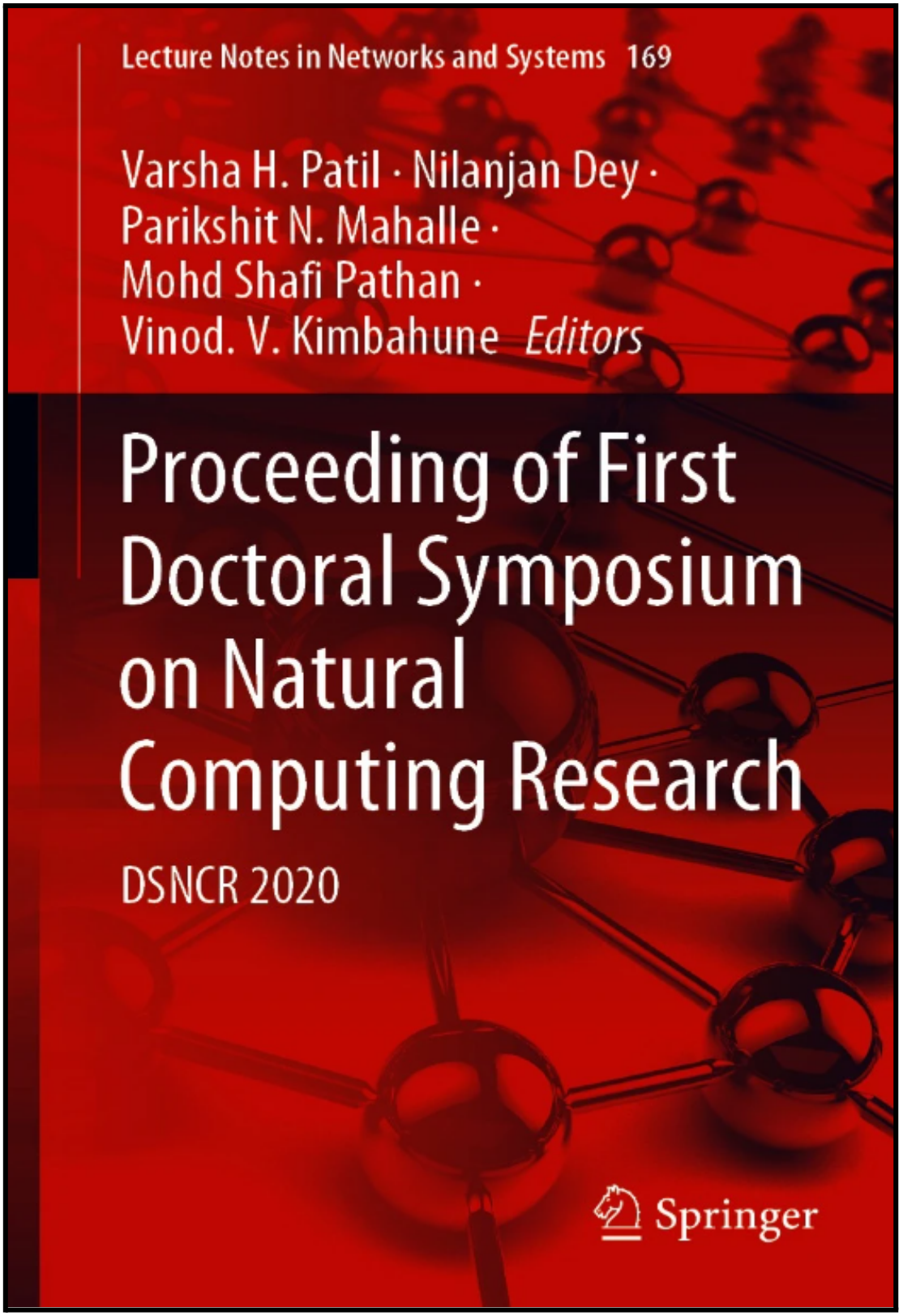
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Varsha H. Patil · Nilanjan Dey · Parikshit N. Mahalle · Mohd Shafi Pathan · Vinod. V. Kimbahune Editors
Proceeding of First Doctoral Symposium on Natural Computing Research
DSNCR 2020
Springer

Video Interpretation for Cost-Effective Remote Proctoring to Prevent Cheating

Kiran P. Kamble & Vijay R. Ghorpade

Conference paper | First Online: 19 March 2021

199 Accesses | 1 Citations

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 169)

Abstract

In the rising era of globalization and digitization, remote education continues in gaining popularity and reach. Efficiently proctoring online remote examination is an important limiting factor to sustain the integrity of the exam as well as provide unprejudiced results. Currently human proctoring is the customer perspective to maintain integrity, either manually with the help of a test taker or by overseeing them visually through webcams. Online exams provide the examiner the choice, to choose the environment and the tools they wish to use during the exam. In response to this, our research proposes an application to detect fraudulent activities during online examination in real-time through the video recorded by the webcam of the examiner's system. The application provides four features that continuously estimate the integrity of the exam: (1) User verification for checking impersonation by the examiner. (2) Multiple people together solving the exam. (3) Absence of examiner. (4) Detecting the use of mobile phones. The extensive experiment depicts accuracy of our cost-effective remote

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Edited by Shankar Sehgal, Parveen Goyal

Volume 45, Part 6,

Volume 45, Part 6, 2021, Pages 5684-5688

Analysis of surface roughness and cutting force under MQL turning using nano fluids

P.B. Patole, G.J. Pol, A.A. Desai, S.B. Kamble

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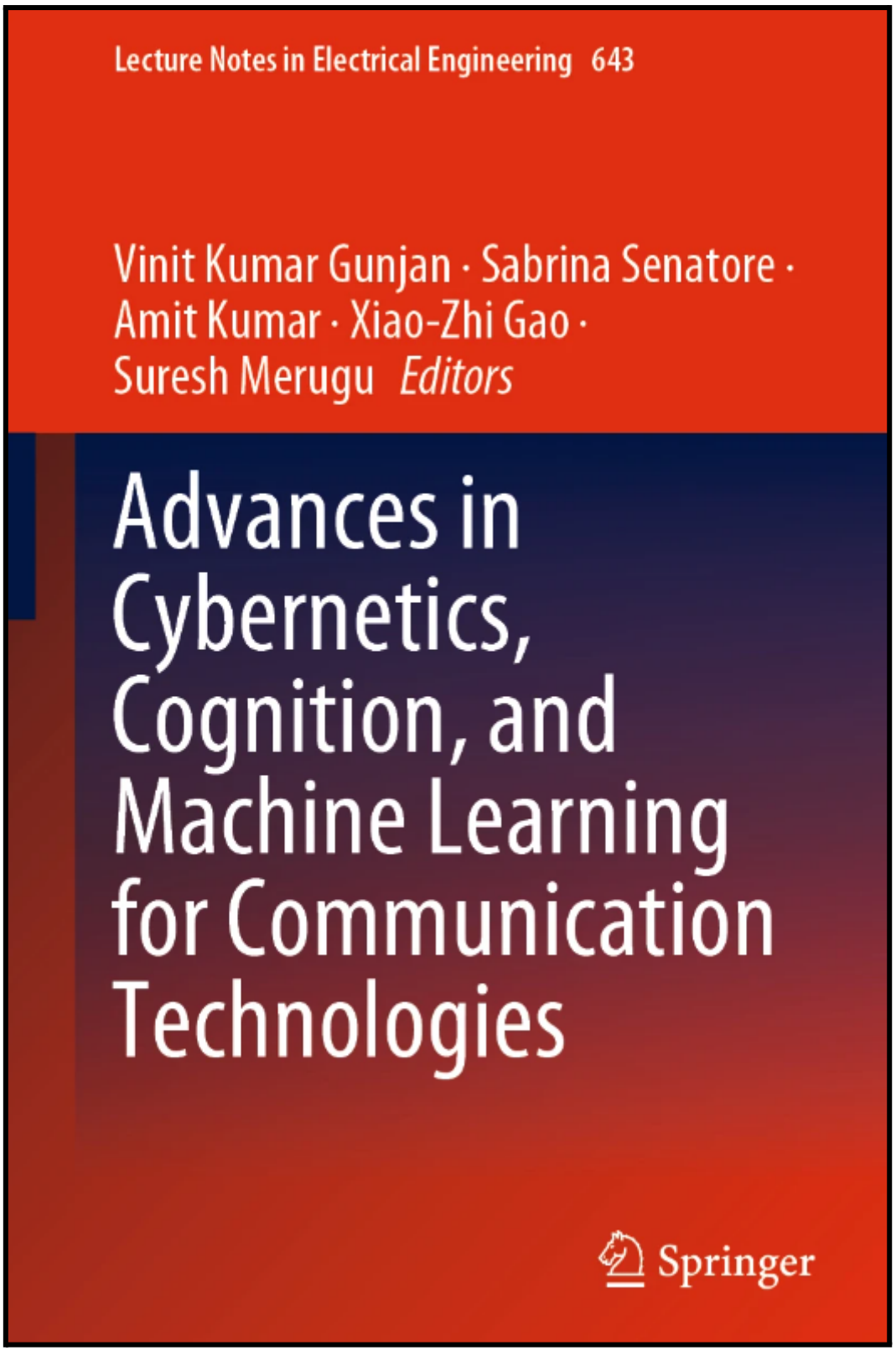
https://doi.org/10.1016/j.matpr.2021.02.501

Abstract

An experimental investigation was carried out to analyze the effects of cutting conditions, and nano coolant on the cutting force and surface roughness in the minimum quantity lubrication turning of the alloy steel AISI 4340. In the present research work, a curve fitting technique is used for the prediction of cutting force and surface roughness in MQL turning process using nano fluids. The developed model may be used for predicting cutting force and surface roughness for given cutting variables. The model is helpful while understanding the behavior of the cutting process. The performance of the developed model is studied with the experimental data of MQL turning of alloy steel AISI 4340 material. The values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IoT Enabled Detection of Suspicious Human Behavior for ATM Environment

Vaishnavi R. Mali, Anil R. Surve & V. R. Ghorpade

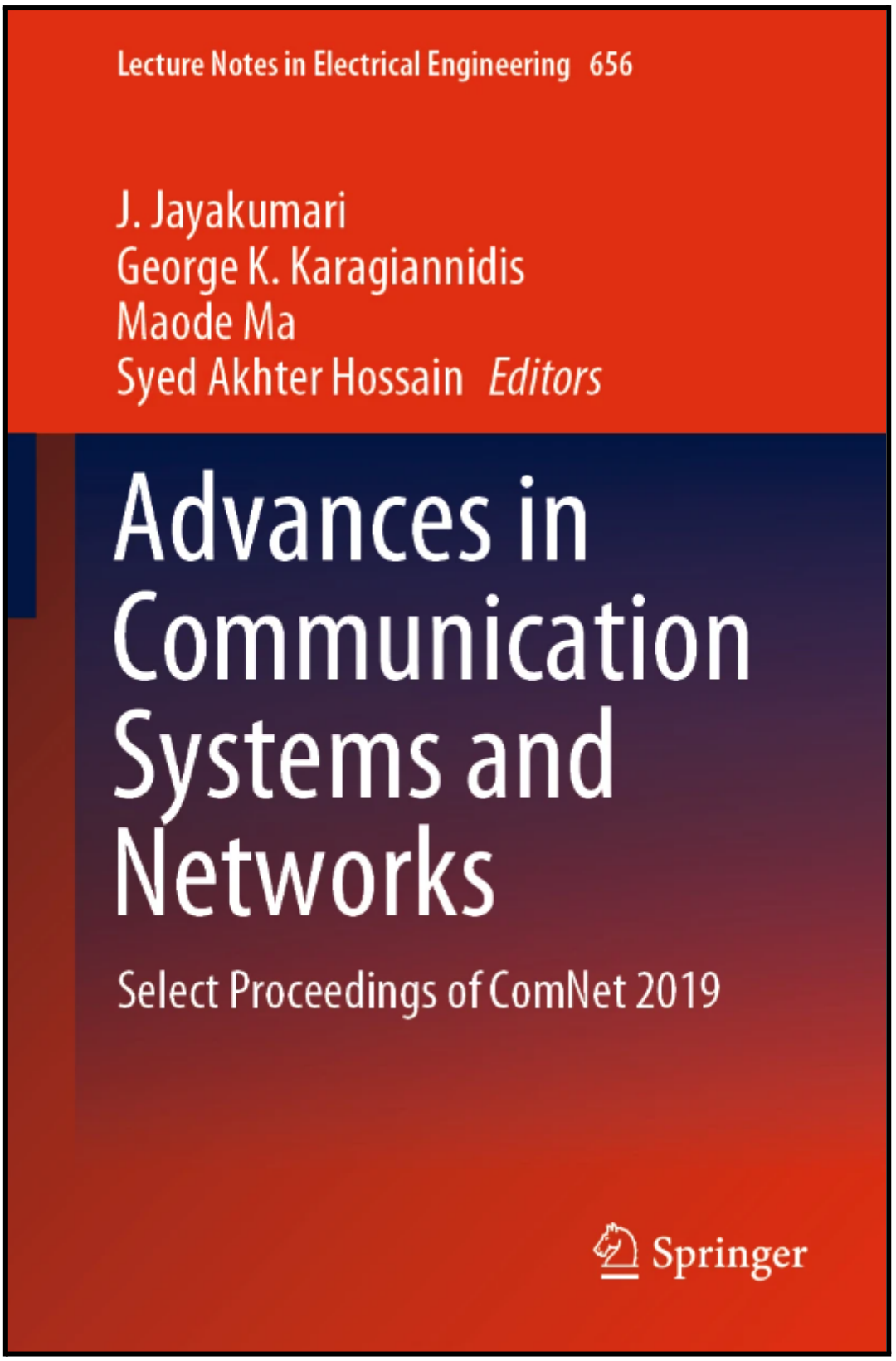
Chapter | First Online: 29 April 2020

387 Accesses

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 643)

Abstract

Nowaday's security is the main thing in all industries. The most serious thing facing the industries which provide financial services and the retail markets is ATM physical attack. The industry which provides financial services and the retail markets lose their lots of money due to physical attack. Today, however, ATMs give a considerable measure of administrations to the clients; they are still dominatingly utilized for their essential capacity of pulling back cash. ATM security is the main issue that has been addressed in the proposed work by studying current scenarios where the traditional way is to take actions after an attack has occurred. But using the CCTV cameras present in the ATM we can prevent these attacks from happening. We can take actions before an incident is going to happen. The proposed system is an attempt to analyze the human in the ATM with the various parameters mentioned in this paper and send alert to the respective entity utilizing IOT platforms if he/she found suspicious. So that actions can be taken before the loss.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Diagnosis of Epileptic Seizure a Neurological Disorder by Implementation of Discrete Wavelet Transform Using Electroencephalography

Sanjay Shamrao Pawar & Sangeeta Rajendra Chougule

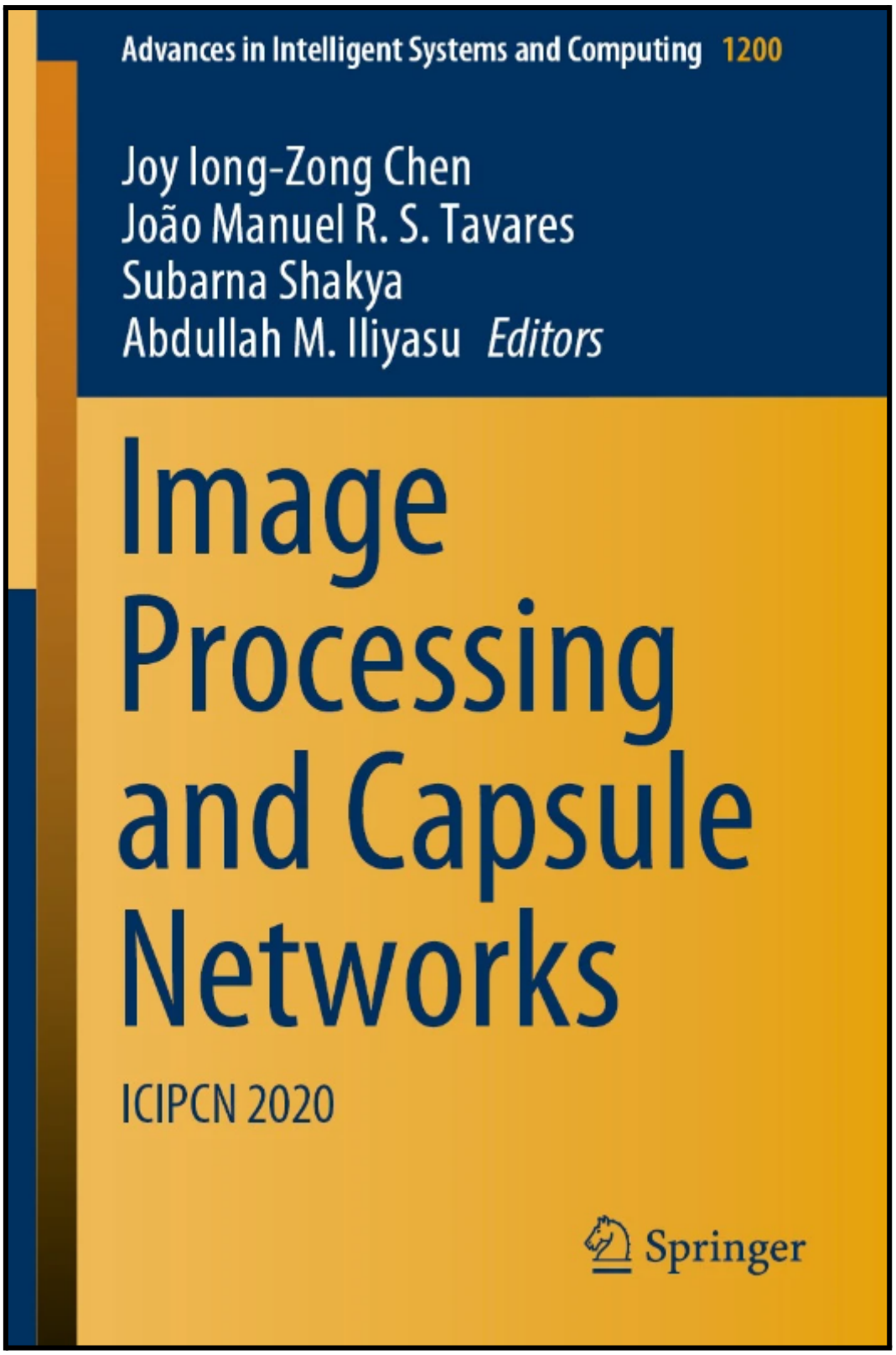
Conference paper | First Online: 14 June 2020

400 Accesses | 1 Citations

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 656)

Abstract

Abnormality and presence of neurological brain disorder such as epileptic seizure is diagnosed by analyzing electroencephalography signals accurately. The acquired brain signals are analyzed in time–frequency domains by using wavelet for accurate diagnosis. The online standard EEG database signal is preprocessed to remove power noise and most important eye blink artifact using independent component analysis. Daubechies wavelet is implemented, and decomposition of frequency is carried out up to eight levels. The exact sub-band of frequencies are extracted from band of frequencies which are called as delta band, theta band, alpha band, beta band and gamma band from lower to higher. Suitable features such as Lacunarity, Fluctuation Index, Energy and Entropy, Kolmogorov Entropy, Kurtosis and Skewness are extracted and classified using K-Nearest Neighbor, Support Vector Machine and Probabilistic Neural Network. Performance analysis is carried out by measuring specificity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Efficient Framework for Identification of Soybean Disease Using Machine Learning Algorithms

Sachin Jadhav, Vishwanath Udupi & Sanjay Patil

Conference paper | First Online: 24 July 2020

557 Accesses | 1 Citations

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1200)

Abstract

This paper exhibits the detection and classification framework of soybean leaflet diseases. Identification and classification were performed utilizing an k-means algorithm and a multiclass support vector machine (SVM). Healthy and unhealthy leaflets infected by frogeye leaf spot, bacterial blight, and Septoria brown spot diseases were collected from a soybean field. The image database is developed by acquiring images with a constant background using a digital camera under the control environment. The image preprocessing techniques applied to the ROI of the raw image. After that, the partition of the diseased region is done using an k-means segmentation technique. The color and texture features were extracted from the segmented leaf region. The mean and standard deviation of RGB channels estimated to extract color features, and texture features were extracted using a (GLCM) method to define an image

Classification of Soybean Diseases Using Pre-trained Deep Convolutional Neural Networks

