ABSTRACT

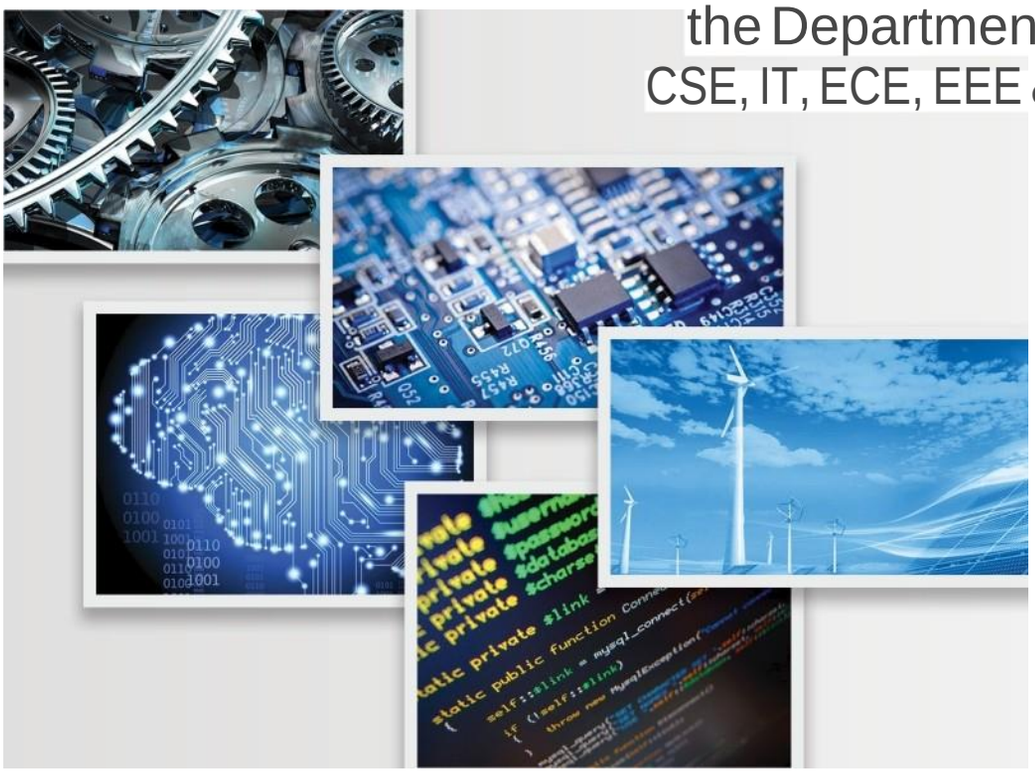
JEPPIAAR INSTITUTE OF TECHNOLOGY

Self Belief | Self Discipline | Self Respect

CIEEMA 2016

National conference on Recent trends in Computer science, Information, Electronics, Electrical, Mechanical Engineering and their Applications

Organized by
the Departments of
CSE, IT, ECE, EEE & ME



03 - 04 March 2016

"Jeppiaar institute of Technology aspires to promote futuristic technical education with the perspective of innovative industrial and social application for the betterment of humanity"

Proceedings of the National Conference on
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Mr. F. Max Savio, EEE, Jeppiaar Institute of Technology

Enquiries regarding this proceeding may be addressed to:

Dr. V. Kannan,
Organizing Secretary
National Conference on
"Recent trends in Computer Science, Information, Electronics, Electrical, Mechanical Engineering and Their Applications" (CIEEMA 2016).

Jeppiaar Institute of Technology,
Jeppiaar Nagar,
Kunnam,
Sriperumbudur,
Chennai 631604
India.

Prepared by
Jeppiaar Institute of Technology,
Jeppiaar Nagar,
Kunnam,
Sriperumbudur,
Chennai 631604
India.
Website: www.jeppiaarinstitute.org

CHANCELLOR'S MESSAGE

I am delighted to welcome all the delegates to the National Conference on **"Recent trends in Computer Science, Information, Electronics, Electrical, Mechanical Engineering and Their Applications" (CIEEMA 2016)**. The scope of this Conference is to share and broaden the knowledge on recent trends in Modern Electronics and its Applications.

I strongly believe that this conference provides inspiring platform for the enthusiastic researchers. The publication of this volume would not have come to fruition without the assistance of referees who worked diligently to lend their constructive support to the cumbersome process of evaluation and selection of papers, which are relevant for this volume. A conference such as this does not happen by itself, but draws upon time, efforts and skills of a wide range of people. I wish to express my appreciation to all the participants who have taken time to join us in the conference.

I am confident that you will enrich your knowledge in the course of this conference. I hope useful deliberations may lead to the joy of learning in this conference!

Col. Dr. JEPPIAAR, M.A, B.L, Ph.D

Chairman

DIRECTOR'S MESSAGE

Welcome to the National Conference on **"Recent trends in Computer Science, Information, Electronics, Electrical, Mechanical Engineering and Their Applications" (CIEEMA 2016).** The purpose of this conference is to discuss, document and indeed to celebrate the growth of emerging technologies. We are quite happy to realize that this conference is a reflection of current trends in the industry and research fields. The authors and speakers have prepared a great collection of high quality contributions; the program committee spent time and effort reviewing the submissions; the members of the organizing committee took on many additional responsibilities. We congratulate all of them who have made this conference a success.

We are very happy to learn that this conference is a fusion of technical expertise and fresh legs of the research and industry. We hope that this conference will be a perfect launching pad for their constructive ideas. We would like to extend our deepest appreciation to all the members for their efforts and support in organizing the conference.

We hope that this association with you will be progressive.

Dr. N. Marie Wilson, B.Tech., M.B.A., Ph.D

Director

PREFACE

On behalf of the organizing committee, we welcome you all to the national conference on **"Recent trends in Computer Science, Information, Electronics, Electrical, Mechanical Engineering and Their Applications" (CIEEMA 2016)**. This issue includes a broad range of papers representing an awareness of the expanding scope and importance of trends in technology and its applications in today's environment. This conference is designed to nurture the core ideas into implementations, in the form of papers, posters and demonstrations supported by tutorials.

Excellent papers were submitted in variety of subject areas. The diversity has its flavor in the theme of the conference. Over the two days of conference, there will be 60 presentations, distributed over different sessions. Preliminary papers were received by December 2014 and reviewed by an external referee process over the next few months. Credit for the quality of the Conference Proceedings goes first and foremost to the authors. I am very thankful that they have chosen **CIEEMA 2016** as a stage for sharpening their technical skill set.

We would like to express our gratitude to the management of Jeppiaar Institute of Technology especially to our Honorable Chairman **Col. Dr.JEPPIAAR,** M.A.,B.L.,Ph.D., Madam Chairman **Remibai Jeppiaar** and our beloved Director **Dr.N. Marie Wilson,** B.Tech., M.B.A., Ph.D for providing us a great opportunity to conduct this national conference. Their contribution and support to this gigantic exercise is in many ways incomparable.

We wish to extend our sincere thanks to all the Session Chairs and Invited Speakers for their dedication and care in conducting this programme. Finally, we would like to thank all the committee members who have made this conference a reality.

March 3rd 2016 **Dr.V.Kannan**

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About **"JEPPIAAR INSTITUTE OF TECHNOLOGY",**

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Jeppiaar Institute of Technology, established in 2011 by the founder and chairman of the institute **Col. Dr. Jeppiaar, M.A., B.L., Ph.D., Dr. N. Marie Wilson, B.Tech., M.B.A., Ph.D.,** the Director of the institute promotes the growth and development with a vision to provide the highest quality of education. A rich heritage of academic excellence is given by the college with its strong infrastructure and unrelenting endeavors in imparting technical education to budding engineers. The institute offers undergraduate programmes in Computer Science and Engineering, Information Technology, Electronics and Communication Engineering, Electrical and Electronics Engineering and Mechanical Engineering. More than Four hundred computers are installed in these laboratories with latest software and modern equipment with the main server having 12 Terabyte storage capacity and RAM of 80GB.The class rooms have been thoughtfully designed to provide a stimulating learning experience. The class rooms are CAI (computer Aided Instruction) enabled with wall mount Multimedia LCD Projector to facilitate teachers to make full use of the modern teaching aids. Our central library has ample collection of text books and reference books offering vast sources of information. The automation facility in the digital library helps our students to consult the catalogs, independent data and abstracts by means of computers.

In terms of the technology, we literally built the advanced India's First "Thin Client" Laboratory for the benefit of the students and research scholars in which the virtual desktop provides an alternative to a traditional desktop infrastructure to a more virtualized environment. Using them puts highly reliable robust hardware in the hands of students. The Learning Management System 'Web Portal' integrated with the Virtual Communities Platform enables collaborative and interactive learning. Our institute encourages the students to actively participate in Workshops, Conferences, Symposiums and Seminars. We have got life time institutional memberships from the professional bodies such as IETE, ISTE, IEEE, CSI, ASME etc. to provide an interactive platform for students to develop professional and technical abilities. Sports and other extra-curricular activities are given importance for the holistic development of the students. National Cadet Corps (NCC), and Youth Red Cross (YRC) are also an integral part of our extra-curricular activities.

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TABLE OF CONTENTS

NANOTECHNOLOGY IN SPACE

[1]*Fazleen.A* [2]*Leobel Freiderz.RI,* [3]*R.Careline Claude*
[1,2,]*UG Scholar,* [3]*Assistant Professor,*
Department of ECE, Jeppiaar Institute Of Technology, Kunnam, Sriperumpudur
fetchu23@gmail.com

Nanotechnology is the engineering of functional systems at the molecular scale. Nanotechnology are allowing us to shrink everyday objects to previously- unimaginably small dimensions. When objects and distances fall in the range of 1 to 100 nanometers (a nanometer is a billionth of a meter). Nanotechnology has become a widespread field of research throughout the world in which nano robotics is one major field of research. The size-related challenge is the ability to measure, manipulate and assemble matter with a scale of 1-10nm. The application discussed in this paper is nanotechnology in space technology. Nanotechnology makes a major contribution to human space flight. Space radiation is qualitatively different from the radiations that humans encounter on the earth's surface. Once the astronauts leave the protective earth's protective magnetic field and atmosphere, they become exposed to ionizing radiation in the form of charged atomic particles traveling at close to the speed of light. Highly charged, high – energetic HZA particles pose risk to humans in space. A long-term exposure to this radiation may lead to DNA damage and cancer. To protect their human cargo, space crafts will need special shields incorporating materials consisting of lighter elements such as hydrogen, Boron and Lithium. However, extra shielding comes at a significant price Nanotubes, Boron Nanotubes have some better properties such as high chemical stability and high resistance to oxidation at high temperatures. Scientists have found that the isotropically enriched Boron Nitride Nanotubes have excellent radiation shieldingproperty thus opening new doors in the areas of space science. The isotrope boron-10 is an excellent neutron.

WIRELESS SENSOR NETWORK (WSN TO IMPROVE ROAD MONITORING)

[1]*R.AnanthiReeta,* [2]*S. Kripa,* [3]*K.Monisha,* [4]*Mahesh J*
[1,2,3]*UG Scholar,* [4]*Assistant Professor,*
Department of ECE, Jeppiaar institute of technology, Kunnam, Sriperumpudur
ananthiaishwarya@gmail.com

Wireless sensor network is used to improve road monitoring by several sensors along a road in order to detect traffic flows, speed, and the continued occupation of the road.Each WSN cluster offers a monitoring system based on videotapes and, at the same time, produces information which can be processed to provide a clear interpretation of the road situation regardless of weather conditions. Therefore, it is necessary to integrate video monitoring information with parameters measured by other sensors, e.g. magnetometer or power sensors, for traffic detection. A WSN can monitor and evaluate roads automatically and continuously, with little human effort. A WSN can work during night even with poor weather conditions, when there is fog or presence of dust

(pollution, volcanic ash) in the air WSNs are low cost and low power. A WSN allows the integration of video monitoring with possible to obtain complete and integrated information (video-images and traffic volumes information). WSNs allow dynamic changes to network topology based on real needs and reports coming from sensors located along the road. When needed, the number of cameras which control a specific area may increase to produce more detailed information. However, it may increase network workload that will be properly managed by the proposed approach.

LABVIEW AND WIRELESS BASED REAL TIME SENSOR MONITORING

[1]Karan Siyal, [2]Ratnaprabha Kasde
School Of Electronics Engineering, VIT University Chennai, Tamil Nadu, India
karansiyal03@gmail.com

These days the greater part of the humidity, pollution, temperature, pressure frameworks are broadly utilized in commercial enterprises. For observing these parameters, one needs to keep an eye on state of the sensors used. Sensors state observance is important particularly in alarm or observation in mining field. The main aim of this project is to keep track on sensors using LabVIEW and wireless module. Wireless module which have used is zigbee module for transmission and receiving purpose. The proposed system is to plan a proficient framework to peruse and screen sensor's information and if any of these variables surpasses the business principles, instantly these data will show in LabVIEW. LabVIEW is a graphical user interface to the user. Results acquired demonstrate that LabVIEW project canscreen the sensors state continuously and precisely.

EMBEDDED SYSTEM BASED AIR POLLUTION MONITORING SYSTEM

Ratnaprabha Kasde[1],Karan Siyal.[2]
School of Electronics Engineering, VIT Chennai, Chennai, Tamilnadu, India
Ratnaprabha.kasde2014@vit.ac.in

Enhancement of technologies are boon to us, in today’s scenario Air pollution monitoring system plays a vital role. It has a direct impact on human life. Air pollution is a major cause of concern as it causes various diseases and disorders such as cancer, lupus, allergic reaction, asthma etc. and also adverse imbalance in atmosphere, Air pollution can be controlled and prevented from its effects. Here we proposed an easy and handy system which is based on sensors and has been designed,performed and examined using GSM technology. This system consists of a Mobile Data acquisition unit and internet server.Transmitter part has DAQ unit consists of arduino, carbon mono oxide air pollution sensor and a Global Positioning System Module (GPS), Thattransmits pollutant level and pack them into frames and these frames are uploaded to GSM and transmission of data to pollution server is done by using mobile network.User can make wise decisions after

getting air pollutant levels for different areas.

RELATION BETWEEN TRANSIENT VIBRATIONS AND RESONANCE

Mir Aamir Abbas
friendabbas@gmail.com

The concept of resonance is well established. However, the computational modeling of the phenomenon makes vibration analysts prone to misconceptions. Relying blindly on the abstract mathematics results in oversimplification of the subject when the transient vibrations are ignored and the steady state vibrations alone are considered. The some common misconceptions among the vibration analysts are attempted to be expelled. Also the mathematical reason behind the inapplicability of the steady state formula at resonance is explained by a computational study considering the implications of transient vibrations on resonance.

SLPSO TASK SCHEDULING

[1]Chandraleka M, [2]Priyanka. R, [3]Priyanka. T
Department of CSE, Jeppiaar Institute of Technology
13cschandralekam@jeppiaarinstitute.org

Public clouds provide Infrastructure as a Service (IaaS) to users who do own sufficient computer resources. IaaS achieves the economy of scale by multiplexing and hence faces the challenge of scheduling tasks to meet the peak demand while preserving Quality-of-Service (QoS). Previous studies proposed cloud federation to resolve this problem and is found that it is not economic. But the later for now is hardly feasible in practice. In this paper we propose a resource allocation framework in which an IaaS provider can outsource its tasks to External Clouds (ECs) when its own resources are not sufficient to meet the demand. This architecture does not require any formal inter-cloud agreement that is necessary for the cloud federation. The key issue is how to allocate users' task to maximize the profit of IaaS provider while guaranteeing QoS. This problem is formulated as an integer programming (IP) model, and solved by self-adaptive learning particle swarm optimization (SLPSO)-based scheduling approach. In SLPSO, four updating strategies are used to adaptively update the velocity of each particle to ensure its diversity and robustness.

A SECURED SYSTEM DESIGN FOR REAL-TIME HEALTH MONITORING OF POST-HEMOTHERAPEUTICEFFECTS BASED ON IOT

Esther Florence P[1], Merlin Joy A D G[2], and Sasivardhini S[3], M Benisha[4]
[1, 2, 3] Student, [4]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology, Sriperumpudur.
12ecpestherflorence@jeppiaarinstitute.org

In the current healthcare scenario, it is evident that post- chemotherapy causes side effects like anemia, leukopenia, thrombocytopenia; which require a lot of attention to be paid to, from the side of health professionals. Our project aims at solving this problem by the provision of constant observation of the

various physiological parameters of these individuals vulnerable to health issues using various wearable clinical sensors. We propose to implement a server based control unit which directly sends the collected information, without the need for an intermediate device to transmit the data, to a mobile app through Wi-Fi. The CC3200 ARM controller is used as a gateway to communicate to the various sensors such as Body Temperature sensor, Blood pressure sensor, SPO2 sensor. The health professionals are notified in case of an emergency, which then compels immediate supportive action to culminate those undesirable effects.

VIRTUAL WALL TRAFFIC SYSTEM WITH VIOLATION WARNINGS

R.Barkhavi[1], R.Kalpana[2] ,P.Priya Dharshini[3],Dr.S.Arul[4]
[1,2,3] Student, [4]Assistant professor
Department of Electronics and Communication Engineering, Jeppiaar Institute of Technology, Chennai.
barkhavi53@gmail.com

The use of Embedded Technology has proved to be very beneficial in monitoring systems fortraffic or infrastructure. In this project we are focusing on the problem in traffic signal that people are facing in their day to day life and will help the pedestrian to cross the road safely. Here, we concentrate on the two major issues in traffic signal. The first one is the visibility of traffic light and the next one is violating traffic rules. Sometimes heavy vehicles like truck or obstacle can block the view of red light because of this, small vehicles cannot see the traffic light. So a virtual wall like structure will replace the red light traffic signal. Fog or other visual issues in winter season, can be overcome by the application of this project. And also vehicles which break the traffic rules during stop signal is observed using OCR (Optical Character Reorganization) and warning is given to that person through message alert for first two times. If the same vehicle is captured and analyzed for third time then a complaint is made by deducting the fine amount from their bank account. The whole system is presented combining hardware, software and Functional modules. This system has the potential to achieve comprehensive monitoring functions for both traffic and infrastructure based on the embedded sensing network. This system is still under study, and needs to be consummated with various loading and environmental conditions taken into consideration. Once finished, this system will be valuable for the Intelligent Transportation System in the future.