Sachin Jadhav, Vishwanath Udupi & Sanjay Patil

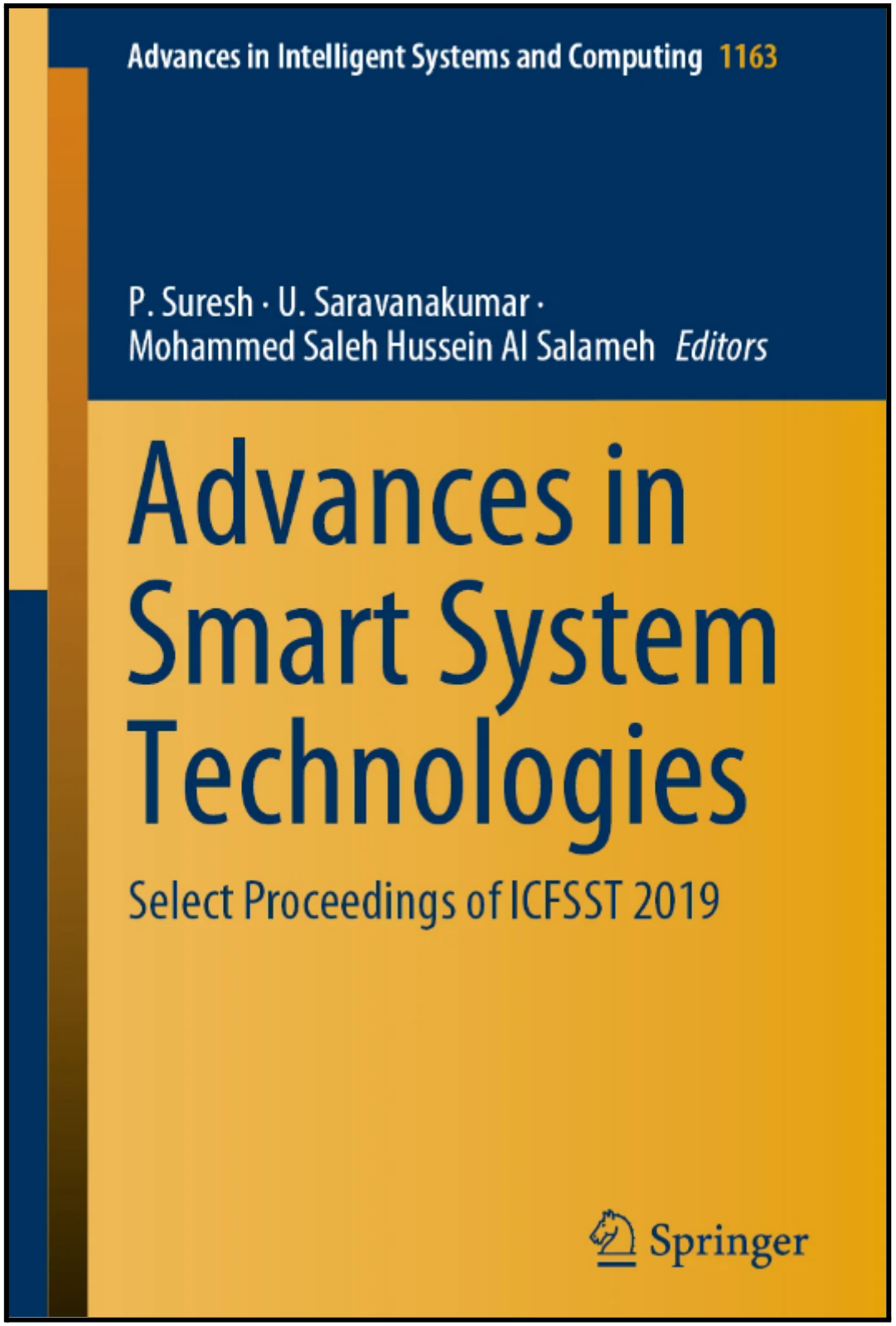
Conference paper | First Online: 24 July 2020

568 Accesses | 2 Citations

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1200)

Abstract

In this work, a novel soybean leaf disease classification technique related to pre-trained GoogleNet deep convolutional neural networks (CNN) architecture proposed. The proposed GoogleNet architecture trained on a database of 550 image samples of unhealthy and healthy soybean leaflets with 3 symptoms of an unhealthy class particularly, septoria brown spot, bacterial blight, frogeye leaf spot, and 1 healthy class using a deep transfer learning approach. As specified 3 unhealthy class and 1 healthy class identification, we have used the 5-fold cross-validation approach, the intended pre-trained GoogleNet-CNN architecture attains an accuracy of 96.25%. It was found that the accuracy of our proposed CNN architecture is enormously more precise than the formal machine learning models. The results of performance analysis to the recognition of soybean diseases exhibit the expediency and highest success rate using the proposed GoogleNet CNN model.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Understanding Textile Antenna by Reviewing and Simulating It for High Data Rates Applications

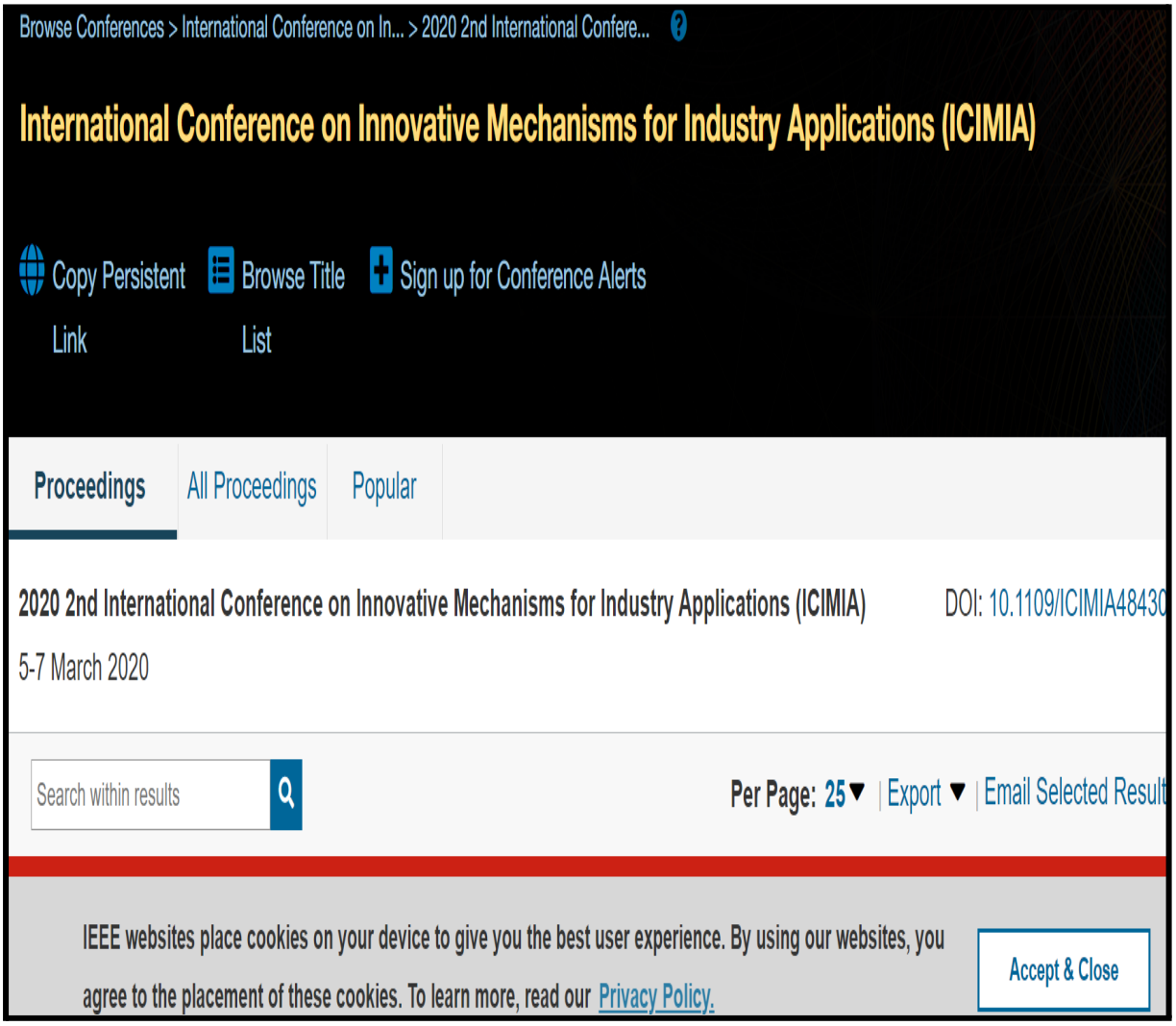
Asit Kittur & G. Vairavel

Conference paper | First Online: 30 August 2020

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1163)

Abstract

In the proposed study, different wearable antenna papers are studied, and their detailed analysis is done. The conclusion of the survey and demonstration of future work is analyzed. While going through the study, different substrate materials and conducing materials along with their permittivity are also studied. For beginners, design calculations are also given. Different antennas with different band and shape with different textile materials and different frequency are studied. Finally, for this study, fractal antenna for different shape and different frequency is simulated.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Study of Recent Web Service Recommendation Methods

Publisher: IEEE | Cite This | PDF

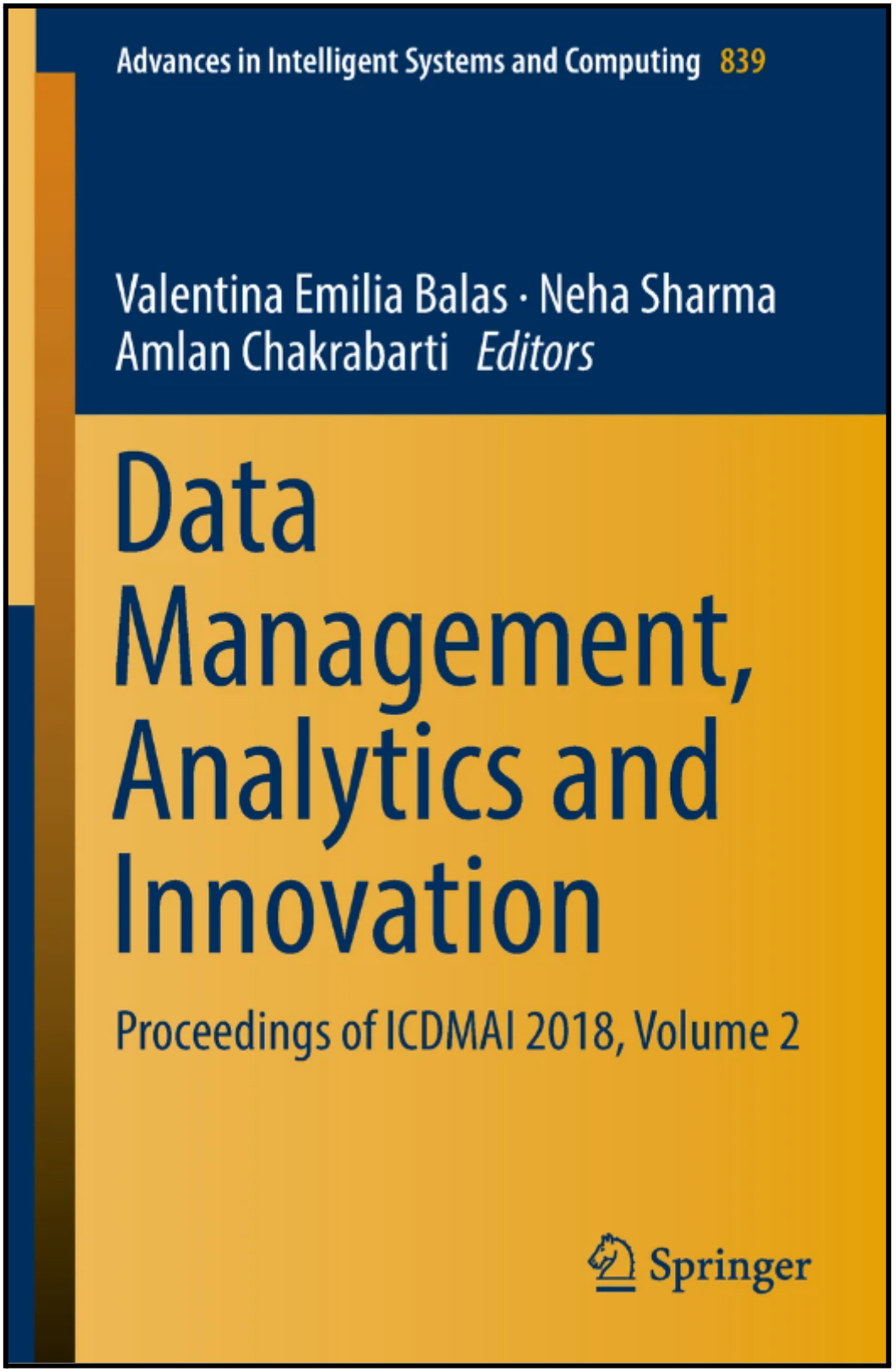
Priya Pandharbale ; Sachi Nandan Mohanty ; Alok Kumar Jagadev All Authors

Abstract

Document Sections

Abstract:

With the expansion in service-oriented computing (SOC), Web services are effectively accessible over the internet; we can without much of an effort to offer our data and software with the assistance of web services. Utilizing web services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Data Management, Analytics and Innovation
Proceedings of ICDMAI 2018, Volume 2
Springer

Continuous Facial Emotion Recognition System Using PCA for Ambient Living

Anil R. Surve, Vijay R. Ghorpade & Anil S. Patthe

Conference paper | First Online: 08 September 2018

951 Accesses

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 839)

Abstract

Nowadays, Facial Emotion Recognition is widely used and is an attractive area in affective computing especially for computer vision with healthcare applications. Facial expressions change with respect to time and person in different instances. To find out the emotions automatically by computers, facial expressions perform the most important role and also aid for human–machine interfaces. Persons can be distinguished by facial expressions easily on time but for computers, it is still a challenge. Presented work proposes the emergence-based eigenface techniques. By using PCA (Principal Component Analysis), we can extract all relevant information present in frames where human faces are detected. We know that facial expressions are conveying emotions exactly. We use PCA to reduce the dimensionality of computations. In this process we are detecting face, extracting features, reducing dimensionality using PCA, and then classifying emotions using Euclidean distance metric and after that, we apply temporal dynamics (Patthe and Anil in Temporal dynamics of continuous

SMART FLOOD MONITORING SYSTEM USING IOT AND WSN

Miss Pisal Jija V., Prof. Mrs. Mulla Shagupta M., Miss Patil Sonali S.
Department of CSE, Bharati Vidyapeeth's College of Engineering, Kolhapur
Maharastrajijapisal43@gmail.com, smmdeo@gmail.com,sonali130597@gmail.com

***Abstract*-**While some areas are more prone to flooding than others, the establishment of flood warning systems near any major waterway or body of water provides critical information that can protect property and save lives. Of course, the most effective flood warning methods extend beyond the installation of and telemetry equipment and employ qualified staff and carefully designed procedures to provide the earliest warning about whether a flood should be expected, when it will occur, and how severe it will be. Nowadays, there is no idea about when flood will occur so there is need to aware people who are near the flooded area. Hence we are design this system to inform the people about the upcoming flood through notification and alert messages. For that purpose we are going to use some sensors which will helpful to give information about the flood. As well as we are going to give all safe places near the user location where user can migrate. Always we are using map for trace safe location. This project report offers exact implementation to individuals, communities, and organizations interested in establishing and operating flood warning systems.

***Index Terms*-** Android application, Flood Monitoring, Node MCU ESP 8266, Sensors, Web application

I. INTRODUCTION

To develop a Real Time Solution to Flood Monitoring Using IoT and Wireless Sensor Network. Developing a flood warning system requires attention to three basic factors: Data collection via gaging, data processing, and the hardware and software required, and the dissemination of flood warning information. While automated flood warning systems are often surprisingly inexpensive to implement, the primary factor determining cost for any such system is the number of gage site locations.

While some areas are more prone to flooding than others, the establishment of flood warning systems near any major waterway or body of water provides critical information that can protect property and save lives. Of course, the most effective flood warning methods extend beyond the installation of gages and telemetry equipment, and employ qualified staff and carefully designed procedures to provide the earliest warning about whether a flood should be expected, when it will occur, and how severe it will be. This project report offers exact implementation to individuals, communities, and organizations interested in establishing and operating flood warning systems.

2019 International Conference on Innovations in Computer Technology and Applications (ICITA-2019), January 4-5, 2019, Thane, Mumbai

Adequate Web Service Discovery Approach

Rahul P. Mirajkar
Research Scholar, School of Engineering and Technology,
Career Point University,
Kota, India
rahulmirajkar982@gmail.com

Nikhil D. Karande
Associate Professor, Department of CSE,
Sanjay Ghodawat University,
Kolhapur, India
nikhilkarande18@gmail.com

Surendra Yadav
Professor, Department of Computer Science & Engineering, Career Point University,
Kota, India
syadav66@gmail.com@gmail.com

Abstract— **A web service is a software system designed to support interoperable machine-to-machine interaction over a network. In today's date, web services are becoming widespread to utilize the web as a business opportunity for offering their own services and using existing services from others. A web service is a service offered by an electronic device to another electronic device, communicating with each other via the World Wide Web. A web service registry UDDI (Universal Description, Discovery, and Integration) provides interoperable, standards based approach for methodically documenting and publishing web services. Since various services are available, it becomes difficult to find the most appropriate service for an exact application. Faced with the increasing numbers of Web services and service users, researchers in the services computing field have attempted to address a challenging issue, i.e. how to quickly find the suitable ones according to user queries. Many previous studies have been reported towards this direction. This paper presents a study on different web service discovery approaches.**

Keywords- Web Mining, Web Service Discovery

I. INTRODUCTION

The number of web services is increasing continuously on the internet. Many well known IT companies have also launched their own Web Service market places e.g. Amazon's Web Service Marketplace, Microsoft's Azure Marketplace etc. [1].

Therefore, quickly finding the suitable web service according to customer/user queries is very challenging. Registries like UDDI (Universal Description Discovery and Integration) are no longer available on internet. Oppositely, the web service search engine or web service directories increase rapidly but web service search engines that rely on keyword matching always suffer from a lack of sufficient keywords in Web service descriptions or from using synonyms of predefined keywords.

Web service discovery is retrieving required web services that can get in two types- first is functional requirements and second is nonfunctional requirements of users. Web service search engine have also some limitations or difficulties in applying these approaches in practice so there is need for new web service discovery approach. Finding a web services similar to users' functional requirements is very important. Then the web service is published in a repository but number of services registered in large scale so repository formed in large size.

Similar Word Mining (SWM) which is used to get higher similarity between two web services. SWM technique gives web services based on topic models. This web services share similar probabilities over multiple topics. The size of SWM can be adjusted flexibly. Topic model estimate topic distribution of given user query. Then queries are ranked for SWM related topics. The web services are relevant which are ranked web services using SWM. Similar Word Mining gives web services related to topic. User search for service query then follow all process steps each time to get relevant web service. User History will provide web services which are already searched by user. User history will improve the response time of web service discovery.

So we need to develop a web service search engine by implementing constraint based clustering using must-link and cannot link approach for extracting relevant web services & also make use of historical user preferences for reducing the search time. Web services are implemented using standards such as UDDI, SOAP, WSDL, etc. Web services are developed and published by different vendors using UDDI. It is the mechanism to register and discover web services. The details of a web service are provided in the WSDL document. It provides the format to describe the web service and how they are bound to a

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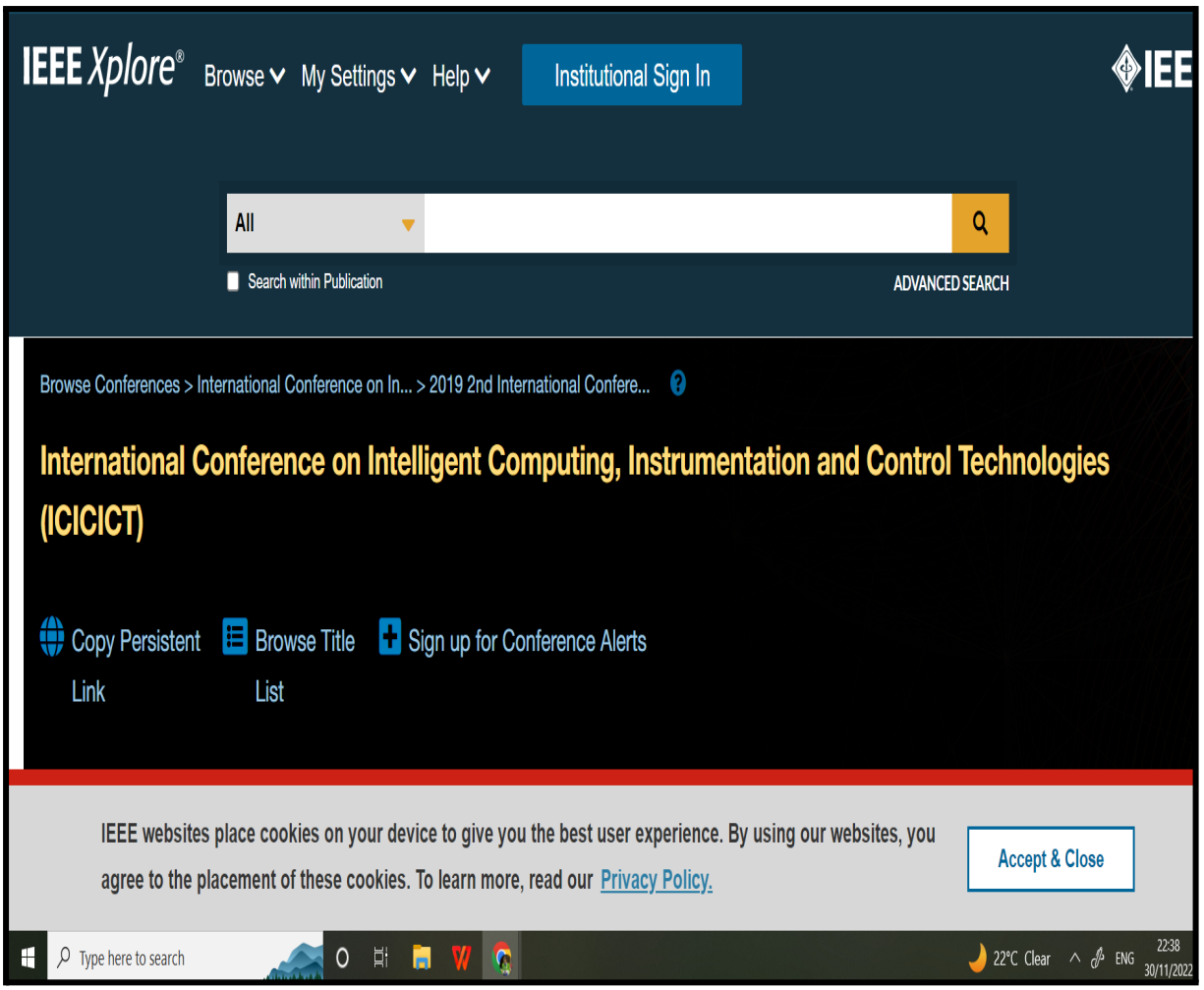
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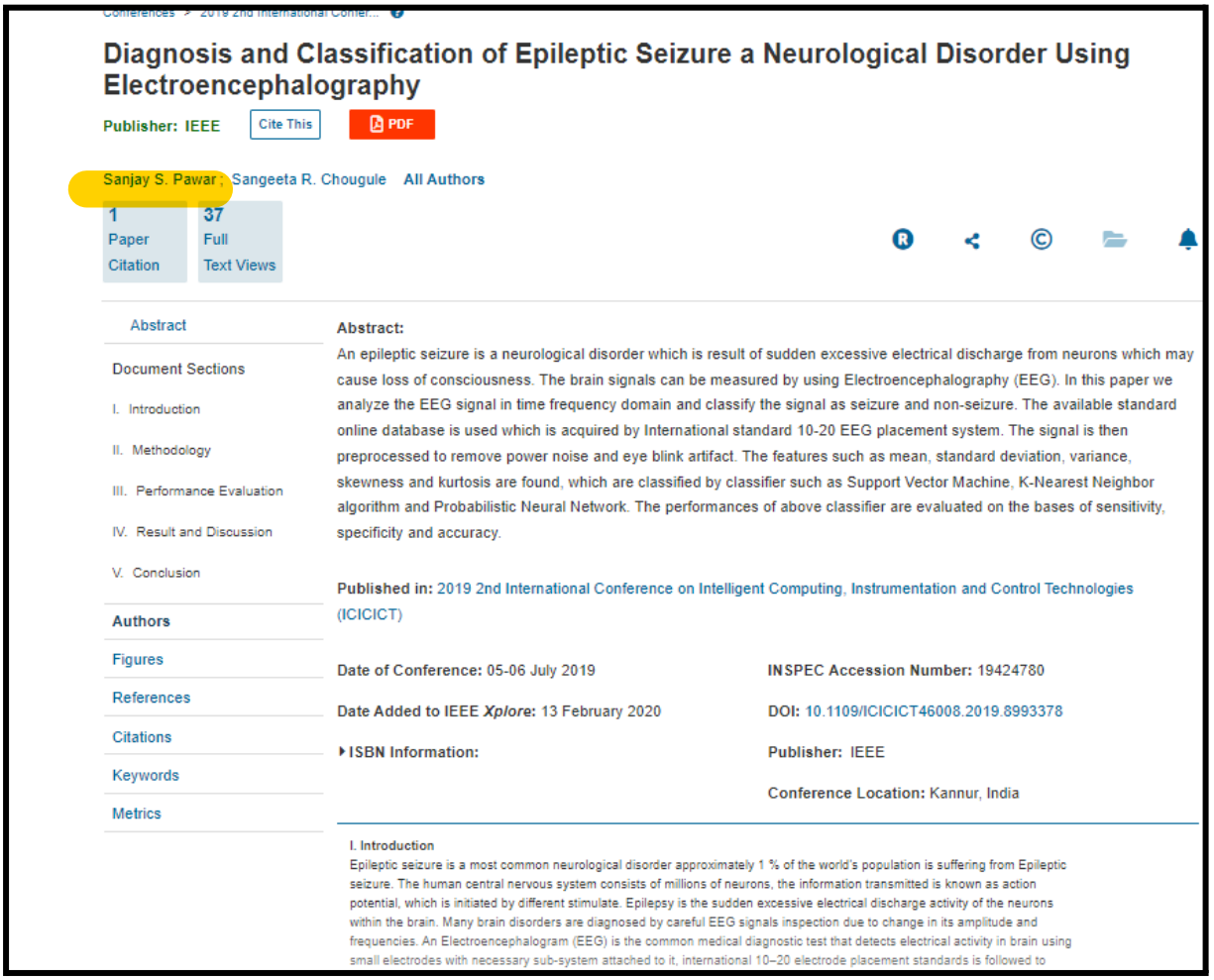

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Diagnosis and Classification of Epileptic Seizure a Neurological Disorder Using Electroencephalography

Publisher: IEEE | Cite This | PDF

Sanjay S. Pawar ; Sangeeta R. Chougule All Authors

1 Paper Citation | 37 Full Text Views

Abstract

Document Sections

I. Introduction

II. Methodology

III. Performance Evaluation

IV. Result and Discussion

V. Conclusion

Authors

Figures

References

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Keywords

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Abstract:
An epileptic seizure is a neurological disorder which is result of sudden excessive electrical discharge from neurons which may cause loss of consciousness. The brain signals can be measured by using Electroencephalography (EEG). In this paper we analyze the EEG signal in time frequency domain and classify the signal as seizure and non-seizure. The available standard online database is used which is acquired by International standard 10-20 EEG placement system. The signal is then preprocessed to remove power noise and eye blink artifact. The features such as mean, standard deviation, variance, skewness and kurtosis are found, which are classified by classifier such as Support Vector Machine, K-Nearest Neighbor algorithm and Probabilistic Neural Network. The performances of above classifier are evaluated on the bases of sensitivity, specificity and accuracy.

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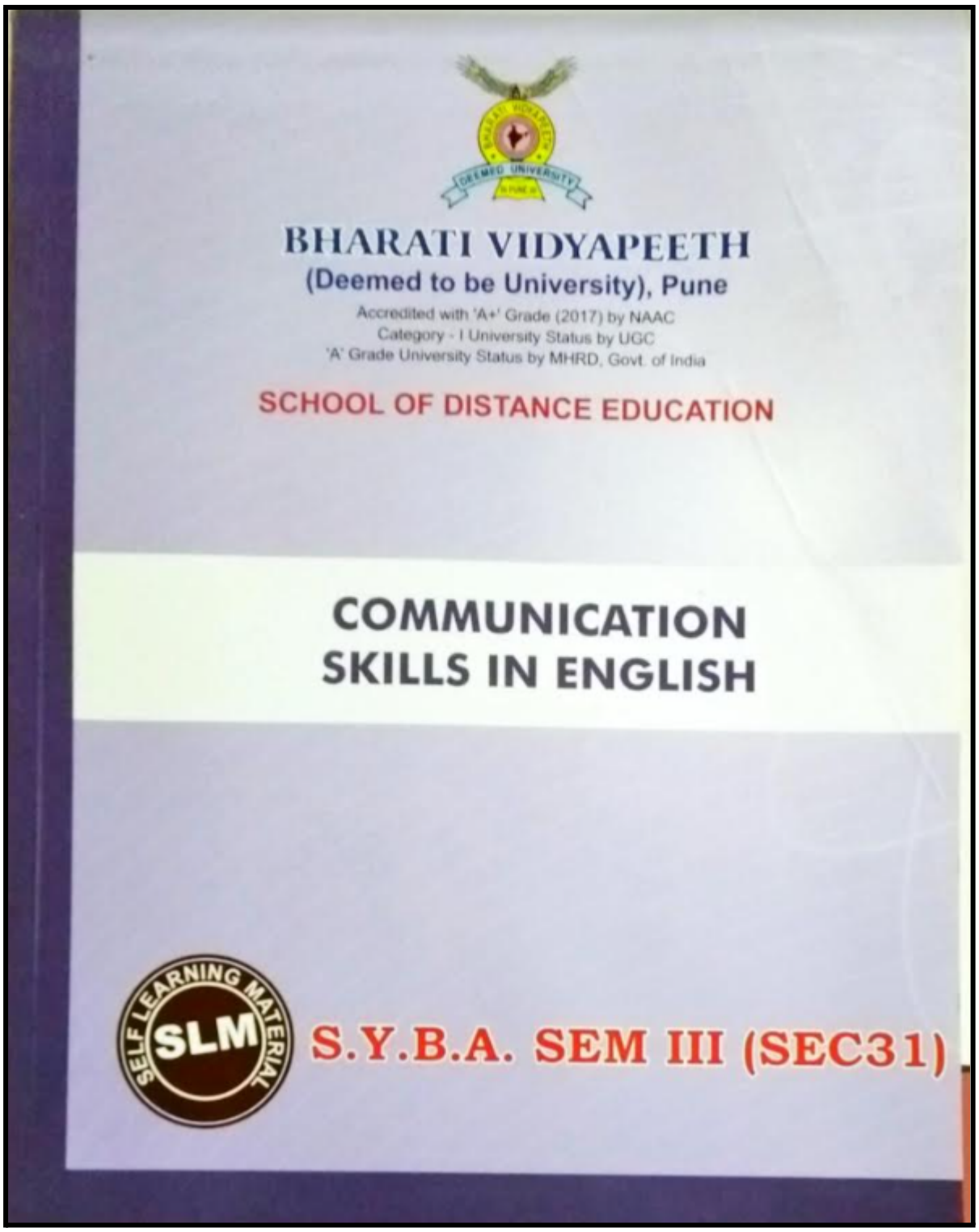
DOI: 10.1109/ICICICT46008.2019.8993378

ISBN Information:

Publisher: IEEE

Conference Location: Kannur, India

I. Introduction
Epileptic seizure is a most common neurological disorder approximately 1 % of the world's population is suffering from Epileptic seizure. The human central nervous system consists of millions of neurons, the information transmitted is known as action potential, which is initiated by different stimulate. Epilepsy is the sudden excessive electrical discharge activity of the neurons within the brain. Many brain disorders are diagnosed by careful EEG signals inspection due to change in its amplitude and frequencies. An Electroencephalogram (EEG) is the common medical diagnostic test that detects electrical activity in brain using small electrodes with necessary sub-system attached to it, international 10–20 electrode placement standards is followed to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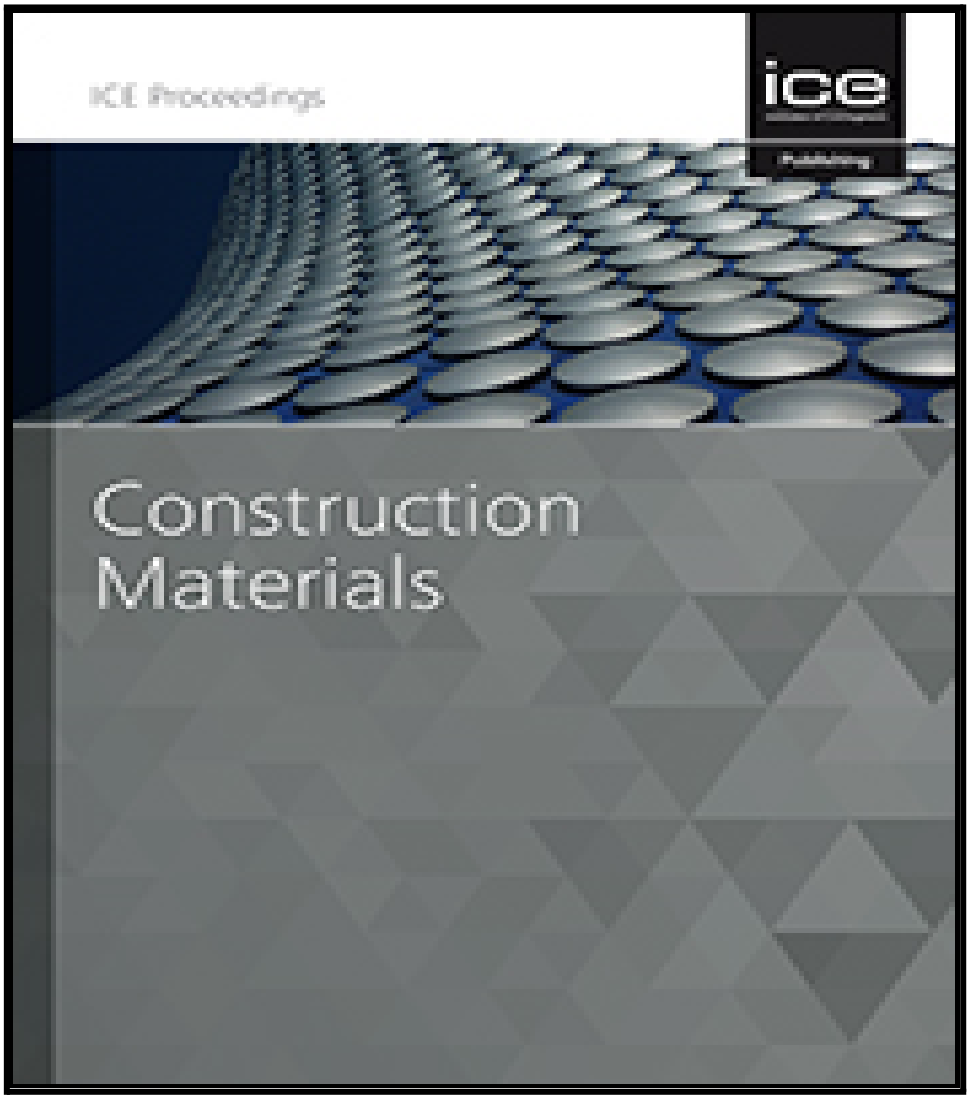
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< Prev

Study of aluminium dross and ordinary Portland cement modified cold bituminous emulsion mix

Authors: Akshay Jadhav, MTech Vijay Kakade, PhD

Author Affiliations

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Published Online: May 10, 2019
Keywords: pavement design recycling & reuse of materials roads & highways

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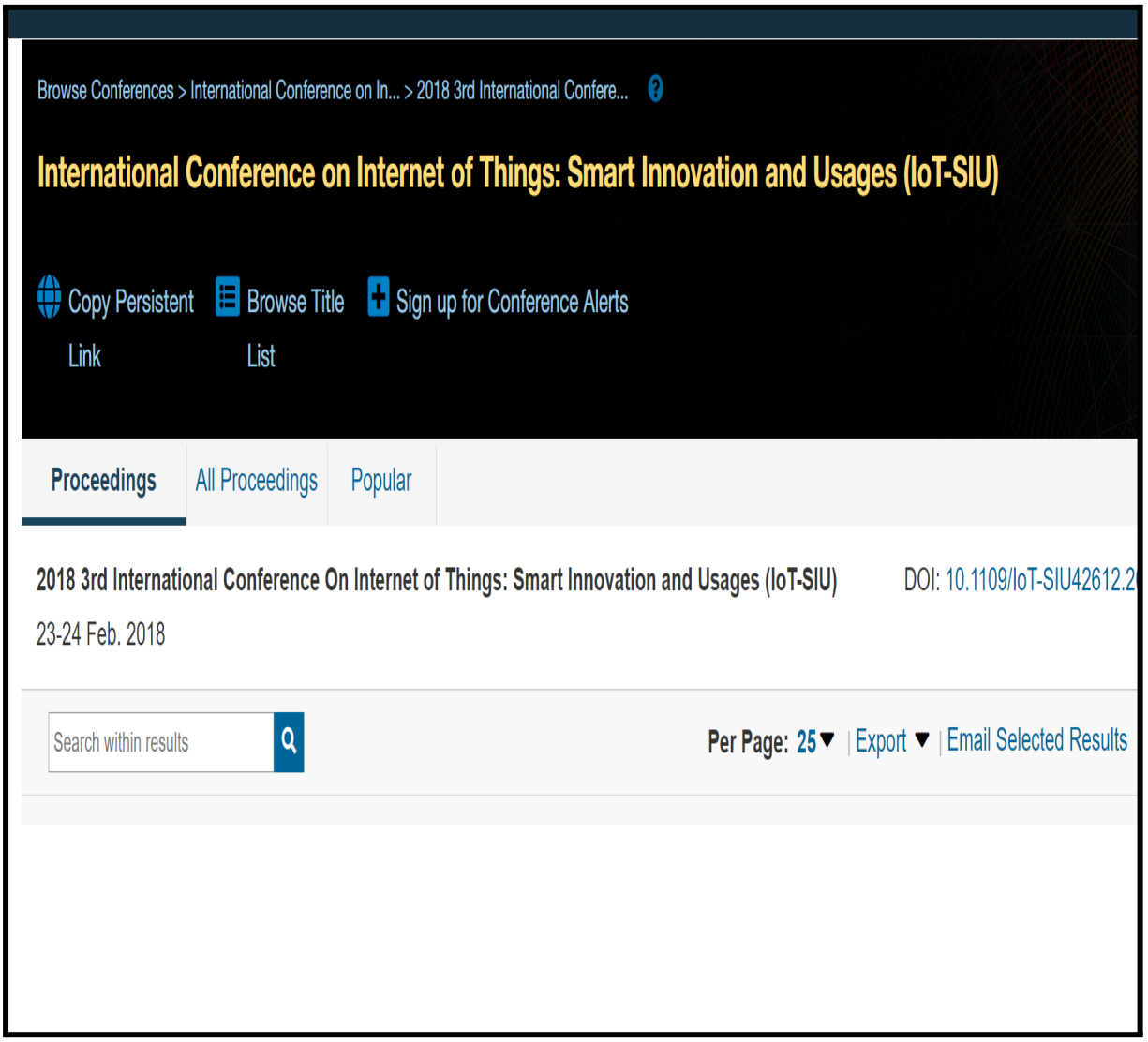
Abstract

Due to their low cost, cold bituminous emulsion mixes (CBEMs) are preferred for the construction of low-volume roads in India. However, due to the low strength of CBEMs and overloading, the premature failure of these roads is common. The strength of CBEMs is generally increased by the addition of ordinary Portland cement (OPC) and hydrated lime. The use of industrial waste materials is also an alternative to conventional additives for improving the performance of CBEMs. Studies carried out in the past have shown a significant improvement in the strength of CBEMs prepared with the replacement of natural aggregates with industrial waste materials such as fly ash and ground granulated blast-furnace slag. In this study, the proportions of aluminium dross (AD) and OPC were varied from 0 to 3% with increments of 1%. Marshall stability, indirect tensile strength, indirect tensile stiffness modulus and retained stability tests were performed on mixes prepared with different proportions of AD and OPC. The stability and indirect tensile strength values of the mixes containing AD were higher than those of the mixes containing OPC. The retained stability ratio indicated that addition of AD and OPC resulted in a reduction in moisture damage. The optimum content of both OPC and AD was found to be 2%.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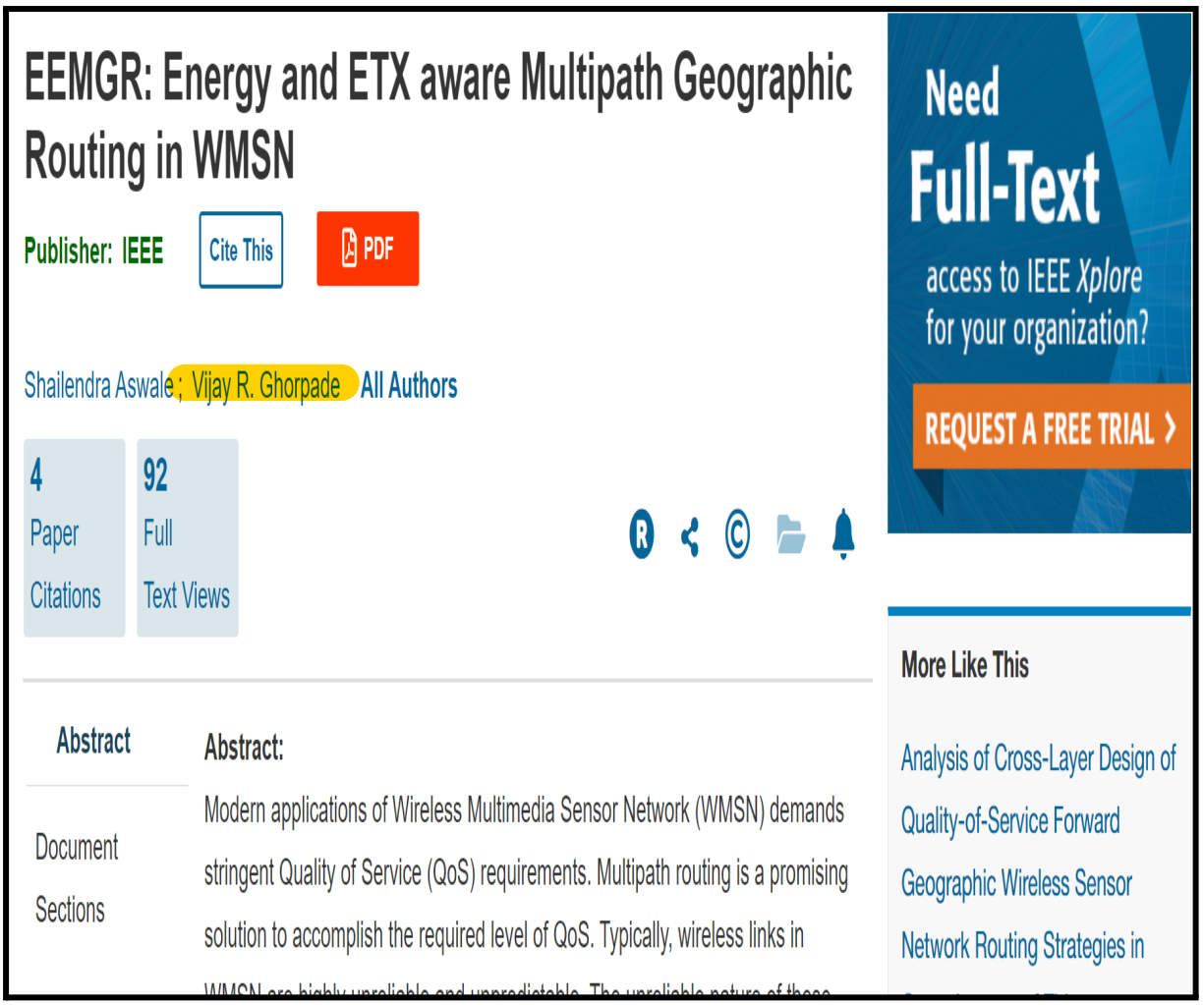

EEMGR: Energy and ETX aware Multipath Geographic Routing in WMSN

Publisher: IEEE

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Shailendra Aswale; Vijay R. Ghorpade All Authors