AUTOMATIC AMBULANCE RESCUE SYSTEM USING DIJKSTRA'S ALGORITHM

Lavanya.J[1] Monika.E[2]Divya varshini.K[3] G.Merline[4]
[1,2,3]Students, [4]Assistant Professor,
Department of Electronic and Communication Engineering Jeppiaar Institute of Technology

Dijkstra's Algorithm is used to find the shortest path from one node to another node in a graph. It is a graph search algorithm that solves the single-source shortest path problem for a graph with non- negative edge path costs, producing a shortest path tree. AARS (Automatic ambulance rescue system) is used to provide a smooth flow for the ambulance to reach the hospitals in time. It

controls the traffic light according to the ambulance location and thus reaching the hospital safely.

SURVEY ON FUSION OF IMAGE USING DISCRETE WAVELET TRANSFORM

[1]S.Ancy, [2]N.Sivaraj, [3]P. Aswin, [4]G.Shanmuga Raja
[1]Assistant Professor, [2,3,4] UG Student
Department of Information Technology, Jeppiaar Institute of Technology,Chennai,India.
ancys@jeppiaarinstitute.org

This paper proposes to enhances the quality of image after fusion process using Discrete Wavelet Transform(DWT). It is used to reduce the problems like blocking, ringing artifacts. Finally, fused two different frequency subbands are inverse transformed to reconstruct fused image.

HUNT DOWN SCHEME BASED ON LOCALITY AMENDMENTS

[1]R Dayana, [2]T.Sandhya, [3]M.Sanjula, [4]A.Preety
[1]Assistant Professor, [2,3,4] UG Student
Department of CSE, Jeppiaar Institute Of Technology, Chennai
sandhya1991k@gmail.com,

Location based Services offer many advantages tothe mobile users to retrieve the information about theircurrent location and process that data to get more usefulinformation near to their location. Now days in this fast life where everyone in is hurry to reach their destination. Waiting for bus is a hectic and even many of us are unaware of the bus timing, hence to overcome this problem we have come up with system “Huntdown Scheme Based On Locality Amendments” which aims to build an Android application that automates all the aspects related to the college bus arrival. At specific pickup point the application sends current location of bus to the server, then server sends SMS to students who are supposed to board at the next pickup point. The complete scenario requires everything to be done manually, & there is no confusion such that bus can arrive early or late since when it leaves from one stop, student waiting at another stop can easily receive a message/SMS. Most of the applications developed so far use a handheld GPS receiver device for tracking the location, but we have reduced the cost of device by using mobile phone which has an inbuilt GPS receiver.

STRETCH OPTIMIZATION OF WIRELESS SENSOR NETWORKS USING PPSS ALGORITHM

P.S.Mariesh[1], P.Surendarnath[2], J.Jai Kumar[3]
[1,2,3] UG Student
Department of CSE, Jeppiaar Institute Of Technology, Chennai
marishps@gmail.com

In the development of various large-scale sensor systems, a particularly challenging problem is how to dynamically organize the sensors into a wireless communication network and route sensed information from the field sensors to a target system. The prime motivation of our work is to balance the inherent trade-off between the resource consumption and the accuracy of the target

tracking in wireless sensor networks. Toward this objective, the study goes through a new energy-efficient dynamic optimization-based sleep scheduling and target prediction technique for large-scale sensor networks. We present a probability- based prediction and optimization-based sleep scheduling protocol (PPSS) to improve energy efficiency of proactive wake up. A cluster-based scheme is exploited for optimization-based sleep scheduling. At every sampling instant, only one cluster of sensors that located in the proximity of the target is activated, whereas the other sensors are inactive. To activate the most appropriate cluster, we propose a non myopic rule, which is based on not only the target state prediction but also its future tendency. Finally, the effectiveness of the proposed approach is evaluated and compared with the state-of-the-art protocols in terms of tracking accuracy, inter node communication, and computation complexity.

DELAY ANALYSIS IN SENSOR NETWORKS

Marie Claude.N[1], Ramesh K[2], Kannan V[3]
[1,2] Department of Electronics and Communication Engineering [1] St.Peter's University, Chennai,.[3]Jeppiaar Institute of Technology, Chennai , India
nishusishu@gmail.com

Network systems are used to of carrying real-timetraffic. This field has drawn enormous attention from currentresearchers because of its flexibility and robustness. However,designing efficient SNS over Mobile Ad Hoc Networks(MANET) is still challenging topic because of its less implement a control mechanism over a wireless network that is capable predictable aspects, such as inconsistent delay, packet drop probability, and dynamic topology. This paper presents design guidelines of SNS over MANET using the network Simulator version 2, NS2 software. It investigates the impact of delay and packet drop.

A SURVEY ON OBSTACLE DETECTION AND AVOIDANCE TO AID DRIVERS

Ms.Sonia Jenifer Rayen[1], P.Deepa[2], S.Dhanalakshmi[3], A.Jenifer[4], J.Suryaprabha[5]
[1]Assistant Professor, [2,3,4,5]UG Student Jeppiaar Institute of Technology, Sriperumbudur,Chennai - 631 604.

The travelling on roads has become a challenging task these days mainly because of the presence of obstacles. The obstacles such as potholes and humps are created due to the movement of heavy vehicles and improper maintenance of roads. This paper provides a survey on various methods of obstacle detection and to aid drivers by alerting them. Most of these methods are based on obstacle detection through sensors and maintaining these details for proper maintenance of roads.

EFFICIENT IRIS SEGMENTATION AND RECOGNITION USING SVM CLASSIFIER

*L Charathraaj[*1] E.Karthikeyan[*2] S.Karthikeyan[*3] Tamilselvi *[4]*
[1,2,3]Student, [4]Assistant professor,
Department of ECE, Jeppiaar Institute of Technology, Sriperumbudur

Iris segmentation plays a very vital role for iris recognition. In the meantime,we proposed this iris recognition processed for bio-metric authentication application to decompose the features using SVD (singular value decomposition). We proposed in this paper, recognize iris using GLCM (Gray Level Co-occurrence Matrix) features and classifying through SOFTSVM (Support Vector Machine) to classify a pattern authenticated or not.

EFFICIENT P2P FILE SHARING IN MOBILE AD- HOC NETWORK THROUGH REPLICATION

S.Muthukumaran[1], V. Arulratnaugave[2], K. Brindha[3], R.Rajakiruthika[4]
[1]Assistant Professor, [2,3,4]UG Scholar
Department of computer science Engineering, Jeppiaar Institute of Technology, Sripumbudur.
smuthukumaran@jeppiaarinstitute.org

In Mobile Ad-Hoc network (MANETs) file sharing plays an important role in recent years. The file querying efficiency affected due to many different properties such as limitation in resource, communication range and node mobility. An instinctive method to ease the problem is only replication in network. Many researches are to be done in Mobile Ad-Hoc network but nothing is focused in querying delay. Precisely, current file replication protocol has two limitations. In order to minimize the querying delay they want a rule to allocate limited number of resources to different files. For replicas, they consider only the storage but, disregard the important role of file availability is that file holder's efficiency. In this paper we introduced a new concept by considering both the storage and meeting frequency of node. The rule we used is optimum file replication rule in order to minimize the querying delay while file sharing. We additionally included that the priority competition and split file replication protocol to minimize the querying delay at lower cost in Mobile Ad-Hoc network (MANETs) to overcome the limitations in current protocol.

MONITORING IN RAILWAY TRACK CRACK AND OBSTACLES USING SMART SENSORS

Kavin S[1], Jeeva D[2], Ragesh Kumar A[3], Kavithapriya C J[4]
[1,2,3]Student, Dept. of Information Technology, Jeppiaar Institute of Technology, Chennai.
[4]Assistant Professor, Dept. of Information Technology, Jeppiaar Institute of Technology, Chennai

We propose a method that uses wireless sensors to identify cracks and obstacles in tracks with exact location of fault. It requires less time and provides accurate result. GPS module and GSM used to track the location and Ultrasonic sensor detects the obstacles on the track in which is controlled by a microcontroller. MEMS sensor mounted on the vehicle front end will inspect the track along the path.

FAULT PROTECTION IN HVDC GRID USING VOLTAGE SOURCE CONVERTER

K. Jayavelu[1], C.Rajeshkumar[2]
Assistance Professor[1], Associate Professor[2]
Jeppiaar Institute of Technology Sriperumbudur,Chennai, India
kjayavelu@jeppiaarinstitute.org

Conventional Voltage Source Converters (VSC) cannot interrupt DC fault currents and DC circuit breakers are not yet commercially available for HVDC power ratings. Thus, the protection of VSC-HVDC systems is still an obstacle for the development of this technology. The features of VSC-HVDC systems make them suitable for implementing HVDC grids. Nevertheless, HVDC grids are more complex than point-to-point links. Accordingly, the fault protection of these HVDC grids is a bigger challenge due to the specific requirements of DC grids. Nowadays there is no real HVDC grid operating, but it is expected that in the near future HVDC grids will be widespread, reinforcing the predominant AC systems. In this paper, the protection required by HVDC grids is thoroughly analyzed.

SECURED AND EFFICIENT POLICY UPDATE IN CLOUD FOR BIG DATA ACCESS CONTOL

S.S.Elamaran[1], M.Palani[2], U.Vignesh[3], R Dayana[4]
UG Scholar[1,2,3], Assistant Professor[4]
Department of Computer Science and Engineering, Jeppiaar Institute of technology, Sriperumbudhur.
elass444@gmail.com

Attribute-BasedEncryption (ABE) is a promising technique to ensure the end-to- end security of big data in the cloud. However, the policy updating has always been a challenging issue when ABE is used to construct access control schemes. A trivial implementation is to let data owners retrieve the data and re-encrypt it under the new access policy, and then send it back to the cloud. This method, however, incurs a high communication overhead and heavy computation burden on data owners. In this paper, we propose a novel scheme that enabling efficient access control with dynamic policy updating for big data in the cloud. We focus on developing an outsourced policy updating method for ABE systems. Our method can avoid the transmission of encrypted data and minimize the computation work of data owners, by making use of the previously encrypted data with old access policies. Moreover, we also propose policy updating algorithms for different types of access policies. Finally, we propose an efficient and secure method that allows data owner to check whether the cloud server has updated the cipher texts correctly. The analysis shows that our policy updating outsourcing scheme is correct, complete, secure and efficient.

ARTIFICE APPROPRIATION FOR CLUSTERED NETWORK MIMO OFDMA

SYSTEMS

Dr.C.Rajeshkumar[1] & K. Jayavelu[2], Associate Professor[1], Assistance Professor[2]
Jeppiaar Institute of Technology[1,2] Sriperumbudur, Chennai, India
crajeshkumar@jeppiaarinstitute.org[1], kjayavelu@jeppiaarinstitute.org[2]

In this article, we address the Artifice Appropriation problem for the downlink of a large network multiple input multiple output orthogonal frequency division multiplexing system with 3-sector base stations. The system is statically divided into a number of disjoint clusters of sectors. A two-step Artifice Appropriation scheme is proposed involving the inter- cluster and the intra-cluster levels. As a first step or inter-cluster level, two cooperative frequency reuse approaches are designed to mitigate the inter-cluster interference. A user partition method is proposed to divide the users of each cluster into cluster-edge and cluster-center users. To balance the cell- edge and the cell-average performance, a fairness jug function is introduced to determine the frequency partition of the cooperative frequency reuse approaches. Then, as a second step or intra-cluster level, a utility-based joint scheduling and power allocation algorithm is proposed for each cluster, to maximize the sum utility of all users in the cluster under per-sector power constraints. Zero-forcing joint transmission is used across multiple sectors within the same cluster. Simulation results show that the proposed scheme can efficiently reduce the inter-cluster interference and provide considerable performance improvement in terms of both the cell-edge and cell-average user data rate. The proposed two-step Artifice Appropriation scheme can be implemented independently in each cluster without inter-cluster information exchange, which is an attractive property for practical systems, since it reduces both the network signaling overhead and the computational complexity.

A DEPLOYMENT OF ARCHITECTURE OF BIG DATA IN REAL-TIME FOR IMPLEMENTATION OF REMOTE SENSING APPLICATION

[1]Nandhakumar M, [2]Sibichakravarthy M, [3]Sabibullah S,
UG Scholar[1,2,3,] Information Technology,
Jeppiaar Institute Of Technology, Chennai, India.

In recent period, there is immense deal merged to real-time wireless sensing Big Data than it appear at first & taking out the important data in an well-organized way and guides a structure in the direction of a main computational faces, such as to analyse, collective, and store, where information are slightly collected. Keeping in sight the on top of declared factors, there is a need for scheming system architecture that greetings both real-time, as well as offline data processing. The proposed architecture for remote sensing satellite application comprises three main units, such as 1) remote sensing Big Data acquisition unit (RSDU); 2) data processing unit (DPU); 3) Data analysis decision unit (DADU).The proposed architecture has the ability of separating, load

balancing, & parallel processing of simply useful information. Finally we get analysed data from the architecture which is proposed.

A STUDY ON WEB NAVIGATION IMPROVIZATION

S. Ancy[1], V. Subhashini[2], R. Pooja Karpagam[3], S. Sujeethra[4], L. Jayachitra[5]
Department of Information Technology, Jeppiaar Institute of Technology, India
ancys@jeppiaarinstitute.org, subhashinivelusamy@gmail.com,
poojarajan1895@gmail.comsujeethra94@gmail.com, jayachitraloganathan@gmail.com

We present a new method called personalized recommendation system, which records each user's sessions and retrieves the data as per the user's interest. The semantic reasoning capabilities improves the quality of web navigation and overcomes the limitations of the existing system. It improves the accuracy, computational time and the effort of the user's task. Finally the system will order the data by top k-ranking algorithm.

SURVEY ON DETECTION OF CANCER CELLS IN MAMMOGRAM USING REGION BASED MINING

Ms. Sonia Jenifer Rayen[1], C.Ishwariya[2], A.Jayseeli[3], S.Lakshmipriya[4]
[1] Assistant Professor, [2.3.4] UG Student
Jeppiaar Institute of Technology, Sriperumbudur, Chennai.

Cancer has become a common disease which has spread all over the world at a large extent, women community suffer from breast cancer. Mammogram can be used to detect breast cancer, which when analyzed can be used to cure it at an earlier stage. The medical image contains vast amount of information and requires an early detection and diagnosis of abnormalities. This research deals with the effective and efficient classification of mammogram using feature extraction. In this approach, we proposed to use the Discrete Wavelet Transform (DWT) by deriving sub-bands images and the classification is done by the algorithm ID3.This system is mainly used for classification of the normal and abnormal cases. Comparative evaluation of experimental approaches has been done to calculate our proposed method.

ENEGRY AWARE SCHEDULING OF MAP REDUCE JOBS FOR BIG DATA APPLICATIONS

G.K.Srivatsan[1],A.Asadullah[2],T.Ganesh[3], K.Kathiravan[4]
Department Of Information Technology, Jeppiaar Institute Of Technology, India.
srivatsan.g.k@gmail.com

This proposed method is used to optimize the mining results and evaluate Map Reduce using a one-step algorithm and three iterative algorithms with diverse computation characteristics for efficient mining. Naive-Bayes Algorithm is used to find the search from the root cause and it does a detailed study and produces an accurate result. Incremental processing is a promising approach

for refreshing mining results. It utilizes previously saved states to avoid the expense of re-computation from scratch. In this paper, we propose Energy Map Reduce Scheduling Algorithm, a novel incremental processing extension to Map Reduce, the most widely used framework for mining big data. Map reduce is a programming model for processing and generating large amount of data in parallel time. In this paper, EMRSA is algorithm provide more energy and less maps. Priority based scheduling is a task will allocate the schedules based on necessary and utilization of the Jobs. For reducing the maps, it will reduce the system work so easily energy has improve. Final results show the experimental comparison of the different algorithms involved in the paper.

AN EFFICIENT HYBRID APPROACH ESTIMATION FOR FACE DETECTION SYSTEM USING FEATURE BASED TECHNIQUE

R.R.Janani[1],E.Prema[2], M.Tamilselvi[3]
[1,2] Student, [3]Assistant Professor
Department of ECE, Jeppiaar Institute of Techonolgy, Sriperumbudur

In proposed method, face detection using viola joans algorithm and Feature Extraction is done using gradient boost algorithm and correlation matching detection. Support vector machines (SVMs, also support vector networks) are supervised learning models with associated learning algorithms that analyze data and recognize patterns, used for classification.

DESIGN OF SAFETY ENHANCEMENT WITH EMBEDDED SYSTEM FOR DISABLED PEOPLE

Krithika L, P.Deepika
12eclkrithika@jeppiaarinstitute.org

The design and development of a new integrated device for measuring heart rate, blood pressure and temperature of the disabled person can be monitored frequently without any assistants. This paper also presents an approach to fall detection with accelerometers that exploits posture recognition to identify postures that may be the result of a fall. A security threat message can be sent through the mobile phone to predefined number, if the user feels to be found in danger. The system is hidden on the wheelchair in a strategic position. In conventional system they have used zigbee technology which covers only short range and limited number of users but in our project we have implemented the concept with GSM which covers wider range and unlimited number of users where there will be no delay in transferring person detail to respective caretaker. Thus through our project we have provided a support to disabled people in society.

SMART HUIS – A HOME AUTOMATION CONTROL USING SMARTPHONE

Vishal Jegadeesan[1], Vinoth Kumar[2], Zakir Hussain[3], Gnanasekar[4], Annamalai R[5]
Student[1,2,3,4,] Associate Porfessor[5]
Department of Information Technology, Jeppiaar Institute of Technology

12itjvishal@jeppiaarinstitute.org

The rising popularity of home automation is mainly due to its lower costs, readily available and ease of usage through the smartphones. The greatest problem in developing a home automation control system is building an all-time reliable control system with all the required features under a single system. The aim of SmartHuis (Huis-Home in Dutch) project is to build a home automation control using android smartphone with high security features like face lock, audio control, surveillance and access controls. The design not only focuses on providing safety features but it also gives features like mathematical data about the electrical appliances, using of system from anywhere around the world, timely control and a distributed framework of home control. More of its interesting features are, it is more compatible with users who are differently abled. Adding to its features an improvised level of life with minimized electricity consumption costs saving of energy is duly done.