4 Paper Citations

92 Full Text Views

Abstract

Document Sections

Abstract:

Modern applications of Wireless Multimedia Sensor Network (WMSN) demands stringent Quality of Service (QoS) requirements. Multipath routing is a promising solution to accomplish the required level of QoS. Typically, wireless links in WMSN are highly unreliable and unpredictable. The unreliable nature of these

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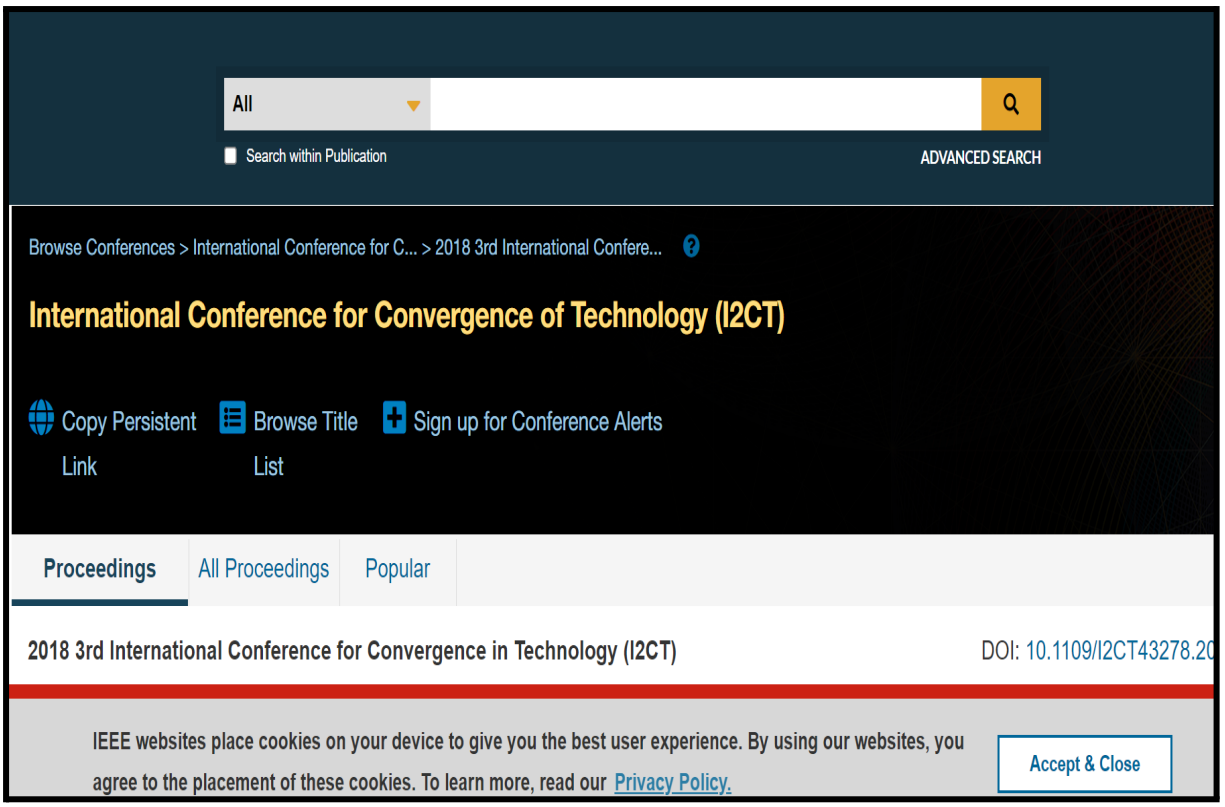
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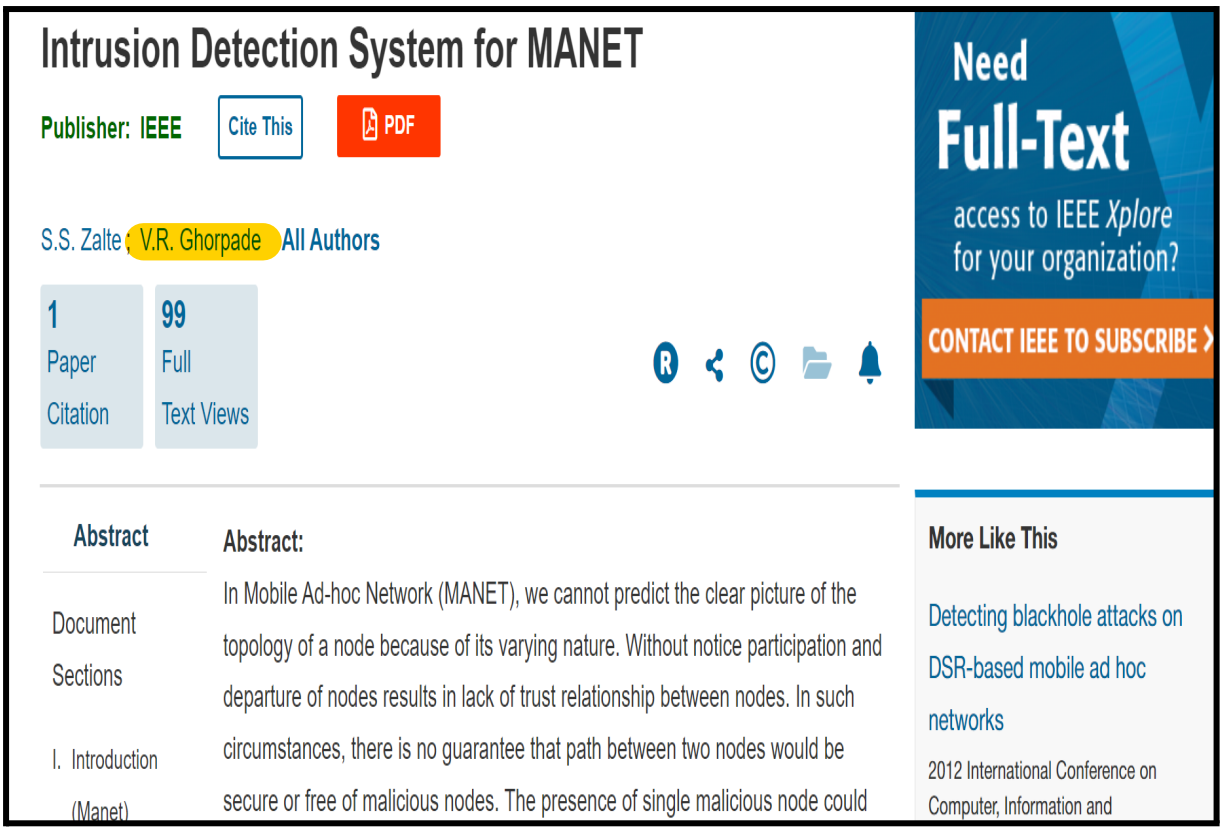

Intrusion Detection System for MANET

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S.S. Zalte, V.R. Ghorpade, All Authors

1 Paper Citation

99 Full Text Views

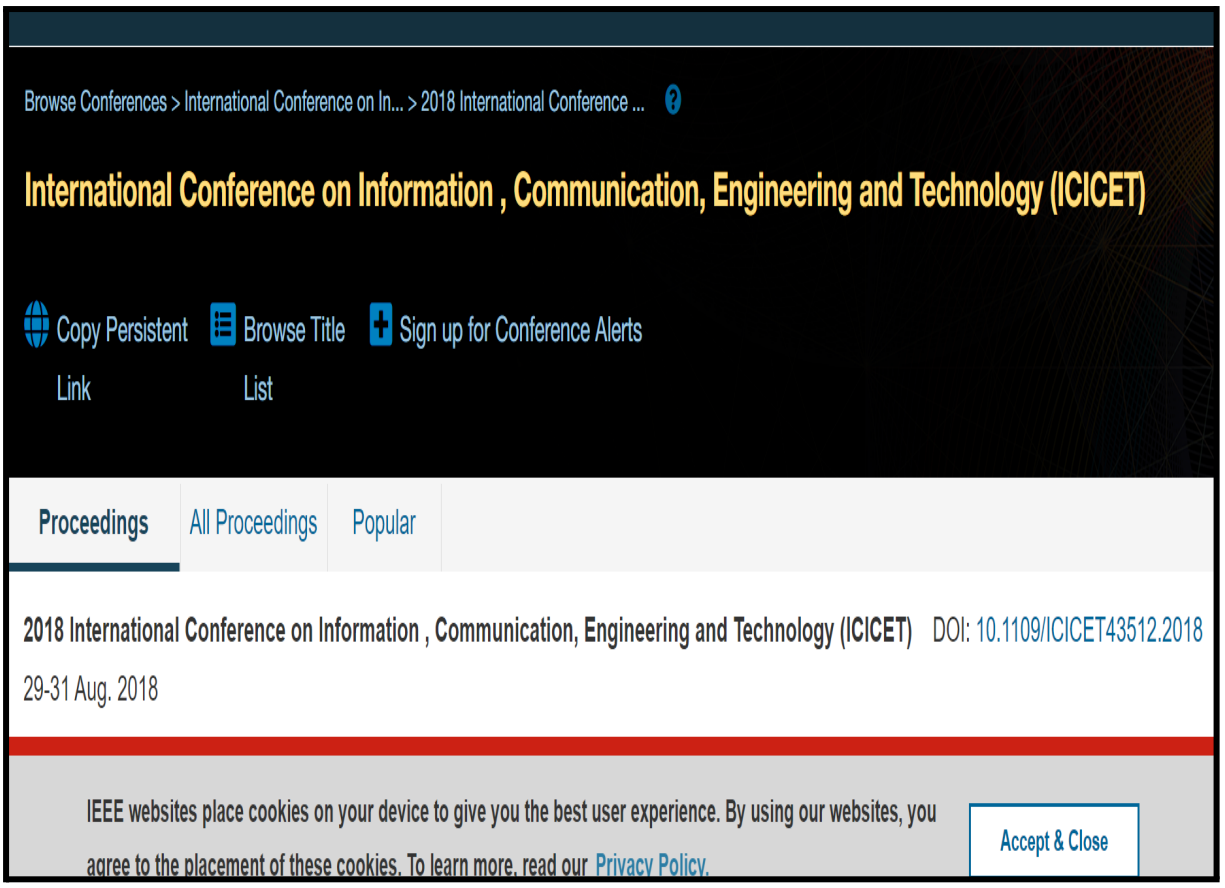
Abstract

Document Sections

I. Introduction (Manet)

Abstract:

In Mobile Ad-hoc Network (MANET), we cannot predict the clear picture of the topology of a node because of its varying nature. Without notice participation and departure of nodes results in lack of trust relationship between nodes. In such circumstances, there is no guarantee that path between two nodes would be secure or free of malicious nodes. The presence of single malicious node could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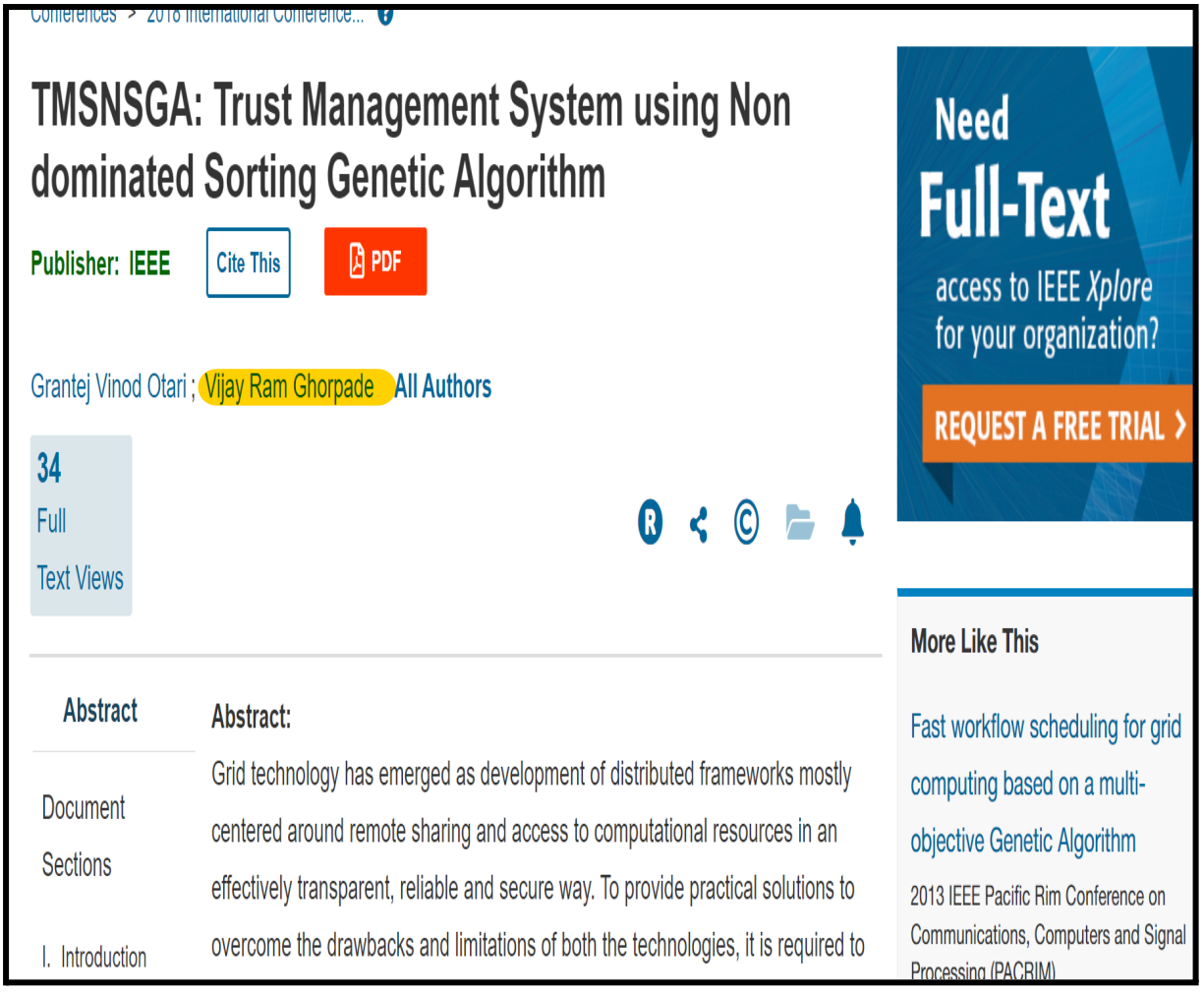
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TMSNSGA: Trust Management System using Non dominated Sorting Genetic Algorithm
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34
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I. Introduction
Abstract:
Grid technology has emerged as development of distributed frameworks mostly centered around remote sharing and access to computational resources in an effectively transparent, reliable and secure way. To provide practical solutions to overcome the drawbacks and limitations of both the technologies, it is required to
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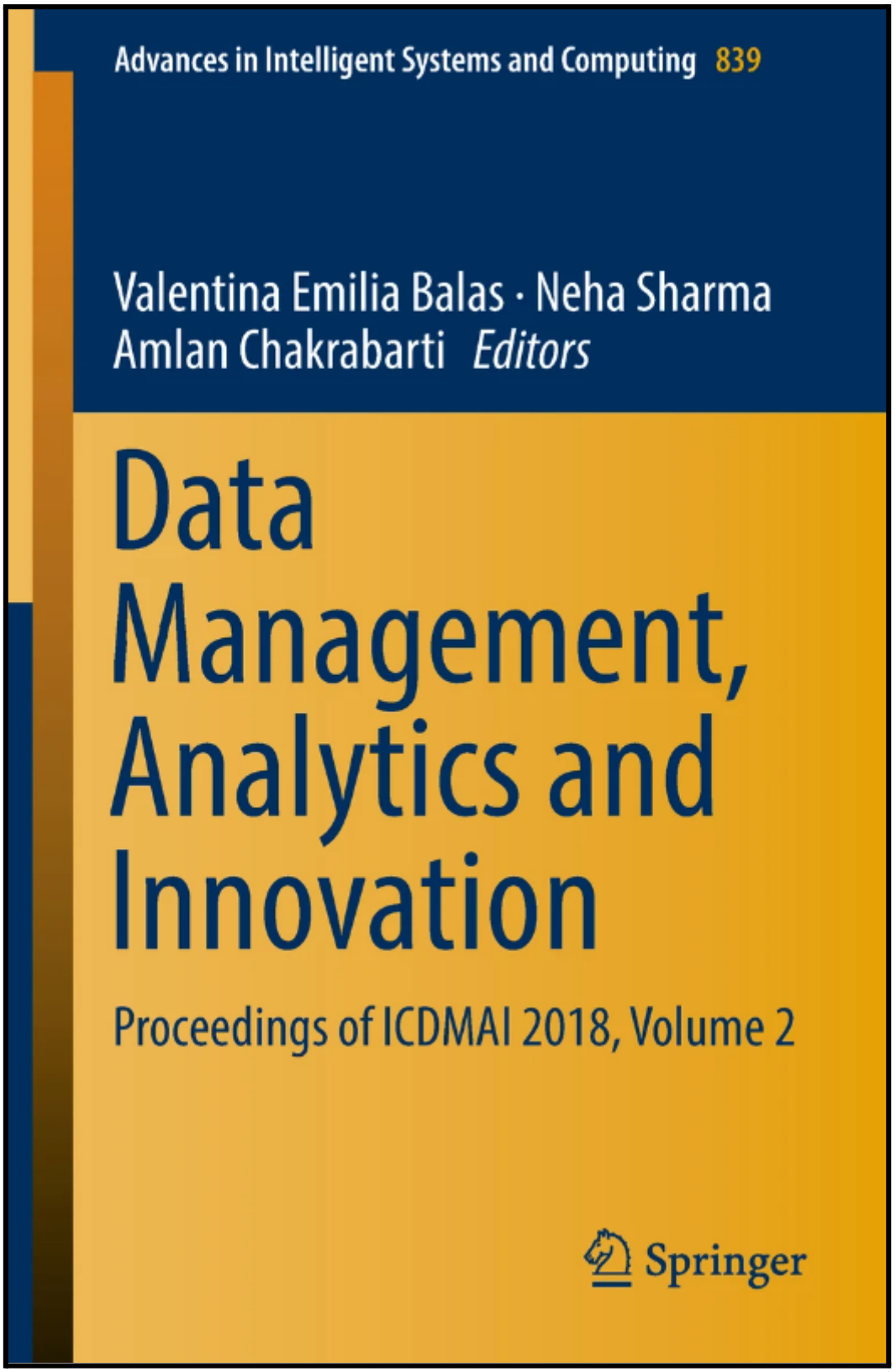
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Continuous Facial Emotion Recognition System Using PCA for Ambient Living

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Conference paper | First Online: 08 September 2018

957 Accesses

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Abstract

Nowadays, Facial Emotion Recognition is widely used and is an attractive area in affective computing especially for computer vision with healthcare applications. Facial expressions change with respect to time and person in different instances. To find out the emotions automatically by computers, facial expressions perform the most important role and also aid for human–machine interfaces. Persons can be distinguished by facial expressions easily on time but for computers, it is still a challenge. Presented work proposes the emergence-based eigenface techniques. By using PCA (Principal Component Analysis), we can extract all relevant information present in frames where human faces are detected. We know that facial expressions are conveying emotions exactly. We use PCA to reduce the dimensionality of computations. In this process we are detecting face, extracting features, reducing dimensionality using PCA, and then classifying emotions using Euclidean distance metric and after that, we apply temporal dynamics (Patthe and Anil in Temporal dynamics of continuous

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10th March 2018 www.conferenceworld.in ISBN : 978-93-87793-03-3

Anti-theft Locker Security System
(Using IOT ,GSM & GPRS)

Ms.Bhatkar Bhakti Girish[1], Mr.Sankapal Pranesh S.[2], Mr.Chinchanikar Aditya Mahesh[3], Mrs. Mulla Shagupta M.[4]

[1,2,3]*CSE Dept.,BVCOE,Kolhapur (India)*
[4]*Asst. Prof., CSE Dept., BVCOEK,*

ABSTRACT

The idea of this project is to implement a secure, non hack able, suthenticated locker system to use in the banks or anywhere it is needed. What happens with traditional Key based access system, keys can get cloned or can get lost or theft & unauthorized access can ruin someone's life. Over last few years some sort of digital security entered in this lockers and lockers became accessible keyless but by digital or biometric authentication. But both password system as well as biometric scanning systems faced many problems like password hacking or CCTV recording, thumbprint mismatch etc. To avoid these problems, we are developing the new solution of keyless digital authentication & access system by using RFID tags. In this idea, we have interfaced the RFID reader to the microcontroller. The user of this system will have his own passive RFID tag. This RFID tags have their own ID numbers and each tag in this world in unique tag & non replicable. Whenever user wants to access his locker he just has to scan his tag on reader just in few seconds. If the tag or user is valid then the locker will be accessed & opened for preset time & it will automatically close after time lapse. If the card is invalid, then locker will not be accessible to the person. A small LCD is used to display the status of system.

Keywords—Microcontroller ,GSM, Locker System, RFID reader

I.INTRODUCTION

The Bank, which is a place that indicate very high level security. In day to day life every person is involved in banking transaction. Because of high level security, we uses bank locker to secure our important document, expensive jewels, or cash etc in it. Hence it has become a very important part for every common human being.The user has to tag the bank official along with him/her locker. The user key along with the bank official's key can provide access to user. The conventional method has many drawbacks such as-

- Both the bank employees must have to present with the keys to open the locker.
- There is possibility of losing the key which makes the system insecure.
- The system is unable to match with today's fast pacing digital world.
- The keys can be duplicated.