PORTABLE DEVICE TO MONITOR PATIENT HEALTH USING IOT

[1]S Muthuvel, [2]P.M.Papurani, [3]J.Pavithra, [4]R.Priyanga, [5]M.Ramadivya
Assistant Porfessor[1],Student[2,3,4, 5]
Department of Computer Science and Engineering,
Jeppiaar Institute of technology, Sriperumbudhur
aruljames26@gmail.com

In monitoring patient health the implementation of IOT technologies brings accessibility to the doctors and patients that can be used in various aspects such as temperature, blood pressure and heart beat monitoring. This technique has secured system so that VIPs can be protected from hidden attackers and their malicious activities. The alert system (buzzer) is fitted to the microcontroller which intimates through alarming in case of emergency (i.e.,) inappropriate rates of patients data from the sensors. The function of IOT blends with sensors and Microcontrollers to produce a typical portable device to monitor patient health. This health care services in home based on Internet of Things have great potential. In this technique intrusion detection of medical devices was embedded in IOT module. Our approach has many aspects like 1) integration of sensors and IOT module 2) Data retrieval from the IOT module which is received by sensors via PIC microcontroller 3) Secured data access by providing URL 4) Flexible and portable device.

SECURE ATTRIBUTION TRANSMISSION OF RELATIONAL DATA SET FOR STREAM RECORDS

S Muthuvel[1], B.Bhuvana[2], S.Revathi[3], R.Swathi[4].
Department of Computer Science and Engineering, Jeppiaar Institute of technology,
Sriperampudur.
1bbhuvi95@gmail.com

This paper presents a novel framework for applying storyline visualizations to streaming data. The framework includes three components: a new data management scheme for processing and storing the incoming data, a layout construction algorithm specifically designed for incrementally generating storylines from streaming data, and a layout refinement algorithm for improving the legibility of the visualization.

CLASSIFICATION OF SECURE ENCRYPTED DATA IN CLOUD

R.Annamalai[1], J.Kiruthika[2], S.Malathy[3], N.Muthulakshmi[4], T.Praveena[5]
Department of Information Technology, Jeppiaar Institute Of Technology,
[1]annamalair@jeppiaarinstitute.org

Data mining is the extraction of hidden predective information from the large database. It is a powerful new technology applied in various fields such as banking, medicine, scientific research and among government agencies. cloud computing provides the flexibility to outsource their data in encrypted form on the cloud. But the existing privacy preserving classification techniques were not sufficient. we propose a predefined naïve bayes classifier which makes use of the trained datasets. our protocol protects the confidentiality of data, hides the data access pattern and also reduces the computation speed and the cost.

ONTOLOGY BASED IMAGE RETRIEVAL FRAMEWORK USING QUALITATIVE SEMANTIC IMAGE DESCRIPTION

Soniya Jenifer Rayan[1], Bhavani shankar sha P.S.K[2],Naga sai kumar.P[3]
[1] Assistant professor, [2,3] UG Student
Department of information technology, Jeppiaar institute of technology, Chennai.
12itpnagasaikumar@jeppiaarinstitute.org

This architecture addresses the issues of keyword based image retrieval and content-based image retrieval through the use of qualitative spatial representations over semantic image annotations. Three types of image retrieval Semantic Retrieval based on Global Labels of Images, Semantic Retrieval based on Image concepts, Semantic Retrieval based on Qualitative Relations.

DATA TRANSMISSION THROUGH VISIBLE LIGHT COMMUNICATION USING LI-FI TECHNOLOGY

J.Srikanth[1],S.Preethi[2],S.Sathurthana[3],S.Nishanthi[4]
Department of Information Technology, Jeppiaar Institute of Technology,Chennai
jsrikanth@jeppiaarinstitute.org,

The main objective of this project is to transmit data from one pc to another without any internet connections or wired communications. This transmission is possible just with the help of LED lights.This also provides very fast transmission of data i.e. 1000 times faster than wifi. Methods:Li-Fi(Light-Fidelity) technology provides transmission of data through Visible Light

Communication(VLC).This technology allows standard LED lights to be turned into high speed wireless communication devices. It serves the role of both illumination and data transmission. Visible light spectrum is free and less crowded than other frequencies in which wireless services can be piggy- backed over the existing lighting installations. With this leading edge technology data such as images,audio,video can be transmitted at high speed. Findings: It offers a secure medium of communication in office/building environment where security of local communication is important. Li-Fi provides better bandwidth, efficiency, availability and security than wifi. Li-Fi can produce data rates faster than 10 megabits per second. Novelty: The novelty of this project is to transmit the data at very high speed without any internet connections or wired communications just with the help of LED lights and photo detector.

A WEARABLE GESTURE RECOGNITION DEVICE FORDETECTING MUSCULAR ACTIVITIES BASED ONAIR-PRESSURE SENSORS

D.Merlin Doj Catharine [1] T.Nila[2], S.Vijayalakshmi[3], K.Arun Kumar[4]
[1,2,3] UG Student, [4]Assistant Professor
Department of ECE, Jeppiaar Institute Of Technology

Recognition of human gestures plays an important role in a number of human- interactive applications, such as mobile phones, health monitoring systems, and human assistive robots. Electromyography (EMG) is one of the most common and intuitive methods used for detecting gestures based on muscle activities. The EMG, however, is in general too sensitive to environmental disturbances, such as electrical noise, electromagnetic signals, humidity, and so on. In this paper, a new method for recognizing the muscular activities is proposed based on air-pressure sensors and air-bladders. The muscular activity is detected by measuring the change of the air pressure in an air bladder contacting the interested muscle(s). Since the change of the air pressure can be more robustly measured compared to the change of electric signals appeared on the skin, the proposed sensing method is useful for mobile devices due to its great signal to- noise ratio (SNR) and fast response time. The principle and applications of the proposed sensing method are introduced in this paper. The performance of the proposed method is evaluated in terms of linearity, repeatability, wear-comfort, etc., and is also verified by comparing it with an EMG signal and a motion sensor.

IDENTIFICATION OF ATTACK ON BROWSING HISTORY OF TWITTER USERS USING INFERENCE TECHNIQUE

S.*Prasanna Devi[1], D.Prathiba[2], B.Saimonisha[3], A.Sangamithrai[4]*
[1,2,3,4] UG Student
Department of CSE, Jeppiaar Institute of Technology, Chennai.
Prasannadevi26@gmail.com

We propose practical attack techniques inferring who clicks which shortened URLs on Twitter using the combination of public information: Twitter metadata and public click analytics. Unlike the conventional browser history stealing attacks, our attacks only demand publicly available information provided by Twitter and URL shortening services. Evaluation results show that our attack can compromiseTwitter user's privacy with high accuracy. Twitter is a popular online social network service for sharing short messages among friends. Its users frequently use URL shortening services that provide the two URL. First, a short alias of a long URL for sharing it via tweets and second, public click analytics of shortened URLs. The public click analytics is provided in an aggregated form to preserve the privacy of individual users.

MUSEUM ADAPT TECHNOLOGY FOR MOBILITY IMPAIRED PEOPLE USING EMBEDDED SYSTEM

A.Priyankaa[1], R.Neelavathi[2], R.Saranya Devi[3], S.Selvin Pradeep Kumar[4]
[1,2,3]UG Scholar,[4] Assistant Professor,
Department of ECE, Jeppiaar Institute Of Technology,
priyaarun146@gmail.com

The majority of the Museum buildings are accessible although many require the use of temporary ramps. The Museum has costumed characters around the village and in the buildings that are readily available to help you use portable ramps if you need assistance. Should you wish to hire a wheelchair, the Museum offer free wheelchair hire from the Gift Shop, however due to limited availability it is usually best to book 24hrs in advance through bookings office and there is few rules framed and maintained in museum for mobility impaired people but most of visitors doesn't follow the rules mentioned in museum. Due to the health condition and visibility level is moderate they are not able to visual clearly. In our project we are going to develop a technology using wireless with help of embedded systems. Our project helps impaired people by providing a good visual with help of camera, user defined time duration to see the objects in museum and the whole technique is controlled by the impaired people.Such places, in fact, very often are not equipped to provide access for mobility impaired people, in particular because these aids require dedicated infrastructures that may not fit within the environment and large investments. For this reason, people affected by mobility impairments are often unable to enjoy a part or even the entire museum experience. Our solution ensures that users see exactly what the robot is seeing.

The cloud robotics platform controls both navigation capabilities and tele-operation. Navigation tasks are intended to let the robot reliably follow pre-defined tours, while main concern of tele-operation tasks is to ensure robot safety (e.g., by means of dynamic obstacle detection and avoidance software). Proposed platform has been optimized to maximize user experience.

AN INERTIAL PEN WITH DYNAMIC TIME WARPING RECOGNIZER FOR HANDWRITING AND GESTURE RECOGNITION

K.Vignesh[1], K.Vijay[2], R.Vigneshwaran[3], P.Deepika[4]
[1,2,3]UG Scholar,[4] Assistant Professor,
Department of ECE, Jeppiaar Institute Of Technology

This paper presents an inertial- sensor-based digital pen (inertial pen) and its associated dynamic time warping (DTW)- based recognition algorithm for handwriting and gesturer recognition. Users hold the inertial pen to write numerals or English lowercase letters and make hand gestures with their preferred handheld style and speed. The inertial signals generated by hand motions are wirelessly transmitted to a computer for online recognition. The proposed DTW-based recognition algorithm includes the procedures of inertial signal acquisition, signal preprocessing, motion detection, template selection, and recognition. We integrate signals collected from an accelerometer, a gyroscope, and a magnetometer into a quaternion-based complementary filter for reducing the integral errors caused by the signal drift or intrinsic noise of the gyroscope, which might reduce the accuracy of the orientation estimation. Furthermore, we have developed a minimal intra-class to maximal inter-class based template selection method (min-max template selection method) for a DTW recognizer to obtain a superior class separation for improved recognition. Experimental results have successfully validated the effectiveness of the DTW- based recognition algorithm for online handwriting and gesture recognition using the inertial pen.

MUSCULAR BIO STIMULATION BY ELECTROMYOGRAM SIGNAL USING FLEX SENSOR GLOVE

V.Chandrasekar[1], M.Gowthamm[2] , T.Blessing Dhilak[3], G.Merline[4]
[1,2,3]UG Scholar,[4] Assistant Professor,
Department of ECE, Jeppiaar Institute Of Technology
vignesh.goodvish@gmail.com

Surface electromyography (sEMG) based pattern recognition studies have been widely used to improve the classification accuracy of upper limb gestures. Information extracted from multiple sensors of the sEMG recording sites can be used as inputs to control powered upper limb prostheses. However, usage of multiple EMG sensors on the prosthetic hand is not practical and makes it difficult for amputees due to electrode shift/movement, and often amputees feel discomfort in wearing sEMG sensor array. Instead, using fewer numbers of sensors would greatly improve the controllability of prosthetic devices and it would add dexterity and flexibility in their operation. In this paper, we propose a novel myoelectric control technique for identification of various gestures using the minimum number of sensors based on Independent Component Analysis (ICA) and Icasso clustering. The proposed method is a model based approach where a

combination of sensors and was utilized to improve the classification performance of independent finger movements for transradial amputee subjects. Four sEMG sensor combinations were investigated based on the muscle contractions. compared to Sequential Forward Selection (SFS) and greedy search algorithm. The performance of the proposed method has been validated with 5 transradial amputees.

PREDICTION OF KIDNEY FAILURE IN BIG DATA

S.Ancy[1], H.Keerthana[2], S.Preethi[3], S.Sharmila[4]
[1]Assistant Professor, [1]UG Student
Department of IT,
Jeppiaar Institute of Technology, Chennai
sancy@jeppiaarinstitute.org

Big data is the large set of dataset used for extraction , selection , analyzing and interpolation of data. Big data is used wide assortment in medical fields for analyzing the patients , prediction of future effects and clinical decision making it is a tool used to store large number of datas to understand the diseases and to predict the disease in future In this paper we use RBFNN (Radial Basis Function Neural Network) with classifier algorithm with the use of parameters to determine the condition of a patient as a normal or a kidney failure patient. The proposed method reveals the stages of the kidney failure patient and treatment and clinical decision

DESIGN AND ANALYSIS OF MODULAR MULTILEVEL CONVERTER FOR SOLAR PHOTOVOLTAIC APPLICATIONS

[1]Kokila B, [2]Swathy V, [3]Jansi Rani J,[4] Pawan Kumar
[1]UG Student, [2,3,4]Assistant Professor,
Department Of EEE, Jeppiaar Institute Of Technology

The purpose of this paper is to study and analysis of multilevel inverter for solar PV based system. The design includes ‘binary’, ‘trinary’ and ‘modified multilevel connection’ (MMC)-based topologies suitable for varying input sources from solar photovoltaic’s (PV). A multilevel inverter is power electronic systems which synthesize desired AC voltage from several DC sources as an input. The advantage of multilevel inverter is that it reduces total harmonics distortion, offer sinusoidal output waveforms, lower EMI, and low switching losses.

EFFICIENT HYBRID FILTER TECHNIQUE TO REMOVE SPECKLE NOISE

R. Amuda [1], Dr. K. Bhuvaneshwari[2]
[1] Research Scholar, Department of Mathematics, Mother Therasa Women’s University
Kodaikanal – 624 102, Tamil Nadu, India.
[1] Associate Professor, Department of Mathematics, Jeppiaar Institute of Technology,
Chennai – 631 604, Tamil Nadu, India.
[2] Associate Professor, Head and Department of Mathematics, MotherTherasa Women’s University
Kodaikanal – 624 102, Tamil Nadu, India.
[1]amuda@jeppiaarinstitute.org

Filters provide an aid to visual interpretation of images. So the design of filters in image

processing is important to de-noise the images, to emphasize edges and to transform the correct images Filters depend on the type of noise present on the images. A new hybrid Filter DWT filters followed by Average filter is introduced to de-noise the speckle noise and investigated the performance on the images.

MEDICAL IMAGE FUSION BASED ON SPATIAL FREQUENCY AND ANALYSISUNDER STATIONARY WAVELET TRANSFORM

[1]Ilakya.K , [2].Sathya.R, [3.]E.Shanthini, [4]P.Deepika
Jeppiaar Institute Of Technology
Ilakyashree27@gmail.Com

Image fusion is defined as the process of combining two or more different images into a new single image retaining important features from each image with extended information content. There are two approaches to image fusion, namely Spatial Fusion and contrast based fusion.

BIOMEDICAL SIGNAL MONITORING IN A TELEMEDICINE SYSTEM FOR EMERGENCY MEDICAL SERVICES USING MECHANICAL SETUP

D. Rajeswari[1], R.Vishnu Priya[2], L.M.Merlin Livingston[3]
[1,2]UG scholar, [3]Associate Professor,
Department of ECE, Jeppiaar Institute of Technology

This paper proposes a polynomial- time algorithm for energy-efficient dynamic packet downloading from medical cloud storage to medical Internet-of-Things (IoT) devices. The medical cloud can distribute its own medical data to medical IoT devices via access points. Therefore, network disconnection can happen between the medical cloud and medical IoT devices when power/energy management in each access point is not efficient. .In order to study new methods of telemedicine usage in the context of emergency medical services, researchers need to prototype integrated telemedicine systems. We used off-the-shelfmedical devices and software to realize real- time patient monitoring within an integrated telemedicine system prototype. The centralized medical cloud storage is connected to randomly deployed medical wireless devices via access points in the given wireless network coverage.

DIBR BASED 2D TO STEREO VIDEO CONVERSION

L.M.Merlin Livingston[1], L.G.X. Agnel Livingston[2], Dr.L.M.Jenila Livingston[3]
[1]Asst. Professor, ECE Dept., Jeppiaar Institute of Technology,Chennai
[2]Asst. Professor, CSE Dept., St.Xavier's Catholic College of Engineering, Kanyakumari
[3]Associate Professor, SCSE, VIT Chennai

In the emerging field of digital image processing stereo video compression technique is very useful. This paper presents an efficient method for stereo videos namely 2D-plus-depth-cue. Converting 2D content to stereo video streams is possible if the depth information is estimated

from the original 2D video sequence. Using the depth information, 3D video content in the stereoscopic format (two temporally synchronized video streams, one for the right and another for the left eye) can be rendered from the 2D video stream, via a process known as depth image based rendering (DIBR).Since the motion estimation procedure is based on the block -matching technique, there will be depth ambiguity between the foreground and the back ground at the object boundaries. Then it reevaluates and modifies the estimated values of the motion vectors of the object-boundary pixels. To ensure that the final estimated depth map is smooth and free of artifacts, our algorithm assumes that each segmented object has a unique depth value and accordingly corrects the estimated motion of the object-body pixels using the object-boundary pixels. This enhances the visual quality of stereo video that is rendered based on the estimated depth map. Finally, a DIBR technique is used to render the stereo videos based on the approximate depth map and 2D video

ENHANCED VISION OF HAZY IMAGES USING IMPROVED DEPTH ESTIMATION AND COLOR ANALYSIS

K.Ambika[1], J.V.Amirtha Vinnarasi[2], A.Anu Keerthi[3], L.M.Merlin Livingston[4]
[1,2,3]UG Scholar, [4]Associate Professor, Department of ECE, Jeppiaar Institute of Technology

The project presents visibility restoration of single hazy images using color analysis and depth estimation with enhanced refined transmission technique. Visibility of outdoor images is often degraded by turbid mediums in poor weather, such as haze, fog, sandstorms, and smoke. Optically, poor visibility in digital images is due to the substantial presence of different atmospheric particles that absorb and scatter light between the digital camera and the captured object. Then visibility restoration module utilizes average color difference values and enhanced transmission to restore an image with better quality. Finally the simulated result shows that obtained restored image has better contrast and hazy free scene objects under various weather conditions and the performance measures such as Gaussian distribution function and measure of enhancement are evaluated.

TWO AND THREE FINGERED ROBOT BY PRECISION MANIPULATION

G.Merline[1], R.Pavithra[2], K.Ishwarya[3]
[1]Assistant Professor, Department of ECE,Jeppiaar Institute Of Technology, Sriperumbudhur.
[2,3]Student,Department of ECE, Jeppiaar Institute Of Technology, Sriperumbudhur

Precision manipulation, which involves repositioning an objects in the robot fingertips, used for daily tasks and also it is used for multitasking. Conditions: a two-finger thumb-index condition and three- finger thumb-index-middle finger condition.The present work focuses on studying the

effects of varying object size and the number of fingers used on the resulting manipulation workspace, or range of motions that the object can be moved through. Conclusion: Precision manipulation of object size and shape is shown, along with how the robot fingers are used during the manipulation.

REAL TIME IMAGE SEGMENTATION FOR MEDICAL SYSTEMS AND DATA PROCESSING USING FPGA

L.Pattathurani[1], Rajat Kumar Dwibedi[2] ,V.Sivachidambaranathan[3]
[1]Assistant Professor/EEE, Jeppiaar Institute of Technology, Sriperumbudur, Chennai,India
[2]Assistant Professor/ECE, SRR Engineering College, India
[3] Professor& Head /EEE, Sathyabama university, India

Medical imaging often involves the injection of contrast agents and subsequent analysis of tissue enhancement patterns. X- ray angiograms are projections of 3D reality into 2D representations there is a fair amount of self occlusion among the vessels. Hence one cannot extract the vessels directly using the image intensities or gradients (edge) alone. Vessel extraction from angiogram images is useful for blood vessels measurement and computer visualizations of the coronary artery. This project describes the algorithm for automatic segmentation of coronary arteries in digital X-ray projections (coronary angiograms) .The pattern recognition technique used in this project is K-Means clustering. In this technique clusters are formed based on the minimum distance criteria with random seed point selection.As the dataset's scale increases rapidly, it is difficult to use K-means and deal with massive data, so an improved K- means algorithm is proposed.

CRACK DETECTOR & FIRE SAFETY MONITORING SYSTEM FOR RAILWAY INSPECTION

SV.Phavethera[1],R.Hemasri[2], Mrs.Benisha.M[3]
[1,2] UG Student, [3]Assistant Professor
Department of ECE, Jeppiaar institute of technology,Sriperumbudhur
benisham@jeppiaarinstitute.org

In recent technologies several sensors are used todetect the crack in railway track. This paper is to design a robotic module to detect cracks in the railway track and indicate it to the corresponding track inspector. In railway track, there may be cracks due to natural calamities or due to the displacement of track. Today's system have some limitations. If the bridge or track is damaged, that information goes to railway authority people, they informs to the corresponding train operator so that it will take more delays for such process. So to avoid delays, our proposed system will immediately notifies and informs the current train comes on the track through ZigBee Network in this prototype. Track status is monitored by ultra sonic sonar sensor modules. Another major thing is Fire Alarms. The paper proposed here can detect fire accident and alert the distant Driver

immediately in the same train. Also the system can capable of informing about the fire accident to fire service station.This paper proposes a cost effective solution to the problem of railway track crack detection utilizing ultrasonic sensor assembly which tracks the exact location of faulty track which then mended immediately so that many lives will be saved. So the rescue team can easily and quickly reach the place and also guide the passengers regarding the emergency exit immediately.

A MESH NETWORKING BASED SOLUTION FOR SMART METERING

Prathima.LK[1] Logeshwari.E[2] Arun kumar[3]
[1,2] UG Students, [3]Associate Professor, Department of Electronics and Communication Engineering
Jeppiaar Institute of Technology

These days, even though there are many new IT services, these cause another types of problems. There are increases in the diversity of services and service quality, but there is also much higher energy consumption. Related solutions are being developed and commercialized by many companies but these products have a passive property. That is, these kinds of solutions need to include intelligent management because of passive operation according to hourly variation or battery status. For example, even though there are various variables such as future power demands, generation status depending on weather conditions, and current battery status, current solutions do not consider these variables, so it is hard to expect high efficiency .Therefore, for much higher efficiency of renewable energy, an intelligent system is needed to monitor these statuses and provide proper management services. In this paper, we propose an intelligent energy management system(iEDM). The concept of dynamic assignment of priorities for all the consumer is established in this project. Slicing of interrupt timings is also discussed which can be used to improve the performance.According to the generated power amount, power shut down will be announced and it will reach the consumer in the uniform level based on priorities.

WIRELESS CONTROL OF A ROBOT USING A SENSING GLOVE

K. Arunkumar[1], S. Archana[2], K. Manasa Harshini[3], V. Divya[4]
[1]Associate Professor, [2,3,4]UG Student
Department of Electronics and Communication Engineering
Jeppiaar Institute of Technology

This study proposes a sensing glove interface for the remote control of a robot based on MIWI wireless communication. The user can use the glove to remotely control the robot's direction through four commands based on different finger actions—"bending of small finger" = right, "bending of ring finger" = neutral/straight, "bending of middle finger" = left, "thumb and index finger touch" = start/ stop. The sensing glove uses flex sensors, force sensor and an LCD for recognizing these actions, which are ensured as analog signals. The commands are transmitted

from the user to the robot through MIWI wireless communication.

JOINT BEAMFORMING BASED POWER AND CHANNEL ALLOCATION ON MIMO SYSTEMS

R.Manikandan[1] , L.Dinesh Babu[2], M.Gowthaman[3], M.Benisha[4]
[1,2,3]UG students,[4]Assistant Professor
Department of ECE, Jeppiaar Institute of Technology, Sriperumpudur.
manikandaninsanes81@gmail.com

In this paper, we consider a joint beam forming using (MIMO) multiple input and multiple output .in this user primary user is reused genetic algorithm is based to determine the suboptimal channel allocation using 3:1:6 MISO system using achievable rate improvement on 6 destinations with help of 18 paths .in modification of genetic algorithm the channel allocation using 3:2:6 MIMO system using 6 destinations with36 paths. by exploiting multiple antennas, a signal processing technology called beam forming .it has been introduced to CRN for directional signal transmission to effectively mitigate mutual interference and improve the signal to interference plus noise ratio. After formulating the joint optimization problem as a non-convex mixed integer nonlinear programming problem with maximum achievable rate improvement. Cooperative communication using subcarrier allocation path using achievable rate analysis. Single beam forming structure using data rate improvement orthogonality between PU and SU communication function. After formulating the joint optimization problem as a non-convex, mixed integer nonlinear programming (MINLP) problem, we propose a solution which consists of two stages. In the first stage, a feasible solution for power allocation and beam forming vectors is derived under a given channel allocation by converting the original problem into a convex form with an introduced optimal auxiliary variable and semi definite relaxation (SDR) approach.

MULTIMEDIA SECURITY SPOOFING OF DIGITAL IMAGE FORENSICS -3D FACE MASK

[1]K.Anandhi, [2]J.Joselinsubi, [3]S.Uma, [4]L.M.Merlin Livingston
[1,2,3]UG students,[4]Associate Professor
Department of ECE, Jeppiaar Institute of Technology, Sriperumpudur.
joejoselinsubi@gmail.com

Multimedia Security spoofing is the act of masquerading as a valid user by falsifying data to gain an illegitimate access. Identification of the spoofing performance of the Tampered or Modified Images 2D Data, Video Images, 3D Face Mask and Morphed Location is proposed.The spoofing performance is further analyzed using OCLBP texture based countermeasures using 2D data. It is further classified using SVM classifier.

A MEMRISTOR BASED CONTINUOUS TIME- VOLTAGE SIGNAL PROCESSING

[1]S.Sundhari, [2]Mr. Shanmugasundaram,
[1]MTech. VLSI Design, [2]Assistant Professor

Department of ECE, Veltech University, Avadi.
rsundhariravi@gmail.com

A few memory merchants are seeking after various types of memory cells that can offer high thickness, non-instability, elite, furthermore, high continuance. In this work, we concentrate on Memristor innovation and distinguish a portion of the critical issues in best in class executions. These issues incorporate sneak streams amid peruses and non-consistency in cell conduct inside of an exhibit. These issues show as long read latencies, long compose latencies, and high reserve line mistake rates. To address these issues, we acquaint various advancements with a memristor memory framework: (i) We utilize a foundation sneak current perused that can be amortized over a few other information peruses from the same section, in this way presenting "open-segment" semantics for memristor cluster access. (ii) We additionally present a novel information mapping approach that decreases multi-bit mistake rates in store lines. Then again, this approach likewise builds the normal compose idleness for a reserve line. (iii) We beat this disadvantage by presenting information pressure and keeping away from inadequately carrying on cells amid composes. The outcome is a memristor memory framework that performs 12% better and has 30X lower likelihood of agony a worthless blunder contrasted with the pattern.

LOW VOLTAGE RE-RAM-BASED NON- VOLATILE FLIP-FLOP DESIGN

*Vijayakumari.V[#], R.SanmugaSundaram **
[#]ECE Department (M.E-VLSI Design),
[*]Assistant Professor (ECE Dept.),
Vel Tech University, Avadi, Chennai
viji.vishwa1109@gmail.com, sanmu@veltechuniv.edu.in

The total power budget of Ultra-Low Power (ULP) VLSI Systems-on-Chip (SoCs) is mostly dominated by the leakage power of embedded memories as well as status registers and flip-flops. On the one hand, supply voltage scaling down to the near-threshold (near-) or even to the sub threshold (sub-) domain is the commonly used, efficient technique to reduce both leakage power and active energy dissipation. On the other hand, emerging CMOS- compatible device technologies such as Resistive Memories (Re RAMs) enable non- volatile, on-chip data storage and zero- leakage sleep periods. For the first time, here we present and then compare Re RAM-based Non-Volatile Flip-Flop (NVFF) topologies which are optimized for low- voltage operation (including near- and sub- operation). Three low-voltage NVFF circuit topologies are proposed and evaluated in terms of energy dissipation and reliability. Using topologies with two complementary programmed Re RAM devices, Monte Carlo simulations accounting for parametric variations confirm reliable data restore operation from the Re RAM devices at a sub- voltage as low as 400 mV. A topology using a single Re RAM device exhibits lower write energy, but requires a near-

voltage for robust read. Energy characterization is performed at nominal, near- , and sub- supply voltages. The minimum energy point is reached for near- read operation with a total read write energy as we expected.

MODELLING OF BLDC MOTOR USING FUZZY

S.Priya,
Assistant Professor/EEE, Jeppiaar Institute of Technology, Sriperumbudur, Chennai,India

This paper presents a control scheme of a fuzzy logic for the brushless direct current (BLDC) permanent magnet motor drives. The mathematical model of BLDC motor and fuzzy logic algorithm is derived. The controller is designed to tracks variations of speed references and stabilizes the output speed during load variations. The BLDC has some advantages compare to the others type of motors, however the nonlinearity of the BLDC motor drive characteristics, because it is difficult to handle by using conventional proportional- integral (PI) controller. The BLDC motor is fed from the inverter where the rotor position and current controller is the input. In order to overcome this main problem, the fuzzy logic control is learned continuously and gradually becomes the main effective control. The effectiveness of the proposed method is verified by develop simulation model in MATLAB-Simulink program. The simulation results show that the proposed fuzzy logic controller (FLC) produce significant improvement control performance compare to the PI controller for both condition controlling speed reference variations and load disturbance variations. Fuzzy logic is introduced in order to suppressing the chattering and enhancing the robustness of the controlled system. Fuzzy boundary layer is developed to provide smother transition to the equivalent control. Smaller overshoot in the speed response and much better disturbance rejecting capabilities.

EEG-BASED BRAIN CONTROLLED MOBILE ROBOT

M.Lokeshwaran[1], M.Neethimuthu[2], S.Rahul[3] , Dr.V.Kannan[4]
[1,2,3]UG students,[4] Professor
Department of ECE, Jeppiaar Institute of Technology
lokeshwaran6m@gmail.com

Interferences from spatially adjacent non-target stimuli are known to evoke event-related potentials (ERPs) during non-target flashes and, therefore, lead to false positives.This phenomenon was commonly seen in visual attention-based brain–computer interfaces (BCIs) using conspicuous stimuli and is known to adversely affect the performance of BCIsystems. Although users try to focus on the target stimulus, they cannot help but be affected by conspicuous changes of the stimuli (such as flashes or presenting images) which were adjacent to the target timulus. Furthermore, subjects have reported that conspicuous stimuli made the mtired and

annoyed. In view of this, the aim of this study was to reduce adjacent interference,annoyance and fatigue using a new stimulus presentation pattern based upon facial expression changes. The facial expression change pattern presented in this paper reduced interference from adjacent stimuli and decreased the fatigue and annoyance experienced by BCI users significantly ($p < 0.05$) compared to the face pattern.

ANALYZING THE PROCESS PARAMETER OF FRICTION STIR WELDING ON DISSIMILAR ALUMINIUM ALLOYS

[1]K. Balasingam, [2]K.S.Lakshmipathi, [3]P.Pradeep
[1,2,3]UG Student,
[1]Dept. of Mechanical Engineering, Jeppiaar Institute of Technology, Chennai, India.

Friction stir welding process is nothing but solid state process which is used for welding different materials for producing the efficient welded joints. The purpose of this work is to investigate the effects of tool rotation speed and transverse feed on the welding of dissimilar AA7075 and AA6061 by FSW using M2 tool.

INFLUENCE OF PROCESS PARAMETER ON NYLON 66 USING ABRASIVE WATERJETMACHINING

[1]K.Dinesh Kumar, [2]S Jerome Praveen, [3]A. John napier , [4]R. Muthukumar
[1,2,3,4]UG Student,
Mechanical Department, Jeppiaar Institute of Technology, Chennai, India.

Abrasive water jet machining is an Unconventional machining process in which the metal is removed from brittle and hard material in the form ofmicro chips. With increase inneed of plastics, glass ,fiber, in manufacturing of various Mechanical and Electronic components.The present study highlights the influence of different parameters like Pressure , SOD, Time, Abrasive grain size,on the Metal removal of nylon 66(polyamide) by Abrasive water jet machining. The results of the Experiments conducted were analyzed and optimized with TAGUCHI method of Optimization and ANOVA for Optimal Value.

PARKED AUTOMOTIVE CABIN TEMPERATURE REDUCER

[1]Anbu Selvan.M, [2]Tamilarasan. S, [3]Jules Antony. S, [4]Nagaraja Kumar.P
[1,2,3,4]UG Student,
Department Of Mechanical Engineering Jeppiaar Institute Of Technology
Chennai, India

The main concern of this work is to reduce the temperature of the automotive cabin when it has been parked under sunlight. This system works when the automotive is parked and the engine is in off condition. This system employs an exhaust fan, front glass guard, gap between the roof the insulating interior, a temperature sensor, ECU, solar panel, battery and a coolant flow copper pipe.

Primarily the unit starts functioning only when the car is parked, once the car in parked and engine turns off, the temperature sensor starts to sense the temperature of the car. At the same time the glass guard covers the front glass so that no heat enters the car through front glass. The fan starts functioning and it blows out the air trapped inside the cabin, the temperature sensor sensing the temperature gives the command to the compressor to flow the coolant through the pipe which is fitted around the edge of the interior roof. The power source required to drive the fan, compressor, motor of screen, ECU and temperature sensor are provided by the solar film attached at the top of the roof of automotive. Here the temperature travel into the cabin by the conduction between the roof and the insulating interior is reduced by providing a gap between them, this gap reduces the heat transferred to the interior as only less heat can be transferred by radiation when compared to heat transfer by conduction. Thus our system reduces the temperature of the cabin when it has been parked under sunlight.

GPS AIDED TRANSMISSION SYSTEM

[1]J. Jasper Sharon Ferdinand, [2]N.Kamalesh Babu [3]G.Aadith Natraj
[1,2,3]UG Student
Department of Mechanical Engineering Jeppiaar Institute of Technology
Chennai, India

This Paper proposes the entire study of Global Positioning system aided transmission. The Global Positioning System Aided Transmission uses GPS data and the navigation system to predict the road ahead. It then automatically displays the right gear needed for the particular turning, which comes ahead before two to three kilometers. This is said to reduce the unnecessary gear changing for the driver. This system mainly stresses on the fact to reduce the efforts of the driver. This will also reduces the problem of changing to wrong gears while driving. It also requires help from the Navigation Sensor, it helps the car to detect the correct gear required for the turn ahead which is almost 2-3Kms ahead, and this system is mainly based for the manual transmission system.

STUDY THE EFFECT OF SHALLOW CRYOGENIC TREATMENT ON THE SURFACE ROUGHNESS OF AA6061 USING MILLING OPERATION

J.Mohammedharees[1], A.Prithiviraj[2], M.Ramasamy[2], A.Rejoy Paul[4], R.Dervanathan[5],T.Venkatamuni[6]
[1,2,3,4] UG Students, [5]Assistant Professor, [6]Professor
Department of Mechanical Engineering, Jeppiaar Institute of Technology,Chennai.

This work is focused inorder to study the effects of various cooling strategies on surface roughness and tool wear during milling of AA6061 work piece material. The Shallow cryogenic treatment (SCT) setup was designed and developed inorder to cool work piece material. Optimal cutting

parameters were selected based on the work piece hardness from reference catalogue and kept constant for all tests. Tool wear and surface roughness were measured at three different conditions such as 5 hours, 10 hours, 15 hours cryogenic treatment in the cryogenic treatment chamber. It was found that surface roughness values for cryogenic treated specimen's exhibits best results compared to untreated specimens. The good surface roughness values were obtained cryogenic treated specimen's at higher depths of cut, higher feed rates and higher cutting speeds for cryogenic treatment as compared to dry machining and flood coolant machining operation.