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Short text Understanding

Snehal Gurav[1], Urmila Lambe[2], Sonal Balanna[3], Puja Savarde[4], Aishwarya Suryavanshi[5], Prof. Mrs. Mulla Shagupta M[6]

[1,2,3,4,5,6]*CSE, Bharathi Vidyapeeth's College Of Engineering,Kolhapur, (India)*

ABSTRACT

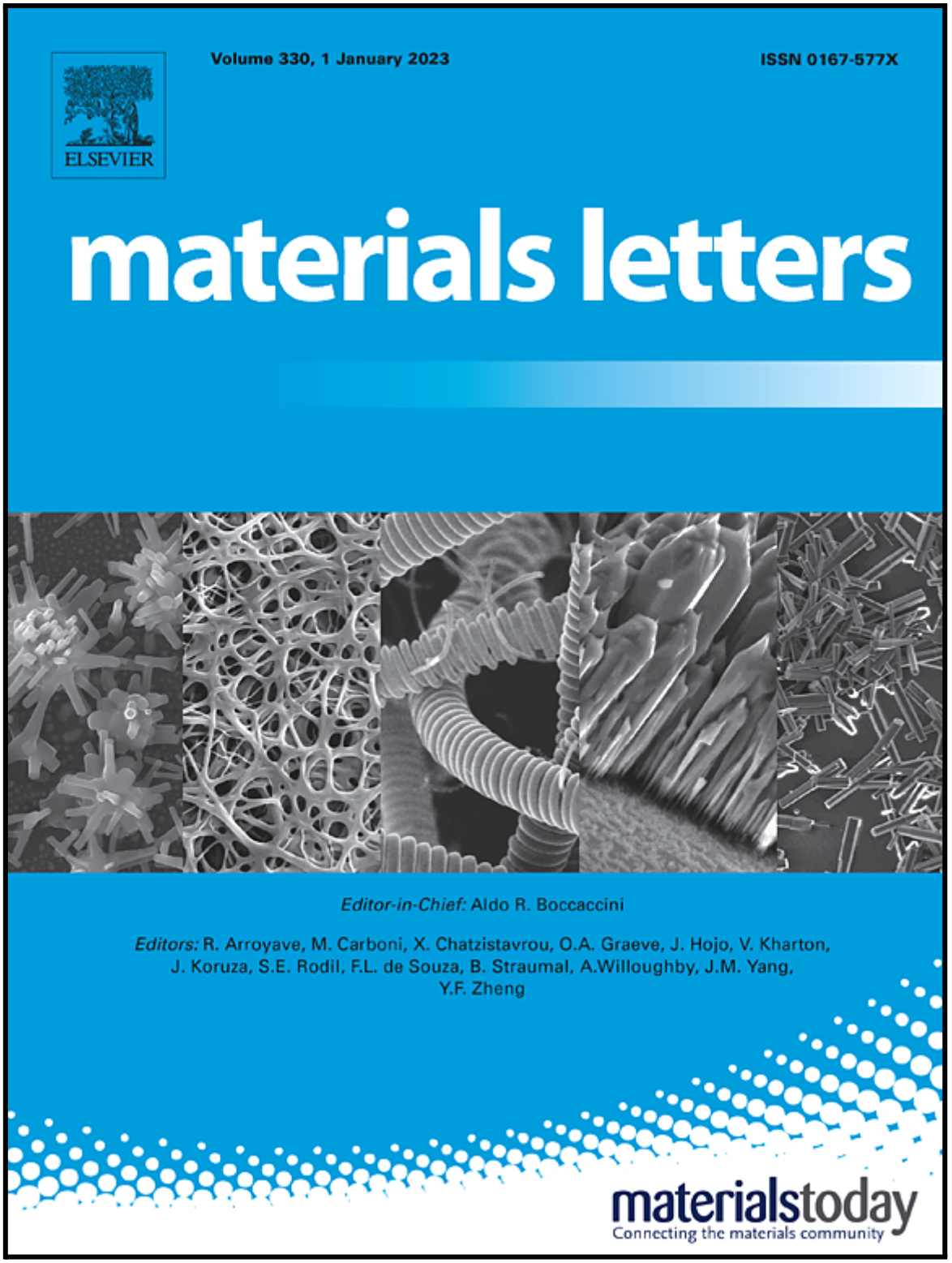
The idea of this project is to implement a short text understanding, short texts is difficult to many applications. Short texts not follow the grammatical syntax of written language. Using the old natural language processing tools, identified by part-of speech of each word in short texts does give us precise results. Short texts do not contain sufficient information to identify its meaning. Short texts are more ambiguous and noisy,are generated in a conflict volume, which is more tedious to handle them. In this project, we develop a system for short text understanding which shows similar knowledge provided by well-known datasets and automatically detect from a huge standaford dictionary. Our approach is to less use of traditional methods for using such as text segmentation, part-of-speech tagging, and concept labelling. All these tasks focus on similar short text. We perform this method on real-time data. The results show that semantic knowledge for short text understanding.[1]

Keywords: Concept labeling, semantic knowledge, Short text understanding , text segmentation, type detection

I. INTRODUCTION

Information technology is a need for machines to better understand language texts. In this project work, we focus on short texts which refer to texts with limited context. Many applications such as web search and micro blogging services etc. need to handle a large amount of short texts. Obviously, a better understanding of short texts will bring tremendous value.

One of the most important tasks of text understanding is to discover hidden semantics from texts. Many efforts have been devoted to this field. For instance, named entity recognition locates named entities in a text and classifies them into predefined categories such as persons, organizations, locations, etc. Topic models attempt to recognize "latent topics", which are represented as probabilistic distributions on words, from a text. Entity linking focuses on retrieving "explicit topics" expressed as probabilistic distributions on an entire knowledgebase. However, categories, "latent topics", as well as "explicit topics "still have a semantic gap with human's mental world. As stated in Psychologist Gregory Murphy's highly acclaimed book, "concepts are the glue that holds our mental world together". Therefore, we define short text understanding as to detect. A typical strategy for short text understanding which consists of three steps: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Organic non-volatile memory device based on cellulose fibers

Anuja P. Rananavare [a], Sunil J. Kadam [b], Shivadatta V. Prabhu [a], Sachin S. Chavan [c], Prashant V. Anbhule [d], Tukaram D. Dongale [a]

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Abstract

The present manuscript reports the development of Ag/cellulose fibers/Al memory device using the electrospinning technique. The morphological characterization suggested that the active layer is composed of micro-fibers. The developed device shows fingerprint pinched hysteresis loop of the memristive device in I–V plane without any additional electroforming step. An excellent endurance for 6×10^3

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A Survey on Speech Emotion Recognition Using MFCC and Different classifier

Supriya B.Jagtap[1], Dr.K.R.Desai[2], Ms. J. K. Patil[3]

[1]P.G. Scholor,Dept. of Electronics and Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, (India)

[2]Prof. and H.O.D, Dept. of Electronics and Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, (India)

[3]AssociateProf.,Dept. of Electronics and Telecommunication Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, (India)

ABSTRACT

In this paper methodology for emotion recognition from speech signal is presented. Speech emotion recognition means extracting the emotional state of speaker and detecting the actual intension of the speaker through his or her speech. The goal is to recognize the emotions likeHappiness, Anger, Boredom, Sadness, Surprise, Fear and Neutral. This Paper presents survey of three methods forSpeech emotion recognition, Application of features like energy, formant, Mel frequency cepstral coefficient (MFCC)and differentclassifiers such as Support Vector Machine (SVM), Binary SVM,K-Nearest Neighbors approach(KNN),Radial Basis Function(RBF), Random Decision Forest(RBF)and Gaussian mixture Model(GMM) are discussed.In addition to the mentioned techniques it gives an outline of the areas where emotion recognition could be utilized such as healthcare, psychology, smart phones, marketing, call centers and cognitive science.

Keywords:Emotion recognition, speech features, classification methods, speech database

I.INTRODUCTION

Emotions play a vital role in human communication. Speechis one of the most natural forms of communication between human and computer. With the visitationof technology in the recent years, more intelligent interaction between humans and machines is desired [1]. The importance of recognizing emotions from human speech has grown with the increasing role of spoken language interfaces in human-computer interaction applications. The goal of speech emotion recognition system is to understandemotions which are present in speech and synthesizing actual intention of the person.And recognize the emotions likeHappiness, Anger, Boredom, Sadness, Surprise, Fear and Neutral.

From a recent scenario, for human emotion recognition through speech signal a wide ranging research is made and this researches using different speech information and signal. Many researchersuse different classifiers or also develop own classifier [1]. For recognition of emotional state researchers use different classifier such

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Study of Texture features for Content Based Image Retrieval

Vandana S.Bujare[1], JayamalaK.Patil[2], Vinay S. Mandlik[3]

[1]*P.G.Scholor,Dept.of Electronics and TelecommunicationEngineering, BharatiVidhyapeeth's College of Engineering, Kolhapur, (India)*

[2]*Associate Porf.Dept.of Electronics and TelecommunicationEngineering, BharatiVidhyapeeth's College of Engineering, Kolhapur, (India)*

[3]*Associate Porf.Dept.of Electronics and Telecommunication Engineering, Bharati Vidhyapeeth's College of Engineering, Kolhapur, (India)*

ABSTRACT

To retrieve the required images from databaseshas become an area of wide interest in many applications. Relevant images can be retrieved using unique image features like texture, color or shape. This paper presents a extensive survey of the Content Based Image Retrieval (CBIR) techniques based on texture features. Paper presents through discussion on three texture features used for development of CBIR systems. These features includesGray-Level Co-Occurrence Matrix (GLCM), Gabor filterand Local Binary Pattern (LBP). Performance analysis of these features is compared to showcase effectiveness in retrieval problems.

Keywords-CBIR,gray-level co-occurrence matrix (GLCM), Gabor filter, Local Binary Pattern(LBP).

I.INTRODUCTION

Image databases are used in many fields including biometric security, medicals and satellite image processing. Content Based Image Retrieval (CBIR) is a technique used to search images from such large image databases according to user's demand, which is known as query image. It is based on image visual contents, known as features.Most of the CBIR systems are developed using three basic image features which includes texture, color and shape of an image. Figure 1 shows general block diagram of CBIR system.

It consists of two major phases i.e. feature extraction and similarity matching. The features are extracted from images and formulated as feature vectors and stored in feature database for further use. When query image is given similar feature vector is extracted and compared with the stored feature vectors from feature database. If the distance among the feature vector of the query image and database image is insignificant enough compared with predefined threshold, then the corresponding image in the database is considered as a match to the query image and is retrieved[1].

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EXPERIMENTAL INVESTIGATION OF EFFECT OF SHRINKAGE REDUCING ADMIXTURE ON SHRINKAGE CRACKING OF CONCRETE

More M. M.[1], Kotwal S. S.[2], Kadam V. S.[3], Jadhav A. M.[4]

[1,2,3,4]*Department of Civil Engineering,*

Bharati Vidyapeeth's College of Engineering Kolhapur(India)

ABSTRACT

One of the main factors that contribute to the cracks in concrete is shrinkage. One of the causes that result in the early deterioration of reinforced concrete involves volume changes in concrete due to autogenous shrinkage and moisture loss. As concrete cures and dries, tensile stresses are created due to hydration and loss of moisture. When a concrete's tensile strength is exceeded by an applied stress, a crack forms in the concrete. Concrete has a relatively low tensile strength compared to its compressive strength and experiences a variety of volumetric changes depending on environmental conditions, curing conditions, and applied stresses. Practically speaking it is difficult to make concrete which does not shrink and crack. It is only the question of magnitude. Now the question is how to reduce the shrinkage and shrinkage cracks in concrete structures. As shrinkage is an inherent property of the concrete, it demands greater understanding of the various properties of concrete, which influence its shrinkage characteristics.

In this dissertation an attempt is made to study the shrinkage characteristics and of concrete, containing admixture Shrinkage Reducing admixture. The shrinkage characteristics of concrete like length, width, total number and total area of cracks etc. are measured on concrete panels.

Keywords: Cracking in concrete, Concrete, Shrinkage, Shrinkage reducing admixture.

I. INTRODUCTION

As shrinkage is an inherent property of the concrete, it demands greater understanding of the various properties of concrete, which influence its shrinkage characteristics. In general, the "gel" structure of the cementitious paste in concrete undergoes swelling when it is wetted and shrinkage when it is dried. Such cracking adversely affects durability of the concrete, integrity and aesthetics of the structure. It is only when the mechanism of all kinds of shrinkage and the factors affecting the shrinkage are understood, an engineer will be in a better position to control and limit the shrinkage in the body of concrete.

The volume instability results in response to moisture, chemical, and thermal effects. In addition, various deleterious chemical reactions involving the constituents of concrete or embedded materials can play significant roles causing localized internal expansions. The impact of cracking on durability, especially corrosion, is detrimental to many transportation structures. In particular, cyclic or tidal exposures initiate dry-wet cycles and

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APPLICATION AND VALIDATION OF REGRESSION ANALYSIS IN THE PREDICTION OF STABILITY VALUE IN COLD BITUMINOUS EMULSION MIX

Jadhav A. M.[1], Kadam. V. S. [2], Patil A. S.[3], More M.M[4]

[1]Assistant Professor,Department of Civil Engineering,
Bharati Vidyappeth's College of Engineering (India)
[2]Assistant Professor,Department of Civil Engineering,
Bharati Vidyappeth's College of Engineering (India)
[3]Assistant Professor, General Engineering Department,
BharatiVidyappeth's College of Engineering (India)
[4]Assistant Professor,Department of Civil Engineering,
Bharati Vidyappeth's College of Engineering (India)

ABSTRACT

Regression analysis is one of the statistical technique which is used for estimating the relationship between various variables. For establishing the relationship between a dependent variable and independent variable regression analysis is used. The Regression analysis with one dependent variable and two or more independent variable is called as multiple regression analysis. It is required to establish a relationship between variables in many civil engineering practical problems. In this study, Marshall Stability test results of cold bituminous emulsion mix are analyzed and the relation between stability values and values of air void with different variables is established. Emulsion content, Aluminum dross, and Cement content these three variables are considered as an independent variable. In this study, total thirty different combinations are analyzed. Comparison between actual stability values and predicted stability values shows that there is very little error and prepared model can be used effectively.

Keywords: Cold Bituminous Emulsion Mix, Marshall Stability Value, Ordinary Portland Cement, Regression Analysis.

I. INTRODUCTION

1.1 Regression Analysis

Regression analysis is a technique that allows finding a functional relationship (model or equation) between dependent variables and independent variables. If only one dependent variable is consideredthen the regression analysis is called univariate regression; while if two or more dependent variables are considered then the regression is called multivariate regression. There are two main types of regression analysis techniques

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ROOT CAUSE ANALYSIS OF DELAYS ON RESIDENTIAL CONSTRUCTION PROJECTS IN KOLHAPUR CITY

Tiware V.S.[1],Mane D. M.[2],Soundattikar N.M.[3] ,Patil A.R.[4]

1 Assistant Professor, Bharati Vidyapeeths College of Engineering Kolhapur (India)
2 Assistant Professor Bharati Vidyapeeth's College of Engineering, Kolhapur (India)
3Assistant Professor Bharati Vidyapeeth's College of Engineering, Kolhapur (India)
[4]Assistant Professor (M.E. Civil Structure)
Sinhgad Institute of Technology and science, Narhe, Pune, Maharashtra,(India)

ABSTRACT

The construction industry has much complex in nature as it involves large number of activities involved within. Managing all these activities is very difficult task even though a proper management some factors affect the project. So the method to track and mitigate these causes affecting the project is needed.

In this research, paper the causes affecting delays on residential projects in Kolhapur city, Maharashtra are taken to study. The questionnaire designed for collection of data and then data analyzed using RII (Relative Importance Index)method. In this paper, the 37 individual causes affecting project duration are categorized into 8 main groups for the study purpose. And the delays are considered as the planned duration with actual duration of the activity. This paper is aimed on knowing the causes of delays occurrence. The causes which vary the planned duration and actual duration of task during construction stage are considered as delays for this research purpose. These causes in construction task can affect the cost of the project so this study is important in cost saving manner as well as for improvement of the organizational method, which are currently used in construction industry. The RII (Relative importance index) method is used to know the effect of such causes on performance. This study helps in knowing the exact causes of delay occurrences with the help of questionnaires prepared and analysed using 'Relative importance index'.

The RII ranking shows that the causeslike Delay in progress payment by owner, Unqualified workforce, Low productivity of labour, Personal problem of labour, Difficulties in financing project have very high RII which are most affecting factors causing delays of construction of residential buildings in Kolhapur city. Cause and effect relationship will act as the base of this study and will help develop suitable and sustainable method. Time and money saving factors interdependency will strategically produce outcomes. The results obtained from this study help produce high end graphs which seizes all the details of delays and overall performance of the project.

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WATER SUPPLY SYSTEMS AND HIGH RISE BUILDINGS

Mane D.B [1], Tiware V.S.[2],Soundattikar N.M.[3]

[1]*Assistant Prof.,Department of Civil Engineering,*
BharatiVidyapeeth College of Engineering, Kolhapur, (India)
[2]*Assistant Prof.,Department of Civil Engineering,*
BharatiVidyapeeth College of Engineering, Kolhapur, (India)
[3]*Assistant Prof.,Department of Civil Engineering,*
BharatiVidyapeeth College of Engineering, Kolhapur,(India)

ABSTRACT

Along with constant rise of land prices in densely populated cities, high rise buildings continuously are gushing out. This high rise housing trend increases energy required for water supply & corresponding green gas emission. Therefore it is necessary to evolve methods which result into energy savings. This paper addresses the issue of appropriate water supply system to be employed for high rise buildings in India. Optimizing energy requirement of water supply systems in high rise buildings is a way towards sustainable development. This paper brings out a case study of a 11 to 24 floor residential building wherein the gravity system and Hydropneumatic system and intermediate tank system methods of water supply schemes are compared on energy consumption profile, all systems being sized as per National Building Code 2005 guidelines. The result shows that the corresponding annual electricity energy can be saved via intermediate tank system than gravity system for scenario considered.

Keywords: High rise buildings, Water supply systems, intermediate tank system, energy consumption profile.

I. INTRODUCTION

Along with constant rise in land prices in densely populated cities high rise buildings are continuously gushing out. This high rise housing trend across our great nation increases energy required for water supply. Reducing energy consumption of water supply system in buildings is a way of reducing carbon emission now days.

As the water pressure head at the government water mains is insufficient to supply whole building (or to reach topmost floor of building), gravity tank system and Hydro pneumatic systems are designed, for water distribution through pipes [1].

Although energy consumption is a major concern for sustainable high-Rise developments, there is no existing measure that systematically addresses the issue with respect to the optimal design and operation of high rise water supply systems. Design solutions which integrate effective energy use into water planning and supply

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EFFECT OF FLY ASH AND ARTIFICIAL SAND ON THE COMPRESSIVE STRENGTH OF CONCRETE

Patil A.R.[1] ,Tiware V.S.[2] ,Patil V.B.[3] ,Mane V.V.[4]

[1]Assistant Professor (M.E. Civil Structure) Sinhgad Institute of Technology and science, Narhe, Pune, Maharashtra, (India)

[2]Assistant Professor (M.E. Construction Management) Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)

[3]Assistant Professor (M.E. Environmental Science and Technology) Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)

[4]Assistant Professor (M.E. Civil Structure) Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)

ABSTRACT

Slurry infiltrated fibrous concrete (SIFCON) is a unique fiber concrete with high percentage of fiber. SIFCON has tremendous potential for application in areas where high compressive strength is required. The SIFCON consists of cement slurry in which steel fibers are preplaced in the mould, after placement of fibers, cement slurry is poured into the fibre network.

To study the performance of SIFCON in compression strength, the cube specimens of dimension 150x150x150 mm were cast. In this paper effect of addition of fly ash, artificial sand & steel fiber on the properties of SIFCON is reported. Waste steel fibers were used in SIFCON. In this study aspect ratios of steel fiber like 80, 90, 100 and 110 are used with 6%, 8% and 10% fibers percentage. Specimens are cast by adding fly ash at varying percentages like 10%, 15%, 30% and 40% by weight of cement and 100% artificial sand. The compressive strength is evaluated.

Test results revealed the superior characteristics of SIFCON as compared with normal FRC

Keywords: SIFCON, aspect ratio, waste steel fibers, fly ash, artificial sand, compressive strength.

I.INTRODUCTION

Continuous use of natural sand in construction activity has needed a full or partial replacement, and one of the alternative is artificial sand. On the other hand fly ash is widely used material all over the world. The use of fly ash in concrete not only improves technical advantages to the properties of concrete but also contributes to the environmental pollution control. If it is possible to use this in making concrete by replacement of cement, then it will solve the problem of its disposal.

Concrete is a commonly used material in construction engineering all over the world. Concrete, by desirable quality of its low cost, easy availability, comparatively simple

A Literature Review study on Compressive and Tensile Strength of Steel Fibre Reinforced Concrete

Vinod H. Kashid[1] **Vivek V. Mane**[2] **Nikhilesh M. Soundattikar**[3]

[1] *U.G.Student, Department of civil Engineering, Bharati vidyapeeth's college of engineering, Kolhapur, India*

[2] *Assistant professor, Department of civil Engineering, Bharati vidyapeeth's college of engineering, Kolhapur, India*

[3] *Assistant professor, Department of civil Engineering, Bharati vidyapeeth's college of engineering, Kolhapur, India*

ABSTRACT

This paper presents a review of the various mechanical properties like compressive and tensile strength of steel fibre reinforced concrete. Fibres are used as cracking resistance and strengthening of concrete. According to various research papers it has been found that steel fibre carry considerable strength more than normal concrete. In this paper, some research shows compressive and tensile strength are increase linearly but also some research shows that the compressive and tensile strength increase non-linearly with increasing of steel fibre. In another one research, shows that such mentioned mechanical strength of concrete increases up to a certain volume fraction in fibre and get reduces after increasing the fibre volume fraction in the concrete.

Keywords: *steel fibre, SFRC, aspect ratio, fibre volume fraction, strengths.*

INTRODUCTION

As we know the concrete is a quasi brittle material. So it is obviously strong in compression but weak in tension. To overcome such brittleness there is interruption of conventional reinforcement in the concrete. By considered such mechanism we only counter balance the compression load by concrete and tension load by steel reinforcement. However we cannot overcome the inherent weakness of plain concrete in post cracking stage. It has been recognised that the addition of closely spaced and uniformly dispersed fibres to concrete would act as crack arresters and also would improve its various mechanical properties like compressive, split tensile and flexural strength etc.

REVIEW STUDY

D.B.Mohite and S.B.Shinde[1] presents, the study of compression strength on concrete mix of M70 grade, without steel fibre & with steel fibres. The steel fibres of hooked ended, flat and waved shape having aspect ratio of 50. The fibre volume fraction has been varied from 0.5% to 4% with an interval of 0.5% by weight of cement. Compression test carried on 150mm size cube specimens. Table no. 1 to 3 shows the results of compressive strength of steel fibre reinforced concrete compared with normal concrete for 7 and 28 days curing respectively. But in actual practice 28 days test result are more preferably used rather than 7 days test.

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OPTIMUM PROJECT COST AND DURATION BY USE OF DIFFERENT TECHNIQUE: A REVIEW WITH CASE STUDY

CHOTHE O. K.[1], TIWARE V.S.[2], PATIL A.D.[3]

[1]*Assistant Professor (M.E. Construction Management)*
Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)
[2] *Assistant Professor (M.Tech. Construction Management)*
Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)
[3]*UG student Dept of Civil Engg ,*
Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, (India)

ABSTRACT

As we know that construction industry is on a boom these days. The new innovations of various technologies as well as materials have been considered as the boon for the economic development. The economy of nation depends directly or indirectly upon the infrastructural development being prevailed in the nation as there are many foreign investments being involved in it.

Time and cost are the two prime concerns which are to be considered appropriately while planning of any project to establish it successfully in time. We know that there is time delay in any project due to various factors which effects directly upon the Total Project Cost. Thus to minimize the total project cost by completing the project in minimum duration we have suggested to use the ***"NETWORK COMPRESSION TECHNIQUE"*** *to be assigned over the collective activities considered in any project and obtain an optimum solution.*

In this paper , we have considered ***1 Case Study,*** *one of a bungalowfor which we have collected data regarding to its plan, quantities required, material required, labour required and derived a chart which would direct give us the appropriate cost and time involved in that activity. By use of network compression technique we have crashed the network in order to get the optimum solution.*

Keywords:Crash Cost, Direct- indirect costs, Network Compression Technique, PERT planning, Project cost minimization

I.INTRODUCTION

Buildings are structures which provide shelters for man, his properties and activities. They must be properly planned, designed and constructed inorder to get benefits from the nature. A building project is a task which is undertaken to achieve a goal of completing a certain construction within time and the given budget. But then to the results of expected cost investment cannot be made as certain in each plan as the project varies as per the plan and extent. Thus it becomes important therefore to arrange the tasks within the project sequentially in correct order and optimise it to get the appropriate results. The proper implementation and construction of a

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Analysis of web system by using model-based testing with selenium tool

Mrs. Nayan Mulla[1], Prof. S.B. Takmare[2]

[1,2]Department of Computer Science and Engg.,
Bharati Vidyapeeth's College of Engineering,
Kolhapur, Maharashtra, (India)

ABSTRACT

Modern business applications predominantly rely on web technology, enabling software vendors to efficiently provide them as a service, removing some of the complexity of the traditional release and update process. To increasing web application accuracy and speed user process crawler model.Cutting edge business applications transcendently depend on web innovation, empowering programming sellers to give proficiently them as an administration, uprooting a portion of the multifaceted nature of the customary discharge and overhaul process. While this encourages shorter, more productive and successive discharge cycles, it obliges persistent testing. Having knowledge into application conduct through unequivocal models can to a great extent bolster improvement, testing and support. Model-based testing permits effective test creation taking into account a depiction of the states the application can be in and the moves between these states. As determining conduct models that are sufficiently exact to be executable by a test computerization device is a hard assignment, an option is to concentrate them from running applications.

***Keywords*—Specification mining; dynamic analysis; model-based testing; web system testing**

I. INTRODUCTION

Then again, mining such models is a test, specifically in light of the fact that one needs to know when two states are proportional, and also how to achieve that state. Here introduce ProCrawl (Process Crawler), a device to mine conduct models from web applications that backing multi-client work processes. ProCrawl incrementally takes in a model by creating system runs and watching the application conduct through the client interface. In our assessment on a few true web applications, ProCrawl removed models that briefly depict the actualized work processes and can be specifically utilized for model-based testing [14].

The omnipresence of web programs and progressions in web advances has brought about web applications turning into a prevailing customer for big business programming. Also, the accessibility of system data transfer capacity empowers applications to be worked by the merchant and gave as administrations to clients. Working applications on the seller side evacuates a portion of the intricacy and expenses of the customary programming discharge and

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A STEP TOWARDS SMART MUSEUM USING SMART CAMPUS GUIDE

Mr. Sagar B. Patil[1], Ms. Jayashri Nivrutti Jadhav[2], Ms. Vidya Raghunath Patil[3]

[3](U.G. Student)

[1,2]Department of Computer Science and Engineering,
Bharati Vidyapeeth's College of Engineering, Kolhapur , (India)

ABSTRACT

This paper introduces an Android application (Smart Campus Guide) that recognizes the structure (a building and a statue, e.g. Museum) in which a user is interested and displays useful information about the museum. The new technologies introducing the Internet of Things allow to provide advanced services to the users. This application records user's personal information when the user downloads this application, keeps track of the user while it is run, recognizes the structure when the user takes a picture of it, displays the picture along with a text ,audio and image showing some useful information about the structure, and plays a video which is closely related to the structure. This paper also introduces our design and implementation of the application in detail. The techniques introduced in this paper can be used in mobile are location based services, IoT based services and QR code scanning. The system has been designed to be easily extensible to other IoT technologies and its effectiveness has been evaluated in the museum. In this system we are also implementing online ticket booking and online transactions.

Keywords*: *IoT based, Location-Based, Mobile application, QR code scanning,database.

I.INTRODUCTION

Art and Culture are always played an important role in human beings live. Over the centuries, hundred of museums and art galleries have preserved historical cultural heritage and served as important sources of education and learning. Museums are nowadays point of interest for human beings such as theatres or cinemas. Visits at museums are often considered boring, because it is hard for museums curators to catch the attention of tourists. Interests may vary from person to person. Interests are different from children to adults, students group from single visitor, casual visitor to fond-visitor. Therefore, interactive and personalized museum tours need to be developed. In this perspective, a significant contribution can be given by the next Internet of Things (IoT), which involves the extension of the Internet to small and lowcost "things" that are thought to realize smart environments in order to provide new services to the users.[12]

As the electronic techniques are advance computing machines have been miniaturized and smart phones are developed with powerful processors and large memories. Nowadays, various services become available on

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Design of cutting and conveying units of mini-sugarcane harvester

Nikhil D. Kamalkar[1], Sunil J. Kadam[2], Sachin j. Patil[3], Sandeep A. Padavale[4]

[1]Department of Mechanical engg
,Bharati Vidyapeeth's College of Engineering, Kolhapur,(India)
[2]HOD of Department of Mechanical engg,
Bharati Vidyapeeth's College of Engineering, Kolhapur,(India)
[3]Lecturer in Department of Mechanical engg New Polytechnic, kolhapur(India)
4Lecturer in Department of Mechanical engg New Polytechnic, kolhapur(India)

ABSTRACT

India has largest area under sugarcane and second largest country in the world in sugarcaneproduction, India produced 341.2 million tones in 2013 where world-wide production ofsugarcane was 1877.1 million tones. Land preparation, Plantation, Water and Fertilizer, management, Weed management and harvesting are important cultivation practice forsugarcane production, among which manual sugarcane harvesting is a very labour-intensiveand laborious activity.This paper is dealing with the Calculations followed to design cutting and conveying units of mini-sugarcane harvester and development of laboratory setup for testing of cutting unit

Keywords:,Force required in cutting ,Sugarcane harvesting,Total Power requirement

LINTRODUCTION

Sugarcane is major crop in India. Majority of Indian farmer have small lands i.e. 3 to 4 hectares in average. Sugarcane planting and harvesting are major activities. In India till date these activities are mostly done manually which is time consuming and laborious job. Harvest labourers can easily fatigue due to excessive stress on the joints and muscles and are exposed to harmful pests from plantations, creating safety concerns. The advent of mechanical harvesting systems frees harvest labourers from the drudgery of field Operations. Available sugarcane harvesters are very large in size and of huge cutting capacity. Due to their size it is next to impossible to use these huge harvesters in dense and narrow row spacing crop as well as small land holding farmers can't afford costly such machines so there is a need to design and development of mini-sugarcane harvester which is helpful for both whom having small or big farms. In this article we are focus on calculations of cutting and conveying units as well as Power requirement for self-propelling ofmini-sugarcane harvester.

Sugarcane Lifting Machine (Harvester)

Prashant N. Chakurkar[1], Dattatraya P. Dudhal[2], Kumar B. Mali[3], Pravin S. Tawate[4], Aishwarya Kolekar[5], Prof. Kadam S.J.

[1,2,3,4,5] Students, Mechanical Engineering Department, Prof.Kadam S.J., Mechanical Engineering Department, Bharti Vidyapeeth's College of Engineering, Kolhapur, Maharashtra, India.

ABSTRACT:-

In India the number of population working under agriculture is nearly about 70% in which rural population is 80%. The agriculture is contributing in India's national income very fast. The agriculture share 20.5% in GDP of India[7], hence we can say that agriculture is the backbone of Indian economy. In today's world of competition, there is need for faster rate of production of agricultural product. In India farmers are facing problems of labor shortage and the Indian agriculture sector is still depends on labors[1]. The need for faster production of agricultural products and labor shortage encourages the need of mechanization in agriculture. Sugarcane is majorly taking crop in India, after cutting of sugarcane starts reducing its weight, hence it is necessary to send sugarcane as early as possible to sugar factory. The speed of loading sugarcane in trucks or tractors is a time consuming process with labors[1]. Thus we are making a mechanism which reduces time of loading and provide prevention to accidents which happens during loading bunches of sugarcane. The project aims at design and fabrication of small sugarcane harvesting mechanism which is operated by engine.

Keywords: *Botte neck, sugaryield, harvester,*

LITARETURE REVIEW

A sugarcane harvester is a complex electromechanical product. The development process commonly uses means of computer-aided, resulting in a large number of files and data. To solve the problem of data integration and sharing, and to provide a rapid designing environment for designers, an integrated design platform was developed. The overall framework and each function modules were analyzed, and the working flow was explained; Based on the data formats which support by each function modules, the data transmission model was expatiated; and the application of the software controls in the integrated design platform was discussed. Using Visual Studio.net as a tool, the integrated design platform was developed, and the functions of this software was validated by a designing example of wheel-type sugarcane harvester. The practical application of the platform shows that it can significantly speed up the design process and shorten the development cycle.

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REVIEW OF CORE TECHNOLOGIES INSUGARCANE HARVESTER

Nikhil D. Kamalkar[1], Sunil J.Kadam[2], Sarang N. Deshpande[3]

[1]Department of Mechanical engg,BharatiVidyapeeth's College of Engineering, Kolhapur(India)
[2]HOD of Department of Mechanical Engg,
BharatiVidyapeeth's College of Engineering,Kolhapur (India)
[3]Department of Mechanical EnggSinhgadCollege of Engineering, Pune(India)

ABSTRACT

Sugarcane is major crop in India and Harvesting is a crucial component of sugarcane production . In this article, we critically reviewed sugarcane harvesting technologies currently being used. Review of two harvesting practices was represented and two harvesting modes were introduced including a comparative discussion on their technical challenges ,advantages and limitations.It is followed by a comprehensive review of core technologiesof current sugarcane harvesters like cane base cutting mechanisms. The influence of base cutter kinematic and geometric parameters, such as blade cutting velocity, disc tilt angle, blade number, blade oblique angle, and blade shape on harvesting efficiency and cutting quality, were reviewed.

Keywords:Base cutting mechanisms, green cane Harvesting, Burn cane harvesting, Cutting quality

I.INTRODUCTION

According to World Crop andLivestock Statistics published by the Food and Agriculture Organization (FAO), world sugarcane growing area increased from 6.3 million hectares in 1950 to 25.4 million hectares in 2011 (FAOSTAT, 2013).India has largest area under sugarcane and is the second largest country in the world in sugarcane production, India produced 341.2 million tonnes in 2013 where world-wide production of sugarcane was 1877.1 million tonnes. India has 4.999 million hectare of land under sugarcane cultivation with average sugarcane yield 68.25 tonnes per hectare in 2013(DEPD,India 2015).Before mechanical harvesting systems were introduced, sugarcane had been harvested manually using various types of hand knives. Manual sugarcane harvesting is a very labour-intensive and laborious activity. Harvest laborers can easily fatigue due to excessive stress on the joints and muscles (Clementson and Hansen, 2008) and are exposed to harmful pests from plantations, creating safety concerns (Carvalho, 2012). The advent of mechanical harvesting systems frees harvest labourers from the drudgery of field operations. To harvest one hectare of sugarcane, it requires 3.3-4.2 machine-hour by mechanical harvesting whereas 850- 1000 man-hour by manual harvesting (Yadav et al., 2002).The goal of this study is to comprehensively review the existing literature on harvesting technologies

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DESIGN AND FABRICATION OF SUGARCANE PEELING MACHINE

Prof.S.J.kadam[1] Sarita Sutar[2], Prathamesh Shinde[3], Kiran Shelke[4], Amrapali Patil[5]

[1]Associate Professor BharatiVidyapeeth's College of Engineering,Kolhapur,(India)
[2,3,4,5] Student BharatiVidyapeeth's College of Engineering,Kolhapur,Mechanical Department.

ABSTRACT

India is a land of agriculture. With wide variety of agricultural crops cultivated, the sugarcane is one of the most important production crops in India. This project deals with the concept of sugarcane peeling attachment. The number of sugarcane small scale juice setups need to clean the sugarcane manually. This not only requires time but also is a tiresome task since the sugar cane needs to be cleaned and then fed into the machine for juice extraction. This project deals with development of sugarcane peeling attachment which can help to peel the sugarcane automatically when fed into this attachment. This project aims to reduce the total time required due to manual peeling and reduction in operator fatigue due to the tiresome peeling operation. The proposed machine is expected to peel sugarcane at a faster rate without much fatigue.

Keywords—Cutting Peeling, Agriculture, Sugarcane, fatigue, time etc.

I.INTRODUCTION

India is the land of villages. This being said the major occupation of majority of villages in India is agriculture. Near about 70% people are dependent upon agriculture. Agriculture has been the backbone of the Indian economy and it will continue to remain so for a long time. It has to support almost 17 per cent of world population from 2.3 per cent of world geographical area and 4.2 per cent of world's water resources. The economic reforms, initiated in the country during the early 1990s, have put the economy on a higher growth trajectory. Annual growth rate in GDP has accelerated from below 6 percent during the initial years of reforms to more than 8 percent in recent years. This happened mainly due to rapid growth in non-agriculture sector. The workforce engaged in agriculture between 1980-81 and 2006-07 witnessed a very small decline; from 60.5 percent to 52 percent.

Indian agriculture is characterized by agro-ecological diversities in soil, rainfall, temperature, and cropping system. Besides favorable solar energy, the country receives about 3 trillion m3 of rainwater, 14 major, 44 medium and 55 minor rivers share about 83 per cent of the drainage basin. About 210 billion m3 water is estimated to be available as ground water. Irrigation water is becoming a scarce commodity. Thus proper harvesting and efficient utilization of water is of great importance.

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A REVIEW ON :APPLICATION OF SOLAR ENERGY

Unmesh Tibe[1],Prajin Pednekar[2], Rohit Patil[3],Sourabh Kale[4], Dnyanendra Vishwakarma[5],Prof.A.P.Kadam[6]

[1,2,3,4,5,6]*Department of Mechanical Engineering,*
Bharati Vidyapeeth's College of Engineering,Kolhapur. (India)

ABSTRACT

Thousands of small & medium scale solarapplications are present in India. All are facing certain problems resulting in lack of electricity, money, space,drying time, etc. In order to solve the faced problem, we are going to design the solar dryer which will focuses on reducing the drying time of food products by means of which the drying rate will be improved &this design focuses on space, time, money, energy, and other resources their it most effectively. This design reduces problems and annoyances in the work flow.

I.INTRODUCTION

Since the beginning of time, people have been fascinated by the sun. Ancient civilizations personified the sun, worshipping it as a God or Goddess. Throughout history, farming and agriculture efforts have relied upon the sun's rays to grow crops and sustain populations. Only recently, however, have we developed the ability to harness the sun's awesome power. The resulting technologies have promising implications for the future of renewable energy and sustainability. Below, we've given a brief on solar power, how it works, and what may be in store for the future of solar.

What is Solar Power?

Solar power is a form of energy harnessed from the power and heat of the sun's rays. It is renewable, and therefore a "green" source of energy.

How does it Work?

The most common way of harnessing energy from the sun is through photovoltaic (PV) panels – those large, mirror-like panels you've likely seen on rooftops, handheld solar devices, and even spacecrafts. These panels operate as conductors; taking in the sun's rays, heating up, and creating energy (and electricity).On a larger scale, solar thermal power plants also harness the power of the sun to create energy. These plants utilize the sun's heat to boil water and, in turn, power steam turbines. These plants can supply power to thousands of people. There are other ways we harness solar power. Read more about these various methods utilized today here via National Geographic. or areas that frequently experience cloudy weather, may have difficulty utilizing solar power effectively. Additionally, solar power is an expensive endeavor. The technologies often require a large amount of land, and they can be extremely costly. Scientists are hard at work to find an affordable,

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Automation, Robotics and Mechatronics –An Introduction to Monopropellant Powered Robotics

Mr.Prathamesh M.Oak[1], Mr. A.P.Kadam[2]
[1,2]*Department of Mechanical Engineering,*
Bharati Vidyapeeth's College of Engineering, Kolhapur (India)

ABSTRACT
This paper describes the design and energetic characterization of an actuator designed to provide enhanced system energy and power density for self-powered robots. The proposed actuator is similar to a typical compressible gas fluid-powered actuator, but pressurizes the respective cylinder chambers via a pair of proportional injector valves, which control the flow of a liquid monopropellant through a pair of catalyst packs and into the respective sides of the double-acting cylinder. This paper describes the design of the proportional injection valves and describes the structure of a force controller for the actuator. Finally, an energetic characterization of the actuator shows improvement relative to prior configurations and marked improvement relative to state-of-the-art batteries and motors.

Keywords: - Actuation, robotics, monopropellant power supply, self-powered robot.

I. INTRODUCTION

One of the most significant challenges in the development of an autonomous human-scale robot is the issue of power supply. Perhaps the most likely power supply/actuator candidate system for a position or force actuated human-scale robot is an electrochemical battery and dc motor combination. This type of system, however, would have to carry an inordinate amount of battery weight in order to perform a significant amount of work for a significant period of time [1].

With regard to this figure of merit, batteries and dc motors capable of providing the requisite power for human scale robot offer reasonable conversion efficiency, but provide relatively low power-source energy density and a similarly low actuator/gear head power density. A gasoline-engine-powered hydraulically-actuated human-scale robot would provide a high power-source energy density, but a relatively low conversion efficiency and actuation system power density.

1.1 A MONOPROPELLANT POWERED APPROACH

Monopropellants, originally developed in Germany during World War II, have since been utilized in several applications involving power and propulsion, most notably to power gas turbine and rocket engines for underwater and aerospace vehicles. Modern day applications include torpedo propulsion, reaction control thrusters on a multitude of space vehicles, and auxiliary power turbo pumps for aerospace vehicles. This seminar describes the design of a monopropellant-powered actuation system appropriate for human-scale self-

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Design ,drafting and manufacturing of fixtures for surface finish and boring operation on Gauge Frame

Mr. Amol M. Pandhare[1], Mr. A.P. Kadam[2]

[1,2]*Mechanical Engineering,*

BharatiVidyapeeth's College of Engineering, Kolhapur(India)

ABSTRACT

The target of the mass production is to increase the productivity and increase the accuracy. This is done by reducing the set up cost and manual fatigue. Thus mass production can be achieved by the use of fixtures. For large scale production of different materials a lot of time is wasted in set up of the device and clamping the device. Trial and error method is usually practiced until the axis of the hole is properly aligned with the axis of the drill. In such a situation a lot of time is being wasted to maintain the accuracy. Eventually it increases the operator's fatigue. Thus fixture increases productivity by eliminating individual positioning, marking and frequent checking. We are used fixture for gauge frame so increasing the productivity. Now using conventional lathe machine for operation on gauge frame.These project have to methodology of performing operation in number of order to increase the rate of production by using Fixture. There are manufacture Fixture for three operations such as surface finish , boring and drilling. In that surface finish is the first operation which is performed on first fixture, and boring operation is done on second fixture.

Keywords:- Deign, Fixture, Material, Plate, Shape.

I.INTRODUCTION

1.1 Introduction

A key concernfor a manufacturing company is the ability to design and produce a varietyof high quality products in as short a time as possible. Quick release of a new product into the market place, ahead of any competitors, is a crucial factor in being able to secure a higher percentage of the market place and a higher profit margin. As a result of the consumer desire for variety, batch production of products is now more the norm than mass production, which has resulted in the need for manufacturers to develop flexible, agile manufacturing practices to achieve a rapid turnaround in product development.