EFFECTIVE TAKE OFF AND LANDING OF AN AIRCRAFT USING MAGLEV

Deepak Melwani J[1], N Baskar Sedupathi[2], Dr. T. Venkatamuni[3]
[1,2]UG Students [3]Professor,
Dept. of Mechanical Engineering, Jeppiaar Institute of technology
deepakmellu@gmail.com

Automobile and aircraft industries are the sectors that are developing rapidly and there are number of innovations that are being made in these sectors. Among the most important problems in an aircraft is the accidents caused during the landing and the take-off. About 48% of the accidents are caused during the landing of an aircraft and 13% of them during the take-off of. The main aim of the project is to reduce the number of accidents caused while take-off and landing of an airplane. This concept also increases the fuel efficiency while take off along with the good suspension system which will be of great comfort to the passengers. The use of magnetic strips or the magnets by the opposite poles used nearby in the runway and the belly of an aircraft this project can be brought to existence. Another method to implement this electrically is the use of superconducting materials in the runway and varying the speed of the aircraft by altering the electricity that is passing through the superconductors. With the use of MAGLEV concept the vehicle is levitated at a short distance away from the guideway using magnets/strips to create the lift and thrust. By using this technology the weight of the aircraft can be considerably reduced and thus material requirement also reduces. In this project the prototype or the working model of the concept was made and the main advantage found after making the prototype was that the length of the runway was found to be reduced considerably when compared to the normal runways and also the accidents can be minimized to a greater extent.

MICROSTRUCTURE AND WEAR ANALYSIS OF DIFFERENT COATINGS BY PHYSICAL VAPOUR DEPOSITION METHOD

P. Vijayasarathy[1], S.Gopinath[2], S.Vigneshwar[3] , B. Karthick[4], N.V.Hariharan[5]

[1]*Professor, Dept. of Mechanical Engineering* [2,3,4,5] *UG Students*
Jeppiaar Institute of technology

This paper mainly concerns and reviews about the problems mainly occurred due to the wear and friction which is mainly occur in the most of all the sliding components. Wear is related to interactions between surfaces and specifically the removal and deformation of material on a surface as a result of mechanical action of the opposite surface. The PVD coating of the punch with the surface layer of the improved hardness and low friction reduce the concentration of wear in the significant amount. The main aim of the present study is to characterize the wear of titanium carbon nitrate(Ti C N),titanium aluminium nitrate(Ti AL N) aluminium chromium nitrate(Al Cr N) coatings by using the physical vapour deposition methods. To increase the life of the components we are engaged in the process of surface modification of the components. As entered in the process of surface modifications we have found many of the surface modification process from this we have choose the physical vapour deposition method which deposits the coating solution on the component and then it undergoes the further process like pin on disc apparatus method scanning electron microscope tests reveals the wear status of the different coatings.

DESIGN AND OPTIMIZATION OF SEA SHORE CLEANER

Aishwarya S[*1] *Arvinth RA*[*2]*Mithunkumar R*[*2]*Santhosh K*[*2]*SugumarD*[*2]
[1]*Assistant Professor* [2]*UG Scholar,*
Department of Mechanical Engineering,Jeppiaar Institute of Technology
[*1] saishwarya@jeppiaarinstitute.org

The main objective is to eliminate the unwanted dust, broken glass, and iron particles from beach sand. This system consists of mechanical actuators, linkages and electrical actuators (motors). It is a self moving type. Perforated sheet has been provided to segregate the dust with the help of simple driving mechanism. Collected dust has-been stored in tray and it will shift to dust bin fitted to its side. It must be a pollution free process.

A REVIEW ON LASER IN ADVANCED MATERIAL PROCESSING AND MANUFACTURING

M. Jagadish [1]*, R. Parthasarathy* [2]*, K. Dinakaran* [3]*, T. Raja* [4] *and J. Ravikumar* [5]
[1,2,3 4] *UG Students,* [5]*Assistant Professor*
Department of Mechanical Engineering, Jeppiaar Institute of Technology, Chennai.
jagadhishmechm@gmail.com

In the present day advanced manufacturing scenario, the components produced must strictly adhere to the dimensional, positional and form specifications, in order to have an edge over competitor's products. Recently, laser materials processing has received much attention due to its

clean and controlled transfer of energy, conditioned and intermediated by laser beam incidence. This review summarizes the progress and advantages in the various research activities carried out through laser welding process and related activities. The content of this paper includes brief reviews on important engineering materials.

SIMULTANEOUS OPTIMISATION OF SMOKE AND NOX EMISSIONS IN A STATIONERY DIESEL ENGINE FUELLED WITH DIESEL-OXYGENATE BLENDS USING GREY RELATIONAL ANALYSIS IN TAGUCHI METHOD

V.Anish[1], R.Niranjankumar [2], J.Ravikumar [3] and T.Venkatamuni[4]

[1&2] UG Students, [3]Assistant Professor,
[4]Professor, Department of Mechanical Engineering, Jeppiaar Institute of Technology, Chennai, India.
[1]atganish@gmail.com, [2]niranjankumar7778@gmail.com,[3]jravikumar@jeppiaarinstitute.org and
[4]tvenkatamuni@jeppiaarinstitute.org

The objective of the present work is to optimize simultaneously the smoke and NOx emissions of a stationary diesel engine fuelled with diesel-oxygenate blends with minimal impact on brake thermal efficiency (BTE) using grey based Taguchi method. Experiments were designed by following of design of experiments (DOE) method and tests were conducted based on Taguchi's L9 orthogonal array. The effects of three parameters viz. oxygen content of additives, proportion of blends with diesel and retarded injection timing were considered. Tests were conducted by blending different chosen oxygenated additives with diesel at different percentages and are introduced at different injection timings. Taguchi's signal-to-noise (S/N) ratio were determined based on their performance characteristics. A grey relational grade was obtained from the S/N ratio using grey relational analysis (GRA). Based on this grade, optimum level of factors was identified by using response table and response graph. The individual effects of factors are estimated using analysis of variances (ANOVA). The results of confirmation experiments reveal that the combination of GRA and Taguchi parametric design can be effectively used to obtain the optimal combination of chosen factors. Experimental results have shown that the response variables can be improved effectively through this approach.

OXYGEN POWERED MEMBRANE LESS FUEL CELL USING HYDROGEN PEROXIDE AS FUEL

Lokesh.C[1], Balaji.P[2], Maria Melky.S[3], Arun Kumar.P[4] , Yuvarajan. D[5]
[1,2,3,4]U. G Scholar, [5]Assistant Professor, Department of Mechanical Engineering
Jeppiaar Institute of Technology
Lokeshyuvi12@gmail.com

It is a well-known fact that now a days most of the widely used fuel cells are of hydrogen-oxygen type. In which Hydrogen acts as a fuel, it is highly difficult to store the hydrogen which is volatile

in nature and highly flammable. Platinum catalyst used there is costly and preventing it from being a commercial success. These kinds of drawbacks can be overcome by using Oxygen as a fuel instead of Hydrogen. The Oxygen is used in the form of hydrogen peroxide. In Photovoltaic cell, Earth abundant water and molecular oxygen combined to produce Hydrogen Peroxide (H_2O_2) in the presence of sunlight irradiation of wavelength (λ>400 nm). Thus the hydrogen peroxide produced by the photo voltaic cell is used as a fuel in the fuel cells instead of hydrogen, which produces an open circuit potential by reacting with hydrogen ions. This fuel cell will be more efficient than the ordinary fuel cells because of the working on designing electro-active materials by switching closed shell to open- shell Phenalenyl, which has been used as the cathode in a single-chamber membrane less fuel cell running on hydrogen peroxide (H_2O_2) as both fuel and oxidant.

PROLIFERATE QOS/QOE AND ENHANCED SECURITY USING DISTRIBUTED HANDOFF TECHNIQUE IN VANETS

[1]Rukmani R., [2]A. Sheetal Mary ,[3]Umayal , [4]V.Kannan
[1,2,3]UG Scholar, [4]Professor
Jeppiaar Institute of Technology,Sriperumpudur,Chennai

Over the past few years, anywhere, anytime wireless connectivity has gradually become a reality and has resulted in remarkably increased mobile traffic. The multi-tier architecture along with stringent latency requirements in 5G brings new challenges in security provisioning due to the potential frequent handovers and authentications in 5G small cells and HetNets. The 3GPP mobile networks, particularly Long-Term Evolution (LTE), are gaining a lot of momentum, as are LTE-connected vehicles. While one may envision an LTE-connected vehicle as a nicely designed vehicle with sophisticated equipment, a conventional vehicle with a person using an LTE-enabled smartphone or tablet on board can be logically qualified for an LTE-connected vehicle. The proposed system introduces SDN into 5G as a platform to enable efficient authentication hand - over and privacy protection. Our objective is to simplify authentication handover by global management of 5G HetNets through sharing of user dependent security context information among related access points. Its defines QoS/QoE-aware policies for LTE-connected vehicles (UE devices) to select the most adequate radio access out of the available access technologies (e.g., WiFi and LTE) that maximize QoE throughout the mobility path. The proposed framework ensures better QoS and achieves better QoE throughout the time of the received service and the mobility path of the user, even in the case of errors in the prediction of the user's mobility.

TELEMEDICINE SYSTEM FOR EMERGENCY MEDICAL SERVICES

[1]L.M.Merlin Livingston, [2]Dr.V.Kannan

[1]Associate Professor, [2]Professor, Department of ECE, Jeppiaar Institute of Technology

This paper proposes a polynomial-time algorithm for energy-efficient dynamic packet downloading from medical cloud storage to medical Internet-of-Things (IoT) devices. The medical cloud can distribute its own medical data to medical IoT devices via access points. Therefore, network disconnection can happen between the medical cloud and medical IoT devices when power/energy management in each access point is not efficient. .In order to study new methods of telemedicine usage in the context of emergency medical services, researchers need to prototype integrated telemedicine systems.We used off-the-shelf medical devices and software to realize real-time patient monitoring within an integrated telemedicine system prototype. the centralized medical cloud storage is connected to randomly deployed medical wireless devices via access points in the given wireless network coverage.

REMOTE AUTHENTICATION MECHANISM BASED ON SEGMENTATION

[1]L.M.Merlin Livingston, [2].P.Deepika
[1]Associate Professor, [2]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

In the emerging modern world, there is a need for fast progression of data exchange in electronic way, information security is becoming more important in data storage and transmission. In wireless communication, in order to share secret information between 2 or more entities, remote authentication could be used. It internally contains three works. The first one is the encryption of finger print image in the form of chaotic image, then internally converts that chaotic image into set of vectors. The second one is the extracting human object from the image. Then the third one is hiding those vector value into the extracted object. Trojan horse and other attacks could be mostly occurring in cases of remote examinations or in interviewing or in personnel hiring, which may create serious threats. This paper aims at in a robust remote authentication mechanism based on semantic segmentation, chaotic encryption and data hiding. Remote authentication is a method to authenticate remote users over insecure communication channel. Password-based authentication schemes have been widely deployed to verify the legitimacy of remote users.

AN EFFECTIVE BANDWIDTH EFFICIENT BECAN SCHEME FOR FILTERING THE INJECTED FALSE DATA IN WIRELESS SENSOR NETWORK

[1]A.Parimala, [2]K.Lalitha Kumari
[1]Assistant Professor, Department of ECE, S.K.P Engineering College
[2]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

Injecting false data attack is a well known serious threat to wireless sensor network for which an adversary reports bogus information to sink causing error decision at upper level and energy waste in en-route nodes. In this paper, we propose a novel bandwidth-efficient cooperative authentication (BECAN) scheme for filtering injected false data. Based on the random graph characteristics of sensor node deployment and the cooperative bit-compressed authentication technique, the proposed BECAN scheme can save energy by early detecting and filtering the majority of injected false data with minor extra overheads at the en-route nodes. In addition, only a very small fraction of injected false data needs to be checked by the sink, which thus largely reduces the burden of the sink. Both theoretical and simulation results are given to demonstrate the effectiveness of the proposed scheme in terms of high filtering probability and energy saving.

AN EFFICIENT APPROACH FOR AUTO CONFIGURATION IN AD HOC NETWORK BY USING FILTER BASED ADDRESSING PROTOCOL

[1]A.Parimala, [2]K.Lalitha Kumari
[1]Assistant Professor, Department of ECE, S.K.P Engineering College
[2]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

The main issue in ad hoc network is an address assignment due to lack of infrastructure. A distributed and self-managed mechanism to avoid address collisions in a dynamic networks are required by autonomous addressing protocols. We propose a lightweight protocol called as Filter based addressing protocol which is based on a distributed address database stored in filters that reduces the control load and makes the proposal robust to packet losses and network partitions. To evaluate the protocol performance we have to take account of partition merging events, network initialization and joining nodes. All the address collisions have been resolved by using our protocol and it has been shown in the simulation result there by reducing the control load traffic.

AN EFFICIENT APPROACH TO DETERMINE THE LOCATION DISTINCTION AND VIRTUAL MULTIPATH ATTACK IN WIRELESS NETWORKS

[1]A.Parimala, [2]K.Lalitha Kumari, [3]Careline Claude R
[1]Assistant Professor, Department of ECE, S.K.P Engineering College
[2,3]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

Location distinction in wireless networks aims to detect a wireless user's location change, movement or facilitate location-based authentication. In wireless networks, the adversary can easily hide her location changes or impersonate movements by injecting fake wireless channel characteristics into a target receiver. To defend against the hidden attack, we propose RSA

algorithm to identify the attacker by using Public key and Private Key. We focus on detecting a misbehaving node using IDS. Initially RSA algorithm is used to predict the node behaviour using zonal routing protocol, the data retrieved securely from the current location. The idea of IDS to introduce the trust authority periodically for probabilistic checking each zone's forwarding evidence in dynamic environment.

EMBEDDED BASED ATM THEFT IDENTIFICATION

[1]Benisha.M, [2]V.Amutha

[1,2]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

The need to create and keep up an even security program is rudimentary and basic to the assurance of banking clients and different resources. Security, as it identifies with ATMs, has a few dimensions.Physical ,Customer personality honesty ,Device activity respectability . Early ATM security concentrated on making the ATMs resistant to physical assault; they were viably safes with gadget instruments. Client personality trustworthiness is Alternate techniques to confirm cardholder characters have been tried and conveyed in certain nations, for example, finger and palm vein examples, iris, and facial acknowledgment innovations. Nonetheless, as of late, less expensive large scale manufacturing hardware has been created and being introduced in machines all around that recognize the nearness of remote articles on the facade of ATMs, current tests have indicated 99% identification accomplishment for a wide range of skimming gadget. Gadget activity honesty is structuring a framework to such an extent that at whatever point the ATM card is embedded in to the machine a message will be associated with our number to check the validation of the client. Presently a days the utilization of ATM cards has been expanded as such we need a superior security framework to safe gatekeeper our advantages. Here we are structuring a framework with the end goal that at whatever point the ATM card is embedded in to the machine a message will be associated with our number to check the verification of the user.PIC microcontroller is utilized for the controlling, transmitting and getting the information's additionally for checking the information's are right or not.DTMF will create the diverse recurrence for various number. LCD is utilized to show the current status.The EEPROM card is utilized as the brilliant card. Buzzer is utilized as an alert sign.

FPGA IMPLEMENTATION OF BIST

[1]Benisha.M, [2]P.Deepika, [3]R.Careline Claude

[1,2,3]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

Lately, Field Programmable Gate Arrays (FPGAs) have progressed significantly in their capacity.

The relating requirements for I/O on these gadgets have constrained the makers to use high-thickness ball network exhibit (BGA) bundles, presently with designs surpassing 1,000 pins with slender bind knock pitches. As per an ongoing EE Times Survey, over 81% of new advanced structures consolidate FPGAs. While BGAs include shorter electrical way lengths which diminish inductance, the basic bind knock associations are liable to maturing and inevitable disappointment from a breaking, oxidation, and disappointment movement. Ridge top has built up a worked in individual test (BIST) center that can be utilized to identify looming issues on FPGAs, so that moderating moves can be made. High and effectively evident flaw inclusion, least test design age, least execution corruption, at-speed testing, short testing time, and sensible equipment overhead. Worked In Self-Test (BIST) gives a possible answer for the above requests. To start with, BIST essentially diminishes off-chip correspondence to defeat the bottleneck brought about by the constrained information/yield get to. Further, it dispenses with a significant part of the test design age and reenactment process. Testing time can be abbreviate by testing different units at the same time through test planning. Equipment overhead can be limited via cautious plan and through the sharing of test equipment. This paper presents a low equipment overhead test design generator (TPG) for check based inherent individual test (BIST) that can decrease exchanging movement in circuits under test (CUTs) during BIST. They accomplish extremely high flaw inclusion with sensible lengths of test arrangements. The proposed BIST TPG diminishes changes that happen at filter contributions during examine move tasks and thus lessens exchanging action in the CUT.

MOTION CONTROLLED PASSWORD SYSTEM FOR COMPACT EMBEDDED SYSTEMS USING MEMS SENSOR

[1]M.Tamil Selvi, [2]J.Mahesh

Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

A movement pass word control framework incorporates a movement sensor receptive to movement of a gadget and gives a sign relating to development of the gadget; a database stores information esteems comparing to foreordained movement of the gadget; and the microcontroller program contrasts the movement sensor signal and the put away database esteems, and, accordingly, gives a yield sign to performing in any event one activity of a preselected set of activities when the correlation uncovers that the gadget has moved in a manner which compares to the put away information esteems. This innovative undertaking identifies with security instruments for smaller electronic gadgets and forestalls unapproved access to compact electronic gadgets, for example, PCs, phones, and such which can be enacted and deactivated essentially by moving the

gadget accurately as per a preselected "movement secret word". A movement secret phrase is anything but difficult to recall when contrasted with customary passwords and individual recognizable proof numbers (PINs). They may in some cases be overlooked and are not generally classified. The chipset incorporates a MEMS accelerometer sensor which could be coordinated inside a gadget, for example, a PC, PIC microcontroller, and an EEPROM memory, wherein the database of the memory incorporates a lot of arrange esteems comparing to approved development of the PC (a "movement secret key"). In this paper, the database incorporates information comparing to a lot of discrete directions of the gadget and the microcontroller clock decides if the development of the gadget coordinates the arrangement of directions inside foreordained timeframes. The framework additionally incorporates the capacity to acknowledge new passwords by inciting the client of the gadget to enter a movement secret word and putting away the development information esteems in the database. A voice recording and playback subsystem is incorporated, to such an extent that when the secret word is going to be changed, recently put away voice guidelines will manage the client. In our application, when the framework perceives a substantial movement secret word it begins to play your main tune that was recently recorded. The chipset incorporates a MEMS accelerometer sensor which could be incorporated inside a gadget, for example, a PC, PIC microcontroller, and an EEPROM memory, wherein the database of the memory incorporates a lot of facilitate esteems comparing to approved development of the PC (a "movement password").

GSM/CDMA CELLPHONE JAMMER

Benisha.M[1],Merline G[2]

[1,2]Assistant Professor, Department of ECE, Jeppiaar Institute of Technology

PDA jammer is a radio gadget planned for controlling the utilization of cell phones inside assigned territories. On a basic level, Block Phone transmits a wide-band radio sign on the recurrence band utilized for transmission of cell base stations with wide spread range. The sign created by Block Phone keeps the versatile stations from deciphering the signs of the phone arrange and consequently cause the cell phones to disengage from the phone organize. This a most cutting edge and propelled venture that shows the genuine working model of a GSM/CDMA wireless jammer system.This framework is being utilized worldwide to forestall demonstration of fear based oppression where the remote activated detonators being utilized for blast.By utilizing this undertaking all phone in this band will incapacitated. No approaching, out going SMS. This can be utilized to make quiet zone for an ideal time frame. This paper is chiefly utilized for PDA

disallowed territories, for example, churches,mosques,libraries,movie theatres,meeting rooms and different spots where quiet is normal. mobile phone jammer viably sticks the activity of wireless with the end goal that giving high security to humankind. It is adaptable future extension too. Mobile phone jammer can be viably utilized in all region for keeping up security of information

AN EFFICIENT COLOR IMAGE ENCRYPTION AND LOSSLESS COMPRESSION SYSTEM USING SPIHT ARITHMETIC ENCODER

W.Nancy

Assistant Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

This paper presents a novel watermarking mechanism for digital media that embeds a recognizable pattern into the spatial domain and an invisible image into the frequency domain. Undoubtedly, visible watermarking is important for protecting online resources from unauthorized reproduction. Lossless compression of encrypted sources can be achieved through SPIHT coding. For encrypted real-world sources, such as images, the key to improve the compression efficiency is how the source dependency is exploited. Lossless compression of encrypted color images can be achieved through arithmetic encoder. For encrypted real-world sources, such as images, the key to improve the compression efficiency is how the source dependency is exploited. This is color image encryption method where image is encrypted by specific rule that is rearrangement of image pixels. In this paper, we present color Image encryption and decryption by using partition and scanning pattern which is related to scan approach.

AUTOMATED ATTENDANCE MANAGEMENT USING FACE DETECTION

Daniel Thangaraj W[#1], Ms.Madhumitha R [#2] , W.Nancy[#3]

#1 Student, Department of Electronics and Communication Engineering, St. Joseph's College of Engineering,.

#2 Assistant Professor, Department of Electronics and Communication Engineering, St. Joseph's College of Engineering,.

#3 Assistant Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

In this paper we design a method for Face recognition based student attendance system implement by using Matlab simulated and Global System for Mobile communication (GSM) hardware module. The system includes terminal Face acquisition module and attendance module. It can realize automatically such functions as information acquisition of Face, processing, and transmission, Face matching and making an attendance report. The detected images are then enhanced and recognized using face recognition technique. The recognized images are compared with the images in the pre-existing database. Contourlet transform based algorithm has been used

as the feature extraction and K-nearest Neighbouring Algorithm (KNN) as the classifier for the classification afterwards. The proposed new algorithm is applied to facial recognition on ORL database; better performance is gained compared with those traditional algorithms, such as Principal component analysis (PCA) and Linear Discriminant Analysis (LDA) etc. The results have further proved the effectiveness of our proposed algorithm. After recognize the face the attendance has taking, this system sends the attendance of every student to their parent's mobile through GSM. Attendance system facilitates access to the attendance of a particular student in a particular class.

AUTOMATIC AMBULANCE RESCUE SYSTEM

K.Arunkumar#1 W.Nancy#2

#1,2 Assistant Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

The purpose of this paper is to introduce a novel robot in order to overcome some difficulties in providing an Automated External Defibrillator (AED) device at then earest location of victim suffering from sudden cardiac arrest in the shortest possible time before the advent of the ambulance. We designed and developed an ambulance robot, called it Ambubot, that brings along an AED to help lay rescuers for saving patients life in a sudden event of cardiac arrest. The first aid to the victim can be carried out once an incident alarm is transmitted to the Ambubot station by sensing via body-attached sensor and/or mobile phone application. Such applications transmit required information to the Ambubot center for further execution. Ambubot center is integrated with three independent servers namely database server, message controller, and GIS server. In addition, message controller server is connected with telecom's short message server for transmitting the message to family members of the patient. The Ambubot robots are located in Ambubot stations when several stations can be covered via single center where human operators are located. Different methods had been proposed for dispatching Ambubot to locate the victim namely tele-control, partially autonomous, and fully autonomous operations. While we have illustrated all those methods in this paper we present the conduction of the tele-control method to control the operation of the robot. In this method, not only Ambubot follows instructions of human operator till the robot reaches the location of victim and delivers the AED but also provides instruction to the people in the location for applying the AED hence the lay rescuers will dry the victim's chest and attach the AED pads by themselves while instructed and monitored by the human experts in the main center in real-time.

CELLULAR COVERAGE AREA DETERMINATION WITH AUTONOMOUS

MAPPING MODE

Dr.S.Arul #1 Mahesh J#2

#1 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#,2 Assistant Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

Evaluating remote inclusion and sign quality is a dull errand looked by all the cell administrators. There might be holes in inclusion in the assessed inclusion zones because of the elements like system issues, assessing programming, signal quality, remote gadget structures, structures, climate, geology geography and so on.. This will result in dropped and blocked associations, more slow information speeds, or in any case sway the nature of administrations. The proposed plan helps in deciding the sign quality of versatile towers in decibel(dB) which is very valuable for portable organizations to fix the area of new towers and furthermore increment the sign range. The framework stores the phone signal quality and position information in the joined Multimedia Card Storage. This gadget can be fixed in a vehicle which takes a shot at the premise of position information stockpiling method. The prime goal of this paper of the framework is to decide the constant Received Signal Strength Indication (RSSI) estimation of the phone signal with the assistance of a GSM modem and to discover the situation of a vehicle with the assistance of GPS beneficiary and store that data in MMC Card. The Global Positioning System is a satellite-based route framework comprised of a system of 24 satellites put into space by the U.S. GPS satellites circle the earth two times every day in an exact circle and transmit signal data to earth. The GSM is the most mainstream standard for cell phones on the planet. GSM varies altogether from its antecedents in that both flagging and discourse channels are computerized, which implies that it is shown as a subsequent age (2G) cell phone system.The Multi-Media Card (MMC) is a glimmer memory card standard.

ACCIDENT MESSAGING SYSTEM USING MEMS BASED ACCELEROMETER,GPS AND GSM

Dr.V.Kannan #1 Mahesh J#2

#1 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#,2 Assistant Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

These days we can follow vehicles utilizing numerous applications which helps in making sure about close to home vehicles, open vehicles, feet units and others. Besides there is a fast increment

in the event of the Road mishap This paper plans to build up a gadget that advises the control station if the vehicle in which the gadget is fitted, met with a serious mishap. This venture is executed utilizing an accelerometer sensor which works utilizing MEMS (Micro-Electro-Mechanical System) innovation alongside GSM (Global System for Mobile Communication) and Global Positioning System (GPS). This paper is predominantly comprise of an inserted framework which comprise of a GPS module,GSM module,USART,Sensor,Timer,Micro controller and ADC.USART is fundamentally utilized for interfacing GPS and GSM module to the miniaturized scale controller. On the off chance that a vehicle met with a serious mishap the sensor which works under MEMS innovation detects the vibration which is as simple signal.This simple signs is given to ADC which convert this into advanced signals.This waveform is screens by the miniaturized scale controller.With the assistance of the satellite GPS module computes the geological situation of the module.This helps in identifying area/position of the module.With the assistance of the portable pinnacle GSM module move the information to the GSM network.This information is then exchange to the predefined number which is put away in the framework which might be the quantity of a control station ,medical clinic or a police headquarters. Consequently this programmed framework is progressively productive and more affordable and increasingly helpful to use from were ever conceivable. Subsequently can be favoured method of correspondence for controlling reason.

AUTOMOTIVE NETWORK DIAGNOSTICS WITH CRASH DATA RETRIEVAL SYSTEM USING J1939 AND LIN

Dr.S.Arul #1 K.Arun Kumar#2

#1 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#,2 Associate Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

Automotive diagnostic equipment, today uncovered the Crash Data Retrieval (CDR) System, a creative equipment and programming item that permits anybody with a PC to download vehicle-explicit mishap information from vehicles engaged with close arrangement impact. A demonstrative control unit that consistently checked the sensor's control units. The CDR unit will record the crash data. A few different sensors give brake pedal status, quickening agent pedal status, vehicle speed, guiding edge, time of crash, crash power, bearing of crash, notice lights status, vehicle head light status, brake light status and encompassing light condition. Vehicle Black Box recognizes an accident naturally utilizing MEMS inertial sensor, and furthermore records the movement of the vehicle and driver's activities during a predefined timeframe when the mishap.

This paper is to structure a framework to screen and analyze car systems, by utilizing an information based analytic method. Deficiency data from a few sources is utilized to assemble an information base. System flaw codes and potential causes analyzed by an indicative module are then put away in a database. The codes are useful for assembling and administration forms. This new symptomatic framework would help diminish quantities of conceivable shortcoming causes, subsequently, effectively pinpointing defective gadgets and shortening analytic time. All the information recorded could be checked and broke down from a personal computer. The client can send extraordinary orders to screen a chose boundary from the recorded information just as to get the symptomatic codes of different flaws happened in the system.

ANTI-THEFT SYSTEM USING -INERTIAL MEMS SENSOR & ZIGBEE – PIC MICROCONTROLLER

R.Thandaiah Prabu#1 Arun Prasath J#2

#1,2 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

thandaiah@gmail.com

Many present assurance frameworks are finished with mechanical switches which start a caution when a specific present degree of movement is distinguished. These units are bulkier and it can't be effectively coordinated with the current conservative electronic frameworks. This paper conquers the downsides of present insurance frameworks, it exploits the sensational advances in miniaturized scale machined semiconductor item innovation and utilizes a tri pivot smaller scale machined accelerometer incorporated on a chip which is mounted into the framework is secured. MEMS accelerometer can detect movement in every one of the three tomahawks. To bolt the framework, the client must keep the gadget in rest state and press the lock button. Firmware being executed on the microcontroller catches the rest position of the framework on every one of the three tomahawks and stores it in a non unstable memory and goes into the lock state. As of late numerous insurance framework are bulkier and we can't execute them in the minimized electronic gadgets, in order to dispose of that difficult we are here planning a smaller enemy of burglary framework. Our task is an enemy of robbery framework utilizing mems and zigbee. Here we have two areas City street guider and Anti burglary framework .In the city street guider every territory is given a specific code and when we press the code the quantity of transports employing in that specific course will be shown. In the counter robbery framework, when we press the lock key the framework will enter the counter burglary framework. Presently if any one moves this framework it will enter the freeze mode and a message will be sent to the remote control unit and the ringer

will be actuated. To open the framework , we need to send a ten digit secret key and on the off chance that the secret phrase matches, at that point the framework will come back to the city street guider mode or, more than likely will stay in the freeze mode.

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R.Thandaiah Prabu#1 Nagaranj N#2 S.Selvin Pradeep Kumar#3

#1,2 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

#3 Assistant Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

thandaiah@gmail.com

These days, we need document frameworks to hold the way of for put away information. Increasingly number of implanted frameworks run on genuine registries, where putting away and recovering information is a serious deal. Everything from the humble utility meter or indoor regulator, up through jetliners and interchanges satellites presently utilize all out document frameworks to monitor all the information they're shuffling. Installed record frameworks are a lot harder , more unpredictable , and more costly than most developers might suspect. It's not tied in with arranging parts, squares, and compose cycles. It's extremely about unwavering quality, safeguards, and harm recuperation. That is not something you hack out in an end of the week coding meeting yet we can get and store information utilizing USB sticks , outer drives and SD cards. The USB (Universal Serial Bus) is a quick and adaptable interface for associating gadgets to PCs/microcontrollers. Utilizing this innovation we can achieve our ideal transmission of records in a snappier strategy. To build up an implanted gadget for recognizing and moving information starting with one USB then onto the next one. This expects to actualize USB convention in a microcontroller utilizing the implanted innovation. When the pendrive is associated with the port of the controller the gadget distinguishes it and imparts a sign back. This must be recognized by the pen drive and the correspondence between the frameworks is built up utilizing the USB protocol.When the USB gadget is associated with the USB port of the controller, the gadget driver identifies the nearness of new gadget and burdens its driver, in the event that it is recently introduced. When legitimate driver is stacked, the correspondence between the frameworks is set up utilizing the USB driver convention. At the point when a pen drive is associated show the framework show all document names in LCD. The information from one pen drive/camera can be perused and put away in the other one as per the client order. At the host, application can utilize defamed API capacity to peruse and keep in touch with the gadget.

HUMAN INTERACTING DEVICE (HID) WITH BLUETOOTH FOR DISABLED

S.Selvin Pradeep Kumar#1 R.Thandaiah Prabu#2 K.Arun Kumar#3

#1 Assistant Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#2 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

#3 Associate Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

selvinpradeepkumars@jeppiaarinstitute.org

Assistive innovation alludes to the gadgets and administrations that are utilized to increment, keep up, or improve the abilities of an understudy with a disability.While the expression assistive innovation may make us consider PCs and automated gadgets, assistive innovation can likewise be extremely low-tech. The host and the gadget are two elements in the HID convention. The gadget is the substance that legitimately communicates people, for example, a console or mouse. The host speaks with the gadget and gets input information from the gadget on activities performed by people. This paper clarifies an exploration venture applying Human-Computer Interaction (HCI) information and strategies, for example, openness and ease of use, to help individuals with Cerebral Palsy or other extreme incapacities complete explicit undertakings with a PC. The task presents a novel technique to control PC mouse cursor development and console with head and eyes.A bluetooth gadget named BGB203 is utilized to transmit relating orders to VB. Cursor development is constrained by VB orders. Head development is distinguished by MMA 2260D IC , and the relating voltage is moved to microcontroller. Eye development is identified by QRB 1114 IC , when an outer hinder happens the PIC send comparing commands. These orders are moved to VB through Bluetooth tech.VB orders brings about the cursor development.

CELL PHONE OPERATED LAND ROVER

Dr.S.Arul#1 V.Yokesh#2

#1 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#2 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

aruls@jeppiaarinstitute.org

Traditionally, wireless controlled robots make use of RF (radio frequency) circuits, which have their disadvantages of restricted operational range, limited frequency range, and limited control. This project introduces the use of the mobile phone for robotic control. This technology is more

controller friendly as it doesn't interfere with other controllers and can use up to twelve controls. It also has the advantages of robust control and provides working range as large as the coverage area of the service provider. Although the look and capabilities of these robots vary, they share mechanically movable structures under some form of control. The robots are controlled in three phases namely reception, processing, and action. Here preceptors are sensors mounted on the robot and the processing is done by on-board microcontroller or processor. This robot works either with the help of motors or with some other actuators. The robot is controlled by making a call on the mobile phone attached to the robot. In the course of the call if any button is pressed a 'dual-tone multiple-frequency' (DTMF) tone is heard at the other end of the call. The cell phone mounted on the robot perceives this tone and then the robot processes it by the ATmega16 microcontroller with the help of DTMF decoder MT8870.

WIRELESS CONTROL OF ROBOTIC ARM

V.Yokesh#1 Dr.S.Arul#2

#1 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

#2 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

aruls@jeppiaarinstitute.org

The main aim of the robotic arm is by employing the rf-FSK method to control the robotic arm. The principles mainly employed to develop in designing the industrialized applications which are supple and simply improved to use in the near future.
There is a big issue in a number of industries where a human being cannot toil. This is because the temperature of the industrial room is more than a temperature that is suitable for human working. In order to conquer the difficulty of high-temperature wireless control, the robotic arm was designed. This robotic arm is brought into play for working in those circumstances where human beings cannot work and also the robotic arm can be controlled by bringing into play wireless method which is in trendy these days. The wireless method employed in our assignment is rf-FSK. This robotic arm circuit is interfaced with a microcontroller (P89C51R2), keypad, and Motors. The motors are connected with each other creating a robot's arm which is again interfaced with a panel enabled with keys to control.

HUMAN BEING SKIN AS TOUCH SCREEN

Dr.S.Arul#1 V.Yokesh#2, U.Iniyan#3

#1 Professor , Department of Electronics and Communication Engineering, Jeppiaar Institute Of Technology.

#2,3 Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Institute of Technology & Management.

aruls@jeppiaarinstitute.org

The mobile industry has brought many revolutionary changes in the field of mobile, from big & bulky handsets to small & portable sets, from keypad operation to touch screen facility. This project aims at using human skin arms or palm or leg as a touch screen panel. All you need to do is wear a band in your wrist, which will display all the data from your mobile to your skin & you can use it as a touch screen technology as in Iphones. To execute further actions, you just need to type the command on your skin & with the aid of an acoustic sensor, this sensor reads the command from your skin & executes it. The acoustic sensor is employed to analyze the precise tissue density and extra biometric data from your skin, to decide the kind of command you have specified.