Fixture are the device which help in increasing the rate of production of identical parts and simultaneously reducing the human efforts required for producing these parts. It has already been emphasised earlier that a centre lathe is a suitable producing machine tool for producing individual parts of different shape and sizes, but for producing similar articles in great number its use will not be economical .Against this, a capstan or turret lathe can be easily adopted for repetition work on account of the multi tooling arrangement and the use of traverse stops. This increase the rate of production . However the involve use of drilling, milling, planning and grinding machines, etc. If such article are to be produced identical shape and size on mass scale , suitable device

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DESIGN AND DEVELOPMENT OF POMEGRANATE DESEEDING MACHINE

P.B. Patole[1], A. J. Badi [2], R. R. Gotkhindi[3], V. S. Nadkarni[4], R. Shinde[5], S. Kharade[6]

[1]*Professor,Mechanical Engineering , BVCOEK , Kolhapur, (India)*
[2,3,4,5,6] *Student, Mechanical Engineering , BVCOEK , Kolhapur, (India)*

ABSTRACT

Pomegranate has various medicinal properties. The first step in processing the pomegranate is to separate edible part from the outer hard shell. Traditionally a pomegranate is deseeded by hand. It is cut into pieces and arils are separated from the shell. It is labour intensive and consumes lot of time. Alternatively to deseed the pomegranate, it is cut in half and is hit with a spoon on the hard outer shell. This method is mechanized for faster processing. The main objective of this project is to automate the process of deseeding. Two large spoons are used as cantilever beam. These spoons provide the tapping force required to deseed the pomegranate. Spoons are coupled to a shaft which provides the spoons with force and movement. This movement of spoons is carried out for specified time, with time delay, gives hammering act over the fruit. The seeds are collected in a tray below the machine. The machine is turned off after all the arils are removed.

Keywords: Pomegranate,Spoons, Bell and drum mechanism,Innovative design and manufacturing

I. INTRODUCTION

The pomegranate (*Punicagranatum*) originated in the region of modern-day Iran, and has been cultivated since ancient times throughout the Mediterranean region and northern India. Nearly all parts of this fruit can be utilized but the crop is important mainly for its arils (the edible portion of the fruit). The fresh arils can be used as a garnishin fruit cups, compotes, salads and desserts, and as a snack. The fruit peel is well regarded for its astringent properties.After the pomegranate is opened by scoring it with a knife and breaking it open, the seeds are separated from the peel and internal white pulp membranes.Pomegranate juice has long been a popular drink in Europe, the Middle East and is now widely distributed in the United States and Canada. Pomegranate seeds are used as a spice known as *anardana*, most notably in Indian and Pakistani cuisine. Traditionally pomegranate is peeled by hand and it takes lot of time. The main aim of the deseeding machine is to reduce human effort and time with its simple design and ease of use. The machine will consist of parts readily available and easy to maintain [1].

II. LITERATURE REVIEW

The extensive literature review carried out for development of Method and a System for Extracting the Seeds (Arils) from Pomegranate Fruits - from Concept to Commercial Utilization

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AUTOMATIC BAR FEEDING AND CUTTING MACHINE

P. B. Patole[1], N. V. Gawade[2], A. R. Jagadale[3], G. A. Bugade[4], S. R. Bhopale[5] R. R. Devale[6]

[1]*Professor, Mechanical Engineering, BVCOEK, Kolhapur, (India)*
[2,3,4,5,6]*Students, Mechanical Engineering, BVCOEK, Kolhapur, (India)*

ABSTRACT

Machining of a shaft requires the shaft to be cut to appropriate length and then put it on machining. Today it is a time consuming task as the process of cutting the bar to required length happens manually. This is not only time consuming but also erroneous marking may result in rejection of the job. Most of the industries use band saws or hacksaws as current equipment for the purpose of cutting operations. This process is not only slow but is also error some. The project deals with the concept of smart automated multi bar feeder and cutter. In this project a concept is proposed to feed multiple bars at once and cut it accordingly to length input given by input panel. The developed machine is smart mechatronic system which can automatically feed the bar to required length and accordingly cut it. The number of pieces as well as length to be cut can be altered using the control panel.

Keywords: Buttons, Feeding, Bar cutting, Automation, Input panel, Length, Number of pieces etc.

I.INTRODUCTION

Bar cutting is employed almost every industry. This includes small industries such as fabrication to very large industries from hydraulic to aerospace. This involves bars of different engineering materials, pipes of various diameters and shafts. Conventionally bar is measured of required length as per the application manually using tape or any other measuring instrument. Then the bar is mounted over the cutting machine and cut to required length. This is a time consuming procedure and requires effort for loading and unloading the bar on the cutting machine. The common cutting machines used in the industrial application are hacksaws, abrasive cutters, reciprocating hacksaws etc. Thus this is a lengthy procedure and involves the following steps:

1) Measuring the bar to required length and marking it.
2) Loading the bar on the cutting machine.
3) Setting up for the cutting procedure.
4) Cutting the bar to marked length.
5) Unloading the cut bar.

Study of Effect of Process Parameters on Quality of Workpiece in Turning Operation - A Review

[1]Miss. P. T. Jarag, [2]Prof. P. B. Patole, [3]Prof G. J. Pol

[1]Student, M.E(CAD/CAM/CAE), Department of Mechanical Engineering,
Bharati Vidhyapeeth's college of Engineering, Kolhapur, India
[2,3] Professor, Department of Mechanical Engineering,
Bharati Vidhyapeeth's college of Engineering, Kolhapur, India

ABSTRACT

This paper deals with the literature review of various factors that affect the surface roughness during turning operation. Process parameters like speed, depth of cut, feed, nose radius, etc. are studied. This study will help us in understanding, which parameters is significant parameter for Surface Roughness, Material Removal Rate, Feed Force, Tangential Force, Tool Life, etc.

Keywords: Turning, Surface Roughness, Tangential force, Tool life.

I. INTRODUCTION

Machining operations such as turning, milling, drilling and grinding are material removal processes that have been widely used in manufacturing, since the industrial revolution of these processes. Turning is one of the most common machining operations in manufacturing. During a turning operation various parameters like speed, feed, depth of cut, tool material and coolant acts on the surface roughness, tool wear and material removal rate.

The utilization of Inconel has increased significantly over the last decades. Today many applications for Inconel 718 are found in aerospace and automobile as well as naval or underwater goods sector. Some of the parts made from Inconel are bearings, gears, bushing, pulley components, gas tanks, intake manifolds and washers among many others. Inconel 718 material is the most difficult material to machine. Improper selection of machining parameters causes cutting tools to wear and break quickly as well as economical losses such as damaged work piece and rejected surface quality. Machining parameters and tool geometry are the important parameters which affect the machinability properties Nalbant et. al [1].

II. LITERATURE REVIEW

A brief literature review of the research carried out for understanding the issues involved in machining. There are number of cutting parameters have general effect on quality of finished component and on machinability such as

Design of Attenuator for FSAE Car for Improved Impact Performance

Bidkar R.R.[1], **Patole P.B.**[2]

1Student, Department of Mechanical Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra

2Professor, Department of Mechanical Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, Maharashtra

Abstract: *The objective of this paper is focused on detailed analysis of the crash behavior of the Impact attenuator structure that was designed to equip the formula SAE car is presented. The design of the energy absorbing structure has to allow a progressive force evolution, avoiding force peaks (i.e. deceleration peaks). It is very important to design impact attenuators in order to protect the driver from any serious wound, in case of any mishap. The impact attenuator serves dual purpose, it protects the race car structures as well as the driver. It absorbs the crash energy in a controlled manner, thus offering the required protection. So, the goal of crashworthiness is an optimized vehicle structure that can be absorbed the crash energy by a controlled vehicle deformations while maintaining adequate space so that the residual crash energy can be managed by the restraint systems to minimize crash loads transfer to the vehicle occupants. This paper is dealing with the study of different material for impact attenuator using honeycomb structured sandwich panel and its analysis by using Hypermesh and explicit solver LS-DYNA. The results of this paper show that the impact attenuator absorbs the total kinetic energy at the time of collision.*

Keyword: *Crashworthiness, Formula SAE, Honeycomb structures, Impact attenuator, LS-DYNA*

I .Introduction

Automobile industry has progressed through different phases. As a part of this progression since 1950's, Motor sports and Auto racing are the most famous sports in the world. Despite of being a dangerous sport, a lot of people get attracted towards it. Many drivers have lost their lives in the fatal crashes occurring during these sports. Racing cars may roll over the track causing the car to be shattered, which is one of the clichéd images at any car racing accident.

Formula 1 motorsport is a platform for maximum race car driving performance resulting from high-tech developments in the area of lightweight materials and aerodynamic design. In order to ensure the driver's safety in case of high-speed crashes, special impact structures were designed to absorb the race car's kinetic energy and limit the decelerations acting on the human body [1]. The impact attenuator serves dual purpose - it protects the race car structures as well as the driver. It absorbs the crash energy in a controlled manner, thus offering the required protection.Crash tests and numerical simulations carried out for designing the safety elements in a car.

A sandwich construction provides excellent structural efficiency, with high ratio of strength to weight. Other advantages offered by sandwich construction are elimination of welding, superior insulating qualities and

Study of Effect of Process Parameters on Quality of Workpiece in Turning Operation - A Review

[1]Miss. P. T. Jarag, [2]Prof. P. B. Patole, [3]Prof G. J. Pol

[1]Student, M.E(CAD/CAM/CAE), Department of Mechanical Engineering,
Bharati Vidhyapeeth's college of Engineering, Kolhapur, India
[2,3] Professor, Department of Mechanical Engineering,
Bharati Vidhyapeeth's college of Engineering, Kolhapur, India

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This paper deals with the literature review of various factors that affect the surface roughness during turning operation. Process parameters like speed, depth of cut, feed, nose radius, etc. are studied. This study will help us in understanding, which parameters is significant parameter for Surface Roughness, Material Removal Rate, Feed Force, Tangential Force, Tool Life, etc.

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INTRODUCTION and OVERVIEW of ICE CRUSHING MACHINE

Pratiraj R. Mangolikar[1], Prasad R. Mule[2], Amit B. Kamble[3], Rushikesh B. Powar[4], Vishal M. Bhise[5], Prof. Gajendra J. Pol[6]

[1, 2,3,4,5] UG Student, Mechanical Engineering Department
BharatiVidyapeeth's college of Engineering, Kolhapur, (India)
[6] Asst. Prof. Mechanical Engineering Department
BharatiVidyapeeth's college of Engineering, Kolhapur, (India)

ABSTRACT

Today there are many methods used for crushing the ice. These methods are widely used but they have to face many problems and limitations. These problems affects on production rate of crushing of ice. Also these methods are more hazardous and harmful for user. To overcome these problems occurring in present methods we are constructing this machine. This paper presents the design and development of automatic crushing of ice.

Keywords:Automatic, Crushing, Ice, Production Rate

I. INTRODUCTION

With the ever changing weather conditions due to climate change, the already hot and humid climate here in the India is getting even hotter and more humid each year, especially during the summer season. Hence, there has been an ever increasing demand for ice-cold refreshments.

Almost every restaurants, cafes & others eating places, there will be menus of cold drinks. The need of fast serving of cold drinks is essential in this field of business. There are ways to quickly serve cold drink such as refrigeration or by adding ice. Most mobile business use tube ice crushers while most permanent business uses block ice crushers.

Shaved ice belongs to a large family of ice-based desserts made of fine shavings of ice or finely crushed ice topped with sweet condiments or syrups. The dessert is consumed world-wide in various forms and manners. Shaved ice can also be mixed with large quantities of liquid to produce shaved ice drinks. Shaved ices are sometimes confused with "Italian ices". The shaved ices are made from plain ice and are flavored after being shaved at point of sale; whereas the Italian ices, also known as "water ice", have theflavor incorporated into the ice and are usually not flavored after production.

II. LITERATURE REVIEW

The purpose of this chapter is to study the parameters that are involved in designing the ice crusher machine. The scope of the project is based on the objectives that are stated in the first chapter. The relevant subjects are

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DESIGN and FABRICATION of CHAKALI MAKING MACHINE

Shruti K. Magdum[1],Samruddhi A. Ghorpade[2], Abhishek A. Kadbane[3],Mohit M. Jadhav[4], DnyaneshwarS. Kadolkar[5], Prof. Gajendra J. Pol[6]

[1, 2,3,4,5] *UG Student, Mechanical Engineering Department*
BharatiVidyapeeth's college of Engineering, Kolhapur, (India)
[6] *Asst. Prof. Mechanical Engineering Department*
BharatiVidyapeeth's college of Engineering, Kolhapur, (India)

ABSTRACT

This machine is related to food industry. It helps to reduce the labour cost as well as time. It also reduces the work load. We are trying to manufacture a machine which will give high speed with more accurate shape of chakali. This machine has high efficiency also the production rate as compare to manual and conventional process.

Keywords:Food Industry, Chakali, Efficiency

I. INTRODUCTION

Chakali is a savory snack from India. It is a spiral shaped, pretzel like snack with a spiked surface. Chakali is typically made from flours of rice, Bengal gram and black gram. It is several variations ,depending on the type and proportion of flours used murukku, a similar snacks typically made without the Bengal gram flour, is also sometimes called chikki..

Fig: Manual Chakali Making Process

This machine is related to food industry. It helps to reduce the labour cost as well as time. It also reduces the work load. We are trying to manufacture a machine which will give high speed with more accurate shape of chakali. This machine has high efficiency also the production rate as compare to manual and conventional process.We provide you with high quality of Automatic Chakli Making Machine. Our Automatic Chakli Making Machines are used for making Quality Chakli in Uniform Shape and Sizes. Our Automatic Chakli

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A CASE STUDY: KAIZEN AND 5S IMPLEMENTATON IN SMALL SCALE INDUSTRY

Ashish Shaikh[1], Jayesh Karale[2], Abhijeet Jadhav[3], Sahil Shaikh[4], Sadanand Kamble[5], Asst. Prof. Amit Desai[6]

[1,2,3,4,5,6]*Department of Mechanical Engineering,*
BharatiVidyapeeth's College of Engineering,Kolhapur. (India)

ABSTRACT

In Inaia many small & medium scale industries are present . Lack of productivity, greater lead time, processing time, stock out situation are major problems faced by industry. In order to solve the faced problem, we make a pin point on two major methodology are Kaizen and 5S. Kaizen implementation focuses on reducing the lead time of production by means of which the productivity of industry will be improved & 5S implementation is emphasize on most effective use of space, time, money, energy, and other resources their organization..This Technique reduces problems and bottle neck in the work flow. 5S and kaizen techniques in the small scale industry have been analyzed and implemented in a case study of the machine shop. On the basis of the case study, we can brings great changes in the organization.by introducing the 5S and kaizen techniques

LINTRODUCTION

Globalization has brought world closer, especially through a common medium like the economy or job sharing. In this process, most of the developed nations like USA, Japan outsource their workloads especially in manufacturing to low cost countries such as India, China etc. Thus, the people in the developed nations get the benefit of cheap products available at high quality; whereas the people in the low-cost countries get the benefit of more jobs creation in their country. In addition, the customers are very knowledgeable, informative and they demand the highest quality product. They constantly seek the products in the market this has the highest quality. The company which fails to adopt new change would either lose their market share or sell at less profit . Therefore, the company should produce its product at high quality, in minimum cost to the customer and meet costumer demand on time. Kaizen and 5S are those technique use to organize, standardize and continuous improve the work area. This is the best efficient technique and tools of the lean manufacturing for the continuous improvement and development of the organization.

II. LITERATURE REVIEW

Lean manufacturing is a systematic method for waste minimization ("Muda") within a manufacturing system without sacrificing productivity. Lean also considers waste created through unstandardize ("Muri") and waste created through non uniformity in workloads ("Mura").Lean manufacturing makes emphasize on what adds value, by reducing which is not adding value.Waste is defined as any activity that does not add value from the customer's

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DESIGN AND FABRICATION OF BATTERY OPERATED REMOTE CONTROL ARTICULATED FORKLIFT

Kiran S. Jagtap [1], Suraj D. Londhe [2], Santosh M. Khujat [3], Pranal S. Koli [4], Asst.Prof. A.A.Desai [5]

[1,2,3,4] *Students Mechanical, B.V.C.O.E .Kolhapur (India)*
[5] *Asst.Prof. Mechanical, B.V.C.O.E .Kolhapur (India)*

ABSTRACT

Industrial operations require continuous flow of material form one workstation to another in industries. This is done manually in most of the small scale industries due to the lack of high initial investment in powered material handling equipments and also the increased maintenance costs of the same. The proper and timely flow of material not only reduces the transit time across the industrial floor but ultimately reduces the time required for the production resulting in increased profits and increased production. This project deals with the concept of portable electric remote controlled forklift for material handling industries. The proposed project consists of development of portable electric remote controlled forklift which can operate with material handling forklift attachment incorporated to the same. This is not only cost effective but also helps in increased industrial productivity.

Keywords :Base (Chassis), DC motor, Chain drive , Differential gear box ,Remote Controlled System

I.INTRODUCTION

Nature of problem: When you're working with forklifts, *any* problem can be serious trouble. You need to know how to recognize the faults, and assess the risks, both in terms of onsite safety and downtime caused by mechanical or other failures. Regular forklift maintenance reduces the risks enormously, but be aware that problems will occur, sooner or later.

In general the forklift can be defined as a tool capable of lifting hundreds of kilograms of weight. A forklift is a vehicle similar to a small truck that has two metal forks on the front used to lift cargo. The forklift operator drives the forklift forward until the forks push under the cargo, and can then lift the cargo several feet in the air by operating the forks. The forks, also known as blades or tines, are usually made out of steel and can lift up to a few tons.

SEMI AUTOMATIC DISHWASHING MACHINE

Suhas Hukire[1], Anant Thorat[2], Vaibhav Shinde[3], Babasaheb Shetake[4], Rutika Ingavale[5], Prof. Avadhut Jadhav[6]

[1]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*
[2]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*
[3]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*
[4]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*
[5]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*
[6]*Mechanical Department Bharati Vidyapeeth College Of Engineering Kolhapur. India*

ABSTRACT

In this paper the construction and performance of dish washing machine is discussed. Performance of machine is compared with manual and automatic dish washing. The parameter includes time and quantity of water .this machine is used for the dish of diameter20 cm.

Key words: Semiautomatic Dish Washing Machine, Scruber, Dish

I.INTRODUCTION:-

In India, Dish washing activity is manual process involving considerable human efforts or with automatic dish washing machines available in market which are expensive manual dishwashing activity requires more number of people and also it is time consuming process involving human effort cost required for labor work is considerably high.

It is require to improve the dish washing process by automation, "semiautomatic dishwashing machine" should manufacture to reduce human efforts and time with its innovative simple design which is environment friendly.

The model of semi automatic dish washing machine is new concept which in its one washing cycle does all the operations of convention dishwashing i.e spraying soda water, scrubbing with brush and clean water similar to fully automatic dishwashing machine in a market.

Different work has done for development of dishwasher machine is as following:

Dhale A.D " Design and development of semi automatic dish washer" This paper discusses the problem faced in usage of automatic dish washer and solutions on those problem . By separating assembly in 3 parts for washing of dishes, rinsing of dishes and washing of glasses large amount of work can be done in considerably lesser time.

ELECTROMAGNETIC SHEARING MACHINE

Pooja Patil[1], Madhura Patil[2], Prof. Kharat A.R.[3], Prof.Kulkarni M.S.[4]

[1]*Mechanical Department, Bharati Vidyapeeth College of Engineering, Kolhapur, India*
[2]*Mechanical Department, Bharati Vidyapeeth College of Engineering, Kolhapur, India*
[3,4]*Assistant Professor , Bharati Vidyapeeth College of Engineering, Kolhapur, India*

ABSTRACT:

As industrial is coming up across the globe various invention and innovations are being carried by human to fasten various processes associated with manufacturing and align things. One such thing is industrial automation unit. In these automation units various machines those can be adopted easily are also getting developed. Considering the examples of piping industry (manufacture of small pipes) where plastic are PVC pipes are needed to be cut, shearing machines are used. There can be various types of shearing machines depending on parts to be cut process of cutting, requirement of cutting length, etc. now a day's hydraulic shearing machine, pneumatic shearing machine and mechanical type shearing machine are popular type of shearing machines used in above industries. These machines are certainly good at work but as with almost all types of machines there are certainly pros and prones association with them to for the purpose various work is being carried out to solve the dilemma. In this project shearing m/c of a new type i.e. electromagnetic shearing m/c is decided to be fabricated. Along with it has also been decided to develop automation unit for the same so that m/c can easily be adopted in today's automated plants.

Keywords: *automation, electromagnetic shearing machine, electromagnet, medium density fibre, microcontroller.*

I. INTRODUCTION

Mr. Frederick York Wolseley of Eureka Station, Walgett invented the world's first successful shearing machine in 1887. After years of effort Wolseley eventually perfected his power driven mobile machine to Melbourne with Eureka's best shearer and in front of amazed onlookers, showed that the new machine could equal the fastest hand blade shearer and produce a better clip, closer to the animal with fewer nicks. On June 1887, a comprehensive patent was issued for the machine. Shearing machine is mechanical power shears are self-contained machines with a ram that moves a non-rotary blade (knife), at a constant rake, past the edge of a fixed

utomatic Braking System and Fuel Flow Measurement

Sachin Pawar[1] , Nitesh Rawool[2], Ramchandra Sarak[3],

Asst.Prof. M. S. Kulkarni[4]

[1,3] *Student - Department of Mechanical Engineering, B.V.C.O.E. Kolhapur, (I*

[2] *Asst.Prof.- Department of Mechanical Engineering, B.V.C.O.E. Kolhapur, (I*

BSTRACT

e major cause of collision during road accidents is drink and drive situation. If the driver is ... e usually es the control over the vehicle and this result in collision. This is not only dangerous to th... 's life but o may take the life of the person if the car collides with the person.Another reason of vehi... sions and s of life is the inexperienced driver driving the car. The driver is risking his own life as ... he life of ers and can cause serious injuries resulting in death if the car collides.

s whatever the cause of collision of the vehicle there is the need to develop an effici... n which matically detects the obstacle in the path of car at particular distance and then if the dis... osses the icular threshold then it automatically brakes the car which can avoid the collision and ... sible life ries.Thus the project is to control the vehicles speed automatically and avoid the acciden... the life. ther aim tomplevent smart fuel metering system in vehicle

words- Adaptive cruise control, collision, ultrasonic sensor, Hall-Effect sensor, Smart... ring.