VEHICLE CONTROL USING DTMF TECHNOLOGY

[1]S.Jacily Jemila, [2]M.Tamil Selvi, [3]G.Merline

[1]Assistant Professor, Department of ECE, Prince Dr. K. Vasudevan College of Engineering and Technology

[2,3] Assistant Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute of Technology

This paper explores direct phone to phone communication between the driver's phone & the owner's phone to support mobile sensing applications. Direct communication between driver's phone & owner's phone is important in improving data collection efficiency and sharing participatory sensing information in an inexpensive manner. We design a practical and optimized communication mechanism for direct phone-to-phone data transfer to the driver's phone that strategically enables phone-to-phone communication. This paper makes use of the DTMF technology available on mobile phones to control the vehicle activities. We employ various sensors in the vehicle which sends us the information about the vehicle activities. In case of occurrence of any abnormalities in the functioning of vehicle, the sensors immediately detect these abnormalities & a message is sent to the vehicle owner. By the use of the DTMF technology in the mobile phone, the owner can control these abnormalities from a remote place.

MICROCONTROLLER BASED INDUSTRIAL CONTROL SYSTEM

[1]S.Jacily Jemila, [2]M.Tamil Selvi, [3]L.M.Merlin Livngston

[1]Assistant Professor, Department of ECE, Prince Dr. K. Vasudevan College of Engineering and Technology

[2] Assistant Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute of Technology

[3] Associate Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute of Technology

This paper illustrates a condition based reporting system of real time appliances using GSM

technology. In this approach, a dedicated microcontroller based hardware unit has been developed to continuously monitor the voltage and current of the devices with the help of voltage and current sensors. This unit is also connected to the GSM (Global System for Mobile Communication) modem. The fault or abnormalities in the operation of the device is recognized with the help of dedicated microcontroller based hardware unit and the abnormalities is reported to the preassigned service provider and consumer contact number through an SMS service. The device can also be switched ON and OFF by sending SMS. This system also has the provision of storing the details about the faults in various loads in the form of database in PC.

INTERFERENCE REDUTION BASED ON STIMULUS PRESENTATION PATTERN

[1]M.Tamil Selvi, [2]S.Jacily Jemila,

[1] Assistant Professor, Department of Electronics and Communication Engineering, Jeppiaar Institute of Technology

[2]Assistant Professor, Department of ECE, Prince Dr. K. Vasudevan College of Engineering and Technology

Interferences from spatially adjacent non-target stimuli are known to evoke event-related potentials (ERPs) during non-target flashes and, therefore, lead to false positives. This phenomenon was commonly seen in visual attention-based brain–computer interfaces(BCIs) using conspicuous stimuli and is known to adversely affect the performance of BCI systems. Although users try to focus on the target stimulus, they cannot help but be affected by Conspicuous changes of the stimuli (such as flashes or presenting images) which were adjacent to the target stimulus. Furthermore, subjects have reported that conspicuous stimuli made them tired and annoyed. In view of this, the aim of this paper is to reduce adjacent interference, Annoyance and fatigue using a new stimulus presentation pattern based upon facial expression changes. The facial expression change pattern presented in this paper reduced interference from adjacent stimuli and decreased the fatigue and annoyance experienced by BCI users significantly ($p < 0.05$) compared to the face pattern.

AUTOMATIC PLANT WATERING SYSTEM

[1]L. Pattathurani

Assistant Professor, Department of EEE, Jeppiaar Institute of Technology

During summers, most people are too lazy to water the potted plants on their rooftop gardens every day. The project is a simple and exciting automatic plant watering system that you can build yourself in just a few hours. It is an Arduino based automatic plant watering system that uses a soil moisture sensor. The project can be controlled from your smart phone using the Arduino software controller. The usage of either wifi system or with the help of Bluetooth module. Two types of

soil moisture sensors are available in the market—contact and non-contact sensors. A contact soil sensor is used in this project because it has to check soil moisture to measure the electrical conductivity. The circuit comprises an Arduino UNO board, a soil moisture sensor, a servo motor, a 12V water pump and an L293D (IC1) motor driver IC to run the water pump. You can power the Arduino board using a 7V to 12V wall wart or plug-in adaptor or solar panel. You need a separate 12V battery or power supply or solar panel for the pump motor. Using the Arduino UNO board, you can water six different potted plants. By adding a few more lines in the code, you can water even more plants—by using the Arduino Mega 2560 board which has more analogue input pins. You can also add an Ethernet or Wi-Fi shield and use the Twitter library. A 16×2 LCD can be added to indicate moisture levels. Enabling option can be added with the circuit to refill the tank after a few days, depending on the volume of the tank.

LOW COST TOXIC GAS FIRE ALARM SYSTEM

[1]S.Priya

Assistant Professor, Department of EEE, Jeppiaar Institute of Technology

Carbon-monoxide gas is one of the most toxic gases. It is an odorless, colorless and tasteless flammable gas kills human life. It is found spark produced by burning of fuels in cars or trucks, room heaters, etc. It is less dense than air. But small amount of Carbon monoxide gas is beneficial. It is used for surgery purpose in hospitals. It is the simplest carbon and is iso electronic with other triply-bonded diatomic molecules having 10 valence electron. It burns with color of blue flame. Carbon monoxide has some fuel constituent. Before CO gas, coal gas is used for domestic purpose. In iron smelting process, Carbon monoxide is used as byproduct. It considered being as drug when it used in small amount. It is mostly formed by the photochemical process. The release of Carbon Monoxide gas from room heater in hotel room caused family death. Emission of carbon monoxide gas, caused people in the room had a breathing trouble and died. Due to this reasons, we came up with idea of implementing carbon monoxide gas detector along with some new features in hotel rooms. When the gas is detected in detector, it will intimate the hotel control room with a notification as the gas released in a particular room by using software application and automatically the heater gets turned off. From this project we can reduce those kinds of gas emission accidents. We can also use this technique in home automation, as there would be the chance of emission of gas from Air conditioner, Refrigerator, Car, etc. It is cost effective and reliable.

AUTOMATIC VEHICLE SENSOR IN ACCIDENT PRONE HIGHWAYS

Dr.Rajesh Kumar

Professor, Department of EEE, Jeppiaar Institute of Technology

Modern society faces serious problems with transportation systems, including but not limited to traffic congestion, safety, and pollution especially in highways . Information communication technologies have gained increasing attention and importance in modern transportation systems. Automotive manufacturers are developing in-vehicle sensors and their applications in different areas including safety, traffic management, and infotainment. Government institutions are implementing roadside infrastructures such as cameras and sensors to collect data about environmental and traffic conditions. By seamlessly integrating vehicles and sensing devices, their sensing and communication capabilities can be leveraged to achieve smart and intelligent transportation systems. We discuss how sensor technology can be integrated with the transportation infrastructure to achieve a sustainable Intelligent Transportation System (ITS) and how safety, traffic control and infotainment applications can benefit from multiple sensors deployed in different elements of an ITS. Finally, we discuss some of the challenges that need to be addressed to enable a fully operational and cooperative ITS environment.

SOLAR POWER SUPPLY VIA TRANSFORMER

Mr.K.Jayavlu

Associate Professor, Department of EEE, Jeppiaar Institute of Technology

A transformer on a solar power facility is primarily used to step-up the voltage to deliver the renewable energy to the utility grid. However, the transformer has some added benefits in that it provides galvanic isolation between the solar facility and the utility grid. Energy policies worldwide are mandating large-scale integration of solar panel (SP) generators with inverters on distribution systems. This causes several SPs to be connected to a distribution transformer. The SP and its interfacing inverter alter the performance characteristics of the transformer. In addition, when new sources and loads are connected to a distribution system, from an asset-management perspective, it is imperative to understand and quantify their effect on distribution system components. This project presents a two-step study on the effects of SP on distribution transformers via simulation and experiments. In step one, the simulation work quantifies the amount of harmonic distortion caused by SP and associated inverters in distribution transformers considering solar farms and rooftop residential installations. The simulation work uses network topology, load, and generation data of a Canadian utility. Various inverter technologies, output

powers, carrier signal frequencies, filtering techniques, numbers of active inverters, and transformer configurations are studied. In step two, level of harmonic distortion observed in simulation is created in a laboratory environment using a commercial inverter for SP applications. A three-phase dry-type transformer is tested to observe the effect of higher harmonic distortion on core and winding temperatures of the transformer. Experimental results conclude that under the worst case loading scenario (i.e., full load with active power flow reversed), the transformer lifetime expectancy is anticipated to decrease by 8.3%.

A PFC BASED BLDC MOTOR DRIVE USING A CANONICAL SWITCHING CELL CONVERTER

F.Maxo savio

Assistant Professor, Department of EEE, Jeppiaar Institute of Technology

This paper presents a power factor correction (PFC)-based canonical switching cell (CSC) converter-fed brushless dc motor (BLDCM) drive for low-power household applications. The speed of BLDCM is controlled by varying the dc-bus voltage of voltage source inverter (VSI). The BLDCM is electronically commutated for reduced switching losses in VSI due to low-frequency switching. A front-end CSC converter operating in discontinuous inductor current mode (DICM) is used for dc-bus voltage control with unity power factor at ac mains. A single sensor for dc-bus voltage sensing is used for the development of the proposed drive, which makes it a cost-effective solution. A prototype of the proposed configuration is developed, and its performance is validated with test results for the control of speed over a wide range with a unity power factor at universal ac mains.

VOLTAGE CONTROLLED CUSTOM POWER DEVICE FOR IMPROVEMENT OF POWER QUAITY

Mr.Pawan Kumar

Assistant Professor, Department of EEE, Jeppiaar Institute of Technology

Due to increasing complexity in the power system, voltage sag is becoming one of the most significant power quality problems. Voltage sag is a short reduction voltage from nominal voltage, occurs in a short time. If the voltage sags exceed two to three cycles, then manufacturing systems making use of sensitive electronic equipments are likely to be affected leading to major problems. It ultimately leads to wastage of resources (both material and human) as well as financial losses. This is possible only by ensuring that uninterrupted flow of power is maintained at proper voltage levels. This project tends look at the solving the sag problems by using custom power devices such as Distribution Static compensator (D-STATCOM). Proposed scheme follows a new algorithm to

generate reference voltage for a distribution static compensator (DSTATCOM) operating in voltage-control mode. The proposed scheme ensures that unity power factor (UPF) is achieved at the load terminal during nominal operation, which is not possible in the traditional method. Also, the compensator injects lower currents therefore, reduces losses in the feeder and voltage-source inverter. Further, a saving in the rating of DSTATCOM is achieved which increases its capacity to mitigate voltage sag. Nearly UPF is maintained, while regulating voltage at the load terminal, during load change. The state-space model of DSTATCOM is incorporated with the deadbeat predictive controller for fast load voltage regulation during voltage disturbances.

TRIBOLOGICAL BEHAVIOUR OF METAL MATRIX COMPOSITE ALUMINUM ALLOY 6351

Arun S[1], Kannan S[1], Dr. T. Venkatamuni[2]

[1]Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

[2] Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

The “composite material” is composed of a discrete reinforcement distributed in a continuous phase of matrix, In Aluminium metal matrix composite (AMMC) one constitutes is aluminium which forms network i.e. matrix phase and another constitute serve as reinforcement which is generally ceramic or non metallic hard material. The basic reason of metals reinforced with hard ceramic particles or fibers are improved properties than its original material like strength, stiffness etc. Stir casting process is mainly used for manufacturing of Metal Matrix Composite (MMC). Manufacturing of aluminumalloy based casting composite by stir casting is one of the most economical methods of processing MMC. Properties of these materials depend upon many processing parameters and selection of matrix and reinforcements. This paper presents an overview of preparation of AMMC material by using aluminium as matrix form and Silicon Carbide, Tungsten Disulphide as reinforcement by varying proportion. Wear tests were conducted using a wear machine and the tester used a piece of the cylinder block as the pin material. The coefficients of friction were monitored during the tests, and the wear volumes of the surfaces with various proportions were compared.

OPTIMIZATION OF PROCESS PARAMETER IN ABRASIVE WATER JET MACHINING OF EN24

Arun S[1], Kannan S[2]

Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

An experimental study to optimize the effects of cutting parameters on Surface finish (um), Kerf width (mm) and MRR (g/min) of EN24 work material by employing Taguchi technique were carried on EN24. Three process parameter where undertaken for this study they are Abrasive flow rate(g/min), Stand off distance (mm), Transverse speed (mm/min). Experiments were conducted by varying these parameter for the cutting of EN24.The design philosophy of Taguchi was followed to conduct the experiments. Analysis of variance (ANOVA) was used to evaluate the data obtained to determine the major significant process factors statistically affecting the MRR, Surface finish and kerf width. The experimental design was planned using Taguchi's L9 Orthogonal Array (OA) and Minitab 15 statistical tool is used. The orthogonal array, signal to noise ratio , analysis of variance and regression were employed to investigate the performance characteristics in abrasive water jet machining. Thus, it is possible to increase machine utilization and decrease production cost for the material EN24.

CHARACTERIZATION AND CORROSION STUDIES OF DIFFERENT COATING BY USING POLARIZATION TEST

Arun S[1], Kannan S[2]

Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Corrosion of metals proceeds by electrochemical processes in most aqueous environments. Hence, electrochemical techniques can be used to study and interpret corrosion phenomena and, in certain instances, to measure the rate of corrosion. Corrosion-potential measurements furnish information on whether the anodic or cathodic process, or both, are controlling corrosion. They may also furnish useful information on film breakdown or film repair. The polarization behavior of corroding metal electrodes can be used in several different ways to measure the rate of corrosion. A promising recent development in this area is the polarization-resistance method, in which the initial slope of a polarization curve can be used to obtain a reliable estimate of the rate of corrosion. It would appear that the use of linear polarization measurements can supply valuable information regarding: (a) Studies of the effect of environment variables on corrosion rate. These include changes in composition, velocity, and temperature, (b) Evaluations of inhibitors in controlling corrosion, (c) Comparison of the corrosion rates of various alloys of similar composition in a given environment, and (d) Determination of changes in corrosion rate with time, including

studies of underground structures as well as materials in aqueous solutions.

INVESTIGATION OF MECHANICAL AND METRALLUGICAL PROPERTIES OF METAL-MATRIX COMPOSITES OF ALUMINIUM ALLOY

Arun S[1], Kannan S[2]

Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

For the last few years there has been a rapid increase in the utilization of aluminum alloys, particularly in the automobile industries, due to low weight, density, coefficient of thermal expansion, and high strength, wear resistance. Among the materials of tribological importance, Aluminum metal matrix composites have received extensive attention for practical as well as fundamental reasons. Aluminum alloys and aluminum-based metal matrix composites have found applications in the manufacture of various automotive engine components. Compound work pieces are developed to combine favorable properties of different materials. Many composite materials are used in home and industrial production. Weight reducing in rapid moving parts of automobile engines such as crankshaft and connecting rod. Aluminum matrix composites (AMC) are potential materials for various applications due to their good mechanical properties. The addition of reinforcements into the metallic matrix improves the stiffness, specific strength, wear, creep and fatigue properties compared to conventional engineering materials. The main objective of this project is to obtain a certain metal which performs better than aluminum alloy. The properties which are to be altered are mechanical strength, toughness, hardness. This report gives an overview of MMC material system on aspects relating to processing, microstructure and properties.

ANALYSING THE PROCESS PARAMETERS OF FRICTION STIR WELDING ON DISSIMILAR ALUMINIUM ALLOYS

Arun S[1], Kannan S[2]

Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Friction Stir Welding is a novel green solid state joining process particularly used to join high strength aerospace aluminum alloys which are otherwise difficult to weld by conventional fusion welding because it produces hot cracks after the welding and it has a more number of process parameters when compared to Friction Stir Welding. Unlike other solid state joining technique, in Friction stir welding a third body contact by tool will generate the friction between the work piece

and tool. The length of the pin is slightly less than the weld depth on the work piece so as the shoulder will provide more friction between work piece and tool. This helps in gain the even distribution of the particles in plastic state by overcoming the undesirable formation of the theta phase. The process parameters like transverse speed and feed on dissimilar aluminium alloys AA6061 and AA7075 are anayzed. The tensile, hardness has been carried out in the work piece. The results showed that spindle speed is the most influencing parameter followed by traverse feed for getting maximum tensile strength. Hardness results are revealed that center of the weld is having maximum hardness because of grain refinement in the weld zone. This test results shows that the low speed and feed gives high strength welded joints and then it reduced slowly when the speed and feed increased simultaneously.

INFLUENCE OF PROCESS PARAMETERS ON NYLON66 USING ABRASIVE WATER JET MACHINING

Arun S[1], Kannan S[2]

Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Abrasive water jet machining is an unconventional machining process in which the metal is removed from brittle and hard material in the form of microchips. With increase in need of plastics, fibre, metals the present study highlights the influence of different parameters like pressure, SOD, time, abrasive grain size on the metal removal of Nylon66(polyamide) by abrasive water jet machining .The result of experiment conducted were analysed and optimized with TAGUCHI method of optimization and ANOVA for optimal value. The project outlines an experimental study to optimize the effects of cutting parameters on surface finish (μm), kerf width (mm) and MRR (g/min) of Nylon66 work material by employing Taguchi technique. The orthogonal array, signal to noise ratio and analysis of variance were employed to investigate the performance characteristic in abrasive water jet machining. Four parameters were chosen as process variables pressure (bar), Transverse speed (mm/min), Abrasive flow rate (mg/min) and Stand-Off distance (mm). It is found that Transverse speed is the major parameter that influences the MRR (g/min), Kerf width (mm) and Surface finish (μm). Increase in Pressure (bar) and Abrasive flow rate (mg/min) also increases the MRR (g/min) and Surface finish (μm).

MECHANICAL AND METALLURGICAL STUDIES ON DISSIMILAR WELD JOINTS

Arun S[1], Kannan S[2], D.Arunkumar[3]

[1]Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam

[2,3] Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam ,

Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

A lot of industry applications exist for friction welded components. In this paper, an attempt has been made to join 316L (Stainless Steel) and EN08 by friction welding by varying the friction welding parameters, namely friction pressure, upset pressure, burn-off length and speed of rotation of the work piece. The parameters were varied accordance to Taguchi L9 orthogonal array with three levels. The welded samples were subjected to mechanical test such as tensile and hardness were performed at room temperature according to ASTME standards. Based on the tensile value high, low and medium were taken and they were subjected to different cryogenic conditions in solid carbon dioxide (-80˚C) and liquid nitrogen (-196˚C) and compared with the room temperature results. To validate the results microstructure and the nature of fractures were obtained. As a second phase of this work to optimize the process parameters using Response surface methodology (RSM) were carried out by full central composite design. Mathematical model were developed and tested for adequacy using analysis of variance and to find the model is significant. It is observed that while comparing the three conditions, maximum tensile strength were achieved with the liquid nitrogen treated for 2 hours.