NTRODUCTION

d accidents are increasing day by day. With this loss of human lives and injury is also inv... he death due to road car accidents in India is increasing day by day. With more than one death... injuries ry minute, India has the dubious distinction of reporting highest number of road fatalities... orld and government says the prime reason is "drivers' fault". "During the previous year, there wer... 490,000 f accidents, which resulted in the deaths of 125,660 people and injured more than five lakh... n India.

majority of road crashes are caused by human error. Research has shown that driver error... for over o of all fatal and injury crashes on road collisions. The main causes of death and injury... remain eding, drink driving and non-wearing of seat-belts.

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A REVIEW ON LOW COST AUTOMATION USING PNEUMATIC SYSTEM - A CASE STUDY ON USE OF PNEUMATIC GRIPPERS AND PNEUMATIC POWER CLAMPS

Prasad Kale[1], Prof. Swati G. Bhosale[2] Prof.M.S.Kulkarni[3]

UG Student, Bharati Vidyapeeth's College of engineering,
Department of mechanical engineering Kolhapur (India)
Assistant Professor,Bharati Vidyapeeth's College of engineering,
Department of mechanical engineering Kolhapur (India)

ABSTRACT

Globalisation is taking place at very high pace. Industries are getting automated to compete in the market. This paper emphasizes on Low cost automation (LCA) using fluid power i.e. pneumatics. This paper also involves case studies of various industries which got automated or solved their problems using pneumatics as low-cost automation. Pneumatic technologies are compact, easy to handle and also safer to use. This Paper provides the usage of various pneumatic technologies in transfer lines, working stations etc.

Keywords:Computer Numeric Control (CNC), Fluid Power System (FPS), Pneumatics, Pneumatic grippers, Pneumatic clamps, Low cost automation (LCA), Vertical Machining centre (VMC)

I.INTRODUCTION

Automation is a set of technologies that results in operation of machines and systems without significant human intervention and achieves performance superior than manual operation. It means to minimize the human control in industry or any work field to increase productivity, increasing product quality, reducing manufacturing time, reducing cost and increasing safety in working operations[1].

With increasing globalisation, industrialization and increasing demand of certain products in market, Industries are concentrating on more and more automation by different methods to increase productivity and to increase competitiveness in the market. Automation requires huge capital investment to replace conventional machines by CNC's, VMC's etc. Large Scale Industries which do have large scale production and sells can afford huge cost automation. But Medium and Small-Scale Industries which do not have that much production cannot afford such huge cost automation, at such case alternative Low-CostAutomation(LCA) proves to be best solution.

Low Cost Automation (LCA) is the technology that is effective or promises to be helpful for any kind of manufacturing organisation.

1.1 Concept of Low Cost Automation (LCA)

A REVIEW ON LOW COST AUTOMATION USING PNEUMATIC SYSTEM - A CASE STUDY ON USE OF PNEUMATIC GRIPPERS AND PNEUMATIC POWER CLAMPS

Prasad Kale[1], Prof. Swati G. Bhosale[2] Prof.M.S.Kulkarni[3]

UG Student, Bharati Vidyapeeth's College of engineering,

Department of mechanical engineering Kolhapur (India)

Assistant Professor,Bharati Vidyapeeth's College of engineering,

Department of mechanical engineering Kolhapur (India)

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DESIGN AND DEVELOPMENT OF IC ENGINE GO-KART

AkshayB. Khot[1], KunalJ. Mahekar[2], VaibhavJ. Mahekar[3], GurunathS. Patil[4], MohanishM. Patil[5], Prof. S. P. Jarag[6]

BE Student , Department of Mechanical Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, India[1,2,3,4,5].

Assistant Professor, Department of Mechanical Engineering, Bharati Vidyapeeth's College of Engineering, Kolhapur, India[6]

ABSTRACT

Go-kart (a simple racing car) is not a factory made product. It can be made by Mechanical and Automobile engineers for racing competitions. Team BVC dragsters aims at designing and fabricating GO-kart having high fuel economy and maximum driver comfort without compromising on kart performance. The goals of the team also include designing kart for the performance and serviceability. Compliance with the rulebook of INDIAN KARTING CHAMPIONSHIP-2018 is compulsory and governs a significant portion of the objectives. The aspects of ergonomics, safety, ease of manufacture, and reliability are incorporated into the design specifications. Analyses are conducted on all major components to optimize strength and rigidity, improve vehicle performance, and to reduce complexity and manufacturing cost. The design has been modeled in Solid works2015 and the analysis was done in ANSYS 14.5. The developed go-kart was participated in an event IKC2018 Season 2.

Index term:Go-Kart (Racing Car), Roll Cage, Power Train, Steering and Brakes Assembly, Finite Element Analysis.

I.INTRODUCTION

Go-Kart is a racing vehicle having very low ground clearance and can be work on only flat racing circuits. The design process of this single-person go-kart is iterative and based on several engineering processes.

The Go kart has been designed by team BVC dragsters consisting of under-graduate students from the Bharati vidyapeeth's college of Engineering affiliated to the Shivaji University. The Team BVC dragsters began the task of designing by conducting extensive research of each main assembly and components of the kart. The entire kart is designed by keeping in mind that it should be able to withstand the racing conditions without failure. Each component has been considered to be significant, so the kart could be designed as a whole trying to optimize each component while constantly considering how other components would be affected. Taking cost as a major parameter, the entire vehicle is designed to integrate the usage of standard parts reducing manufacturing cost. Combining this design methodology with the standard engineering design process enabled us to achieve a perfect match of aesthetics, performance, and ease of operation.

Design of Human Powered Forklift

Rahul Toraskar[1], Onkar Vangutte[2], Onkar Patil[3]

Department of Mechanical Engineering Bharati Vidyapeeth's College Of Engineering Kolhapur.

Shivaji University, kolhapur.

ABSTRACT

Many industries used forklifts for lifting heavy goods etc. These are applicable for large scale industries and highly automated industries. Since the small scale industries requires repeated movement of load from one station to another the use of these forklift will not be economical, hence we decided to design of forklift which helps small scale industries in transporting the load in easy and cost efficient way.

The idea was to lift and shift the material on shop floor where very low frequency of shifting is required and the object being heavy enough for humans to shift the material. Where the lifting could be done by rope and pulleys provided in approachable place near to foot pedal. And once the load is lifted by the fork the vehicle could be propelled with the operator itself by his pedal effort just like bicycle. The vehicle could be stressed easily without any problem in the job floor as well meant for flat floor.

I. INTRODUCTION

Now a days due to heavy work load environment in the mechanical industrial lines workers are been depressed for carrying a heavy load, where the workers are prone to unhealthy conditions. Due to these factors some load carrying machines were developed in the recent past years.

Working in the mechanical workshops or any other large fabrication unit, where load is to carry (bars, plates, machined jobs etc.) from one unit of the factory to the other unit this device is useful. The **In-plant goods carrier system** is user friendly as designed. The device finds greater use in the industrial lines for transport of the machined jobs, carrying goods internally in the fabrication plant.

The present In-plant goods carrier system is used for the industrial applications which can be moved from one place to other and hence the work such as carrying goods or any other is done within the time schedule and the particular cycle time for that operation is saved , the handling, fixing and the other time wasted in carrying goods can be better utilized to carry out the production.

The device works on the simple mechanism of the motion transmission. It consists of bevel gear mechanism where motion from wheel is transmitted to rear wheels with the help of chain and the device moves further.

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DESIGN OF MULTI SPINDLE CHAMFERING AND TAPPING ATTACHMENT FOR SPECIAL PURPOSE MACHINE OF HYDRAULIC LIFT COVER

J. G.Shinde[1], S.S.Patil[2], S.T.Shinde[3], B.K.Wagh[4], S.S.Salape[5]

[1]*Assistant professor at Mechanical Engg. Department,*
BharatiVidyapeeth'sC.O.E.Kolhapur, (India)
[2,3,4,5]*Student of Mechanical Engineering,*
BharatiVidyapeeth'sC.O.E.Kolhapur, (India)

ABSTRACT

The main aim of mass production is to increase productivity with maximum accuracy. While manufacturing job in mass scale it is important to reduce set up cost and manual fatigue. Most of the manufacturing industries are going for automation to increase the productivity and to overcome shortage of skilled labor. The purpose of this project is to reduce the cycle time by replacing radial drilling machine and by attachment to special purpose machine(SPM) for chamfering and tapping operation. The concept is that the hydraulic lift cover has drilling, chamfering and tapping operations and is performed on two different machines. All the operation performs on same machine having two separate multi spindles. This paper gives the detail information of design and analysis of attachment for special purpose machine and compares the cycle time for conventional method. This machine is containing automation by using hydraulic system. Modeling is done using CATIA software.

Keywords: Tapping Attachment, Form tool, SPM, CATIA Software

I. INTRODUCTION

The present work relates to chamfering and tapping attachment and more particularly to a relatively compact type of device which operates automatically to milling, drilling plus chamfering and tapping operations and design which is very easy to handle and simple in operation by a single person. Special purpose machine is part of multi-tasking machine. This is new approach to increase the productivity of organization. If we compare between ordinary machine and special purpose machine in terms of time, costs, number of steps involved etc. The technology of SPM is decided upon the principles of minimization of cost, improved productivity and improved safety, which posses with high initial investment, higher maintenance cost. The following studies are carried out, time saved by component handling (loading and unloading), increase in productivity both qualitative and quantitative, less human intervention, indirectly reduction in operator fatigue, increase the profit of company. In this paper the SPM for milling, 3 multi drilling plus chamfering (Φ 9.3), tapping operation for these 3 drilled holes. Multiple-spindle machines are used for mass production, a great time saver where many pieces of jobs having many holes are to be drilled and tapped. Multi-spindle head machines are used in mechanical industry in order to increase the productivity of machining systems.

Review Paper on Design and Analysis of Automotive Wheel Rim Using Finite Element Analysis

Jitendra Shinde[1], Sunil Kadam[2], Samuvel Pandit[3]

[1,3] Assistant professor, Department of Mechanical Engineering, BV Engineering College, R.K.Nagar, Kolhapur, India
[2] Associate professor, Head of Department of Mechanical Engineering, BV Engineering College, Kolhapur, India

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Abstract - *This work involves the design and analysis of automotive wheel rim using Ansys software .we have design this wheel rim using Catia and imported into ansys software for further analysis. In this work we are going to carry out the radial load fatigue test on newly designed rim with material and design optimization. Also validate the results experimental results.*

Key Words: **Wheel rim, Design, Analysis, Optimization**

1.INTRODUCTION

A wheel rim is a highly stressed component in an automobile that is subjected to bending and torsional loads. Because of the long life and high stresses, as well as the need for weight reduction, material and manufacturing process selection is important in rim design. There are competitions among materials and manufacturing processes, due to cost performance, and weight. This is a direct result of industry demand for components that are lighter, to increase efficiency, and cheaper to produce, while at the same time maintaining fatigue strength and other functional requirements.

In the fatigue life evaluation of aluminum wheel design, the commonly accepted procedure for passenger car wheel manufacturing is to pass two durability tests, namely the radial fatigue test and cornering fatigue test .Since alloy wheels are designed for variation in style and have more complex shapes than regular steel wheels, it is difficult to assess fatigue life by using analytical methods. The newly designed wheel is tested in laboratory for its life through an accelerated fatigue test. Based on these test results the wheel design is further modified for high strength and less weight. But stress analysis will not yield the optimum wheel design described a probability based model for prediction of fatigue failure of automotive wheel rim. Aluminum alloys, magnesium alloys and structural steel are the three important materials by which rim of wheel is casted and then manufactured. Fatigue life of all of these three components gets varied. It is necessary to know the fatigue life of each of these materials. By conducting design of experiments best parametric design can be done. Also thickness of the rim can be varied for each of these materials. It is stated that by varying the thickness level we can get varied fatigue strength for different materials. It is recommended to use optimum thickness which gives higher strength without compromising the fatigue life of the rim. Weight reduction can cause high level of cost saving.

2. PROBLEM STATEMENT

The failure of rim wheel is due to crack initiated near the hole which further gets propagated throughout the rim which leads to fatigue failure. In order to improve the Fatigue life of rim, material optimization and design optimization is necessary for which best material has to be selected by conducting design of experiments to find parametric design which gives higher fatigue life.

3. OBJECTIVE

1. To design the proposed automotive wheel rim.
2. To carry out stress and fatigue analysis of wheel by using finite element method.
3. To study the effect of various materials on fatigue life of the rim.
4. To optimize thickness of rim to reduce the material consumption and improve life of component by using advanced fatigue strain life approach.
5. To develop the experimental setup for proposed automotive wheel rim.
6. To compare experimental and finite element analysis results.

4. Methodology:

In this dissertation work it is proposed to study the effect of various materials on fatigue life of the automotive wheel rim by using finite element analysis and radial load testing.

Phase I – Literature Survey.
In this phase literature survey of fatigue life analysis, Design optimization etc. will be carried.
Phase II – One of the method to find fatigue life of rim is by conducting radial load test. This Phase includes fatigue analysis of newly designed rim by finite element analysis and by radial Load test.

A) Experimental work:
We are going to carry out fatigue life analysis of rim by radial load technique as follows:

DESIGN ANDFAILURE ANALYSIS OF SUSPENSION BALL JOINT USING FINITE ELEMENT ANALYSIS

Jitendra Shinde

P.G. Student, Department of Mechanical Engineering, BV Engineering College, R. K. Nagar, Kolhapur India

Nikhil Jamadade

P.G. Student, Department of Mechanical Engineering, TKIET, Warnanagar, Kolhapur, India

Abstract

This study describes the analysis and investigation of the causes of the sudden failure of a Mac Pherson strut suspension system ball joint. The axis of the ball joint element showed a complete fracture which occurred midway between the top and bottom section changes of the element. It is seen the ball joint of this car fails suddenly without any sign of consumption and this case is a dangerous as well as disturbing factor for traffic and driver. So there should be something else supports car when the ball-joint fails. This research has a modification of this ball joint for this purpose. The modification has depended on the results obtained from the numerical analysis of the loaded ball-joint in two situations. Measurements of parts of ball joint of Nissan pickup car have been made and these parts have been drawn in two forms (situations) by using CATIA software imported to ANSYS WORKBENCH software where a three- dimensional model was created and maximum load is applied to ball-joint.

Keyword: Ball joint, Suspension system, Fatigue, Contact stress, analysis

Introduction

Ball joints are used on the front end of almost every car, truck and minivan. Ball joint is an important part of car suspension system. Ball joints act as the pivot point between two parts: the suspension and car's tires. Ball joints help support car's weight and, as is the case with some vehicles, ball joints may be used to help set the alignment. The ball joint is one moveable part of a control arm assembly. It is steel bearing stud and socket enclosed in a steel casing. The socket enclosed in steel casing is connected to the control arm. The bearing stud is tapered and threaded so that it fits into a tapered hole in the steering knuckle and the latter connects the tire. Ball joints are a critical part of any car's suspension and steering. They attach the wheel hub, which the wheel and tire are mounted to the rest of the suspension. This connection needs to be able to rotate horizontally for steering and vertically for shock absorption, hence the use of ball joints that can move in all directions. While ball joints last for a long time, they do wear. The polished metal ball rides in a polished metal cage. Space between the two is filled with grease to reduce wear. However, if the grease leaks out of the ball joint or any dirt and impurities get into the grease, the ball joint may become worn or damaged. There is a rubber boot over the joint to help keep dirt out, but that does not mean that there is no way in which dirt can enter. In an automobile, ball joints are spherical bearings that connect the control arms to the steering knuckles. They are used on virtually every automobile made and work similarly to the ball-and-socket design of the human hip joint. A ball joint consists of a bearing stud and socket enclosed in a casing; all these parts are made of steel. The bearing stud is tapered and threaded, and fits into a tapered hole in the steering knuckle. A protective encasing prevents dirt from getting into the joint assembly. Usually, this is a rubber-like boot that allows

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INTELLIGENT MODULAR ROBOTIC VEHICLE FOR DEFENCE AND DISASTER MANAGEMENT

Jadhav Vaibhav B[1], Jadhav Somesh S[2], Kadam Manik H[3], Jadhav Tejasvini S[4], Vibhute Amruta S[5], Didake V T[6]

[1,2,3,4,5]*Student, Mechanical Engineering Department, BVCOE, Kolhapur(India)*
[6]*Assi. Prof. Mechanical Engineering Department, BVCOE, Kolhapur(India)*

ABSTACT

Detection and removal of buried landmines is a serious concern all over the world. As manual method will no longer work and requires large man power in higher risk,area of work is much larger. At natural disasters and gas leak conditions it is difficult for the rescue team to operate at instance. So a smart robotic system must be generated to operate in such conditions. This work deals with development of a smart robotic system which can operate easily as well as can detect landmines, hazardous gases and fire in the way and informing the operator. Also it is capable of surveillance, most of all modular base which makes it versatile for any further applications.

Keywords:land mine, modular,robotic vehicle, surveillance,etc

I. INTRODUCTION

In 21 St Century, use of technology in every field is increased and it must be used as it eases the operation to be carried out. In similar ways defense is a field where new technology is used for surveillance, assisting the soldiers in various field operations like mine detection, disaster management etc.; which results in reduced risk, efforts with minimum human interface.

Use of landmines in battlefield is a threat to enemy. But the buried landmines many times cost the country in loss of lives of their own soldiers as keeping track of the buried landmines is difficult task. Also detecting and removing the landmines by using manual method is going to take a lot of time as there are reportedly around 50 to 100 million landmines buried all over the world.So generation of smart robotic system having a metal detector, an arm to handle the landmines and manipulator to operate the mines with a robust design is need of current era.

Also in populated areas natural disasters and gas leakages in mines a responsive and smart system should be generated. As it becomes difficult for rescue team to operate at that instance and provide help. So a smart robot which can navigate through areas and provide sufficient information is important.

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DESIGN OF IMPELLER FOR OPTIMIZATION

Amrut Gurav[1], Abhishek Patil[2],
Omkar Kumbhar Sattar Pathan[3], Indrajeet Burase[4]

[1]Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India.)
[2]Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India.)
[3]Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India.)
[4]Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India.)
Assistant professor, Bharati Vidyapeeth's College of Engineering,
Kolhapur, Mechanical Department, (India.)

ABSTRACT

This paper presents a simplified, impeller and vane profile design procedure by using 3D model. The intent of this paper is to offer a detailed picture of impeller and vane profile design procedure based on fundamental understanding of published procedures using 3D model. There are limited number of published vane profile design procedures by Val S. Lobanoff, John S. Tuzson, A. J. Stepanoff, and others. There is also a lack of explanation and detailed step by step procedure available for designers to systematically design and develop impeller and vane profile design, so the designers are encouraged to reverse engineer the vane profiles popularly available in the market. In the case of published procedures great problem arises while following them since some of them are contradictory to each other. In this paper while designing the vane profile, the overall dimensions of an existing impeller were not changed. Commercial 3D CAD software is used to create the 3D model. Simplification in vane profile design procedure will encourage the designers to enhance the performance of existing as well as new models of pumps.

Keywords-3D model, vane profile design procedure, published procedures, vane profile, CAD software.

LINTRODUCTION

In recent years lots of efforts are being made by pump manufacturers to simplify the impeller vane profile design procedure with improvement in pump performance. In pump industry efforts have been taken to simplify the vane profile design procedure for centrifugal pumps only, but very few efforts have been taken to simplify the vane profile design procedure for other pumps. There are limited numbers of published vane profile design procedures by Val S. Lobanoff, John S. Tuzson, A. J. Stepanoff, and others. There is lack of explanation as well as detailed step by step procedure available for the designer to systematically design and develop impeller and vane profile. A great problem arises while following these procedures, since some of the procedures are not matching with each other. So the designers have to use their own judgmental skills for designing the vane profile. The simple method of constructing vane profile is to draw a single radius circular arc using the calculated angle β_1, β_2 and radii R_1, R_2 but this may have serious implications in the performance of the pump.

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DESIGN OF CUSTOMIZED HEAT EXCHANGER FOR OPTIMIZATION

Indrajeet Burase[1], Mohit Rajadnya[2], Aniket Takmare[3], Suraj Powar[4], Pranav Chavan[5], Ashish Patil[6]

[1]Asst.Prof. Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India)
[2,3,4,5,6]Bharati Vidyapeeth's College of Engineering, Kolhapur, Mechanical Department, (India)

ABSTRACT

Heat exchangers are equipments used to transfer heat from hot fluid to cold fluid. These can be used as condensers as well as evaporators. The one proposed in the paper will be used as evaporator which is used as chiller in market. These chillers are used in various industries like printing press, food industries etc.. Currently, immersed type heat exchanger is used for the purpose which has issues due to its big size, frequent cleaning requirement. Here, designed heat exchanger is a customized shell and coil type heat exchanger as a replacement of this current system which will reduce overall size of the system which ultimately reduces the production cost. Also required chilling effect is obtained in lesser time.

Keywords: Immersed type Heat exchanger, Kern's method, shell and coil heat exchanger.

I. INTRODUCTION

Heat exchanger is a device which transfers heat from hot fluid to cold fluid. The current type of heat exchanger is immersed type of heat exchanger, in which, heat transfer takes place through natural convection. Heat transfer rate is less due to stagnant water. It requires more space causing wastage of usable area. It needs to be clean daily. We have designed shell and coil type of heat exchanger which transfers heat through forced convection also increases heat transfer rate as compare to immersed type. The proposed type of heat exchanger requires less space. It does not require to be cleaned on daily basis. It reduces running time for same result. Basically, this heat exchanger is said as customized because it is combination of helical coil heat exchanger and shell & tube heat exchanger. Kern's method for design of heat exchanger is used in designing this heat exchanger.