POWER GENERATION ANALYSIS USING TURBO VENTILATOR SYSTEM

Arun S[1], Kannan S[2], D.Arunkumar[3]

[1]Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam

[2,3] Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

The Turbo ventilators are used in the industries for the purpose of ventilation without using electrical power.Hence we have decided to use the Turbo ventilator system for power generation instead of the conventional type of wind mills by considering the cost and design of the project in account. The reason for selecting the Turbo ventilator system is, it can be rotated at any direction of wind flow, easy installation and multi purpose functions. The total arrangement of this project can be used for Non conventional energy utilization and for circulating the fresh air inside the shop floor as well as office area also. So that, by introducing the new design of power generation analysis using the Turbo ventilator system, we can analysis whether the electric power from the alternator (dynamo or generator) can be drained or not without disturbing primary function of the Turbo ventilator system. And the power generated can also be converted to various forms it may be either AC or DC supply according to our consideration by means of invertors. Even the amount of the power generated while analysis it may be less is ¾ of the total capacity of the alternator used; it can be used for less input power electric appliances, such as Emergency lamp, chargeable torches and lighting purpose for longer duration.

PRODUCTIVITY INCREASE IN CURING PROCESS OF BRAKE LINING

Arun S[1], Kannan S[2], D.Arunkumar[3]

[1]Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam

[2,3] Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Rane brake lining company produces brake lining for leading automobile companies. In the brake lining production, there is a manufacturing process is going on. In that the curing process is the main process which make the perform cake into a mould by a heavy press and heat. The mould made in the curing machine may stick to the mould and they are difficult to remove the mould from the mould surface. Now they are using grease as the mould releasing agent in the curing machine. The worker have to apply the grease in the mould surface and then he have to place the perform cake. By applying grease, the worker will take some time and the worker may get injury due to high temperature mould surface. So we planned to add the mould releasing agent in the raw material itself, so the mould can easily removed from the surface.So we identified the mould releasing agents and add those in the correct proportions in the mixture. Now the mould was easily removed with the grease and reduces the man time and increases the production by 4.21%.

PERFORMANCE AND EMISSION ANALYSIS OF A CI ENGINE FUELLED WITH PREHEATED COTTON SEED OIL AND BLENDS WITH DIESEL

J.Ravikumar[1] , S.Boopathi[2], D.Christopher Selvam[1]

1Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

2 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

This study, preheated cotton seed oil and diesel blends were tested in a single cylinder CI engine to investigate the engine performance and emission characteristics under the different load conditions at constant speed. First this experiment was conducted for preheated cotton seed oil of different temperature like 70^{o}C, 80^{o}C and 90^{o}C. The optimized preheated temperature of 80^{o}C was chosen as based on engine performance and emissions. The various blends are (Preheated cotton seed oil 20+D80), (Preheated cotton seed oil 40+D60), (Preheated cotton seed oil 60+D40), (Preheated cotton seed oil 80+D20), (Preheated cotton seed oil 100) were tested in the engine at optimized temperature (80^{o}C). The results are compared with neat diesel fuel. The engine performance and emission level is improved with preheated blends (cotton seed oil 20+D80) at optimized

temperature.

SIMULTANEOUS OPTIMIZATION OF SMOKE AND NOX EMISSIONS IN A STATIONARY DIESEL ENGINE FUELLED WITH DIESEL-OXYGENATE BLENDS USING GREY RELATIONAL ANALYSIS IN TAGUCHI METHOD

J.Ravikumar[1] ,S.Boopathi[2]
1Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.
2 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Experiments were carried out by adopting Design of Experiments (DOE) method and tests were conducted based on Taguchi's L9 orthogonal array. The effects of three parameters namely oxygen content of additives, oxygenates proportion with diesel and varying injection timing were investigated. Experimental trail were conducted by blending the various chosen oxygenates at different proportion with diesel and injection timing. Taguchi's signal-to-noise (S/N) ratio were determined based on their performance characteristics. A grey relational grade was obtained from the S/N ratio using grey relational analysis (GRA). Based on this grade, optimum level of factors was identified by using response table and response graph. The individual effects of factors are estimated using analysis of variances (ANOVA). The results of the experiments reveal that Diglyme blended with 10% of diesel and injected at-21° crank angle is the optimum combination for simultaneous reduction of smoke and NOx with less significant impact on performance. This combination shows a smoke reduction of 28.33% with 17.4% reduction in NOx emissions simultaneously with best possible performance increase of 6.7% when compared to diesel. The combination of GRA and Taguchi parametric design can be effectively used to obtain the optimal combination of chosen parameters. Experimental results have also shown that the response variables can be improved effectively through this approach.

EMISSION IMPACT OF OCTANOL ON PONGAMIA BIODIESEL PROPELLED DIESEL ENGINE

J.Ravikumar[1] ,S.Boopathi[2],.D.Christopher Selvam[1]
1Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.
2 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

The emissions characteristics of diesel-engine fuelled with different blends of Pongamia biodiesel i.e. PBD100, PBD90P10 (10% Vol of higher-alcohol dispersed in PBD100) and

PBD80P20 (20% Vol higheralcohol dispersed in PBD100) at 1800 rpm for compression ratio 16:1 were investigated. Results revealed that the NO*x*, HC, CO and smoke emissions were reduced with the increase in the concentration of octanol. Further, PBD80P20 showed effective results when compared to diesel fuel.

COMBUSTION PERFORMANCE AND EMISSION CHARACTERISTICS OF A DIESEL ENGINE FUELLED WITH SOYBEAN BIODIESEL

Rajeshkumar[1],J.Ravikumar[2],S.Boopathi[3],Dr.T.Vengata Muni[4]

1,3 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

4 Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

The energy embodied in soybean could be converted by transesterificationprocess as soybean bio diesel and could be recovered as fuel for diesel engines. In this method, fuel regeneration takes place in a single step itself. The present study investigates the combined influence of load and injection timing on the combustion, performance and emission characteristics of a diesel engine fuelled with soybean bio-fuel. Experiments were conducted at three injection timings (21º CA bTDC, 23º CA bTDC and 25º CA bTDC) and load rates (0%, 25%, 50%, 75% and 100%) at theengine's rated power output. The peak in-cylinder pressures and HRRs droppedgradually as the injection timing was delayed from 25ºCA bTDC to 21ºCA bTDCat all load rates. The engine delivered diesel-like BTHE at 21ºCA bTDC under 100% load. NOx emission of soybean biodiesel blends found lower than the diesel at different load conditions except at 25ºCA bTDCunder 100% load. HC emission of soybean biodiesel blend B100 is 47ppm under 100% load which is lower than the diesel under full load. Smoke and CO emissions stayed lower at early injectiontiming of 21ºCA bTDC under different loads.

PERFORMANCE COMBUSTION AND EMISSION CHARACTERISTICS OF DIESEL ENGINE FUELED WITH PAPAYA SEED BIO-DIESEL

Dr.Rajeshkumar[1],Mr.J.Ravikumar[2],Mr.S.Boopathi[3]

1,3 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

In the modern society, the fossil fuels and the increase of greenhouse gases in the atmosphere, renewable bio-fuels are the focus of several current research projects. For a fuel design process for future combustors the description of the influence of functional groups on the ignition behavior of fuels can be an important step. Bio diesel is one of the modern alternative fuels which are renewable and it renewable and it replaces theconventional fuel like diesel, petrol and natural gas. Bio diesel is bio degradable andnon-toxic and low emission profiles and so is environmentally beneficial. The aim of this project is to use alternative fuel which can to produce power for stationary Diesel Engines can be used in irrigation and rural electrification. The blends(B50 and B100) of bio diesel is used for further testing. The performance, combustion andemission test were conducted on single cylinder 4-stroke diesel engine using differentblends of these bio diesels and the results showed that B50 IT-21 is superior blend amongother bio diesel blends. Further the performance and combustion characteristics of B50IT-25 is very close to diesel while the emission characteristics of B50 IT-21 is better than that of diesel as the emission of CO, HC and smoke. Thus we concluded that B50 IT-21 is the most suitable blend for substitute of diesel which will reduce diesel consumption by 50%.

MULTIRESPONSE OPTIMIZATION OF ENGINE PARAMETERS FOR LOW EMISSIONS AND HIGH PERFORMANCE IN A DI DIESEL ENGINE FUELED WITH DIESEL-OXYGENATE BLENDS

Dr.Rajeshkumar[1],Mr.J.Ravikumar[2],Mr.S.Boopathi[3]

1,3 Associate Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Diesel engines are widely used in major sectors of any country because of its higher thermal efficiency and durability than petrol engine. Even though diesel engines produce more power, the pollutants emitted by them causes adverse effect on the environment, and also earth is running short of fossil fuel. Out of various pollutants smoke and NOx emission is significant. If measures are taken to reduce one parameter other parameter tends to increase.And also no obvious modifications to the engine design remain to further reduce particulates and NOx emissions, the industry is forced to resort to expensive after treatment methods.

In the present investigation, three oxygenated additives were chosen namely dimethyl carbonate (DMC), diglyme (DGM), diethyl ether (DEE). They were mixed with standard diesel in proportions of 10%, 15% and 20% respectively. Investigations were carried out to reduce the smoke emissions of stationary diesel engine with the above blends with minimum decrease in NO_x

emissions and minimum decrease in brake thermal efficiency. Design of experiments (DOE) method was employed to identify the experiments to be conducted on the engine. Three factors namely fuel additive, % volume of blend and injection timing was selected as influencing factors for the investigation. To critically examine the effect of influencing factors on the chosen objective, three levels were chosen for each factor. Taguchi's L_9 orthogonal array (OA) was used to reduce the number of experiments to be conducted. Through multi response optimisation technique, optimum combination of fuel additive, percentage volume of blend and fuel injection timing were determined to reduce the smoke emissions and NO_x emissions without much decrease in brake thermal efficiency.

STRUCTURAL AND MECHANICAL PROPERTIES OF MICROWAVE SINTERED CERAMIC COMPOSITE

M.Tamizh Milton Kalai,Mrs.I. Sharon Marishka[1], MR.P.Vijayasarathi[2]*
** Student, Department of Production Engineering, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India*
1Assistant Professor, Department of Production Engineering, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

The present scrutiny evaluates the effect of SiC particles dispersion on the microstructure and hardness of microwave sintering of Al_2O_3-SiC.Al_2O_3 reinforced by SiC was developed with the objective of improving hardness and fracture toughness. $Al_2O_3$is used as the matrix because of its superior mechanical properties. But, Al_2O_3 has low fracture toughness and low flexural strength. So, SiC added as reinforcement due to its high strength and high hardness. The results obtained from the hardness test could be used to evaluate the hardness and fracture toughness. The result shows that the hardness value lies between 2807 to 4900 MPa and Fracture toughness lies between 4.103 to 4.6615 MPa$\sqrt{m}$. The Microstructure of different specimens were studied Scanning Electron Microscope (SEM).In X-Ray Diffraction Test, X-Ray Diffracto gram projects the Highest Intensity Peak values of the composites.

ANALYSING EFFECT ON FORMING PROCESS IN ALUMINUM SHEET METALS

Ananthamula N Tejaswi,Mrs.I. Sharon Marishka[1], MR.P.Vijayasarathi[2]*
** Student, Department of Production Engineering, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India*
1Assistant Professor, Department of Production, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

To study the formability of the material "forming limit diagram"(FLD) is the key tool to

give forming properties of any material. The formability properties of known material can be used very effectively in any forming process. Here we are finding out the forming characteristics of aluminium by the help of FLD. This would help in letting us know the extreme resisting values of particular thickness aluminum sheets. The formability properties of aluminum sheet is found out using NAKAZIMA TEST. It is the simplest and well used method to determine forming limit diagrams. The principle of the Nakazima Test is based on the deformation of sheet metal blanks of different geometries using a hemispherical drawing punch until fracture occurs.The sheet was marked with a close packed array of circles using photo printing techniques. The blank is then stretched over a punch, resulting in stretching of circles into ellipses. The major and minor axes of an ellipse represent the two principal strain directions in the stamping. The percentage changes in these strains are compared in the diagram. Thereafter, the forming limit diagram is formed and required formability properties are obtained.

COMPARATIVE STUDY OF AIR FLOW ANALYSIS OF A CAR LOUVRE

Mrs.I. Sharon Marishka[1], MR.P.Vijayasarathi[2],S A Wilfred Rajkumar[3]

** Student, Department of Production Engineering, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India*

1Assistant Professor, Department of Production Engineering, Velammal Engineering College, Chennai – 600066, Tamil Nadu, India.

2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

3 Assistant Professor, Department of Mechanical Engineering, Dr.MGR Educational & research institute Universsity,Maduravoyal,Chennai

Louvre is a shield protecting the radiator and engine compartment from any damage ,but at the same time allowing maximum air to flow from outside to inside the engine. Existing profiles, though dissipates the heat effectively, are not much successful in arduous terrains like deserts and semi-deserts during extreme temperature conditions. The ideal profiling of a radiator cover should allow maximum airflow from outside to inside. This study deals with the comparison of different radiator Louvre profile using CFD analysis.

ANALYZING THE BIO FILTRATION SWALES AND STRIPS USED IN BIO FILTRATION

S.Gejendhiran[1],Yuvarajan D[2]

1 Assistant Professor, Nandha Engineering College, Erode - Perundurai Main Road, Erode – 638052.

2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Air streams can be purified by passing them through a biologically active filter medium to destroy organic and inorganic contaminants. It is especially effective for low concentrations of VOCs and

inorganic chemicals (e.g., sulfur compounds). It has proven effective for mixed waste air streams and especially applicable for odor abatement. In this study, one biofiltration strip and six swales treat highway runoff, while two strips treat runoff from maintenance yards (for pretreatment for infiltration trenches). Runoff is captured in drain inlets and routed to the swales, while strips receive sheet flow directly from the pavement. Swales are conveyance channels where storm water flow passes through the grass. Strips are broad surfaces with a grass cover that allows storm water to flow in relatively thin sheets. Biofiltration swales and strips are providing useful information about vegetation that can filter storm water pollutants effectively in dry areas with little rainfall. These biofiltration devices can also be used for pretreating storm water going to infiltration BMPs (i.e., trenches and basins). This "treatment train" approach can increase the overall effectiveness of storm water treatment.

AERODYNAMIC STUDY OF BUMPERS AND REAR WINGS

S.Gejendhiran[1],Yuvarajan D[2]
1 Assistant Professor, Nandha Engineering College, Erode - Perundurai Main Road, Erode – 638052.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Aerodynamics can be used to control the handling of a car in high-speed corners (greater than approximately 60 mph). Aerodynamic components push down on the car, or create downforce, which helps the tires maintain better traction. The two main aerodynamic upgrades are front bumpers and rear wings. While these two components can increase cornering speeds when installed on your car, they will also increase drag and limit your top speed. Improvements at the front can be made by ensuring the ‘front end is made as a smooth, continuous curve originating from the line of the front bumper’. Making the screen more raked (ie. not as upright) ‘tends to reduce the pressure at the base of the screen, and to lower the drag’. However, much of this improvement arrives because a more sloped screen means a softer angle at the top where it meets the roof, keeping flow attached. Similar results can be achieved through suitably curved roofs.

STUDY AND ANALYSIS OF INDUSTRIAL ROBOTS

S.Vignesh[1], N. Balaji[2]
1Assistant Professor, Department of Mechanical Engineering, Mahendra Engineering College, Mallasamudram-637503.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

Modern industrial robots are true marvels of engineering. A robot the size of a person can easily carry a load over one hundred pounds and move it very quickly with a repeatability of +/-0.006

inches. Furthermore these robots can do those 24 hours a day for years on end with no failures whatsoever. Though they are reprogrammable, in many applications (particularly those in the auto industry) they are programmed once and then repeat that exact same task for years. These robots can be powered by electric motors, electric actuators, hydraulic motors, hydraulic cylinders, or pneumatic cylinders. In some cases the electric motors rotate ball-screw mechanisms or rack and pinion systems to provide linear motion from the rotary motion of the motor. Sometimes linear stepper motors are also used to provide linear motion. In other applications motors are used with gears, belts, chains, and pulleys to provide a variety of linear and rotational motion.

INVESTIGATION ON TELESCOPIC GAUGES MEASUREMENTS

S.Vignesh[1], N. Balaji[2]
1Assistant Professor, Department of Mechanical Engineering, Mahendra Engineering College, Mallasamudram-637503.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

These are a range of gauges that are used to measure a bore's size, by transferring the internal dimension to a remote measuring tool. They are a direct equivalent of inside callipers and require the operator to develop the correct feel to obtain repeatable results. Twisting the knurled end of the handles locks the gauges; this action is performed to exert a small amount of friction on the telescopic portions of the gauge (the smaller diameter rods found at the T head of the gauge). Once gently locked to a size slightly larger than the bore, the gauges are inserted at an angle to the bore and slowly brought to align themselves radially, across the hole. This action compresses the two anvils where they remain locked at the bores dimension after being withdrawn. The gauge is then removed and measured with the aid of a micrometer or vernier calliper.

INVESTIGATION OF WORKING OF GAS TURBINE

S.Vignesh[1], N. Balaji[2]
1Assistant Professor, Department of Mechanical Engineering, Mahendra Engineering College, Mallasamudram-637503.
2 Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

A gas turbine, also called a combustion turbine, is a rotary engine that extracts energy from a flow of combustion gas. It has an upstream compressor coupled to a downstream turbine, and a combustion chamber in-between. Energy is added to the gas stream in the combustor, where air is mixed with fuel and ignited. Combustion increases the temperature, velocity and volume of the gas flow. This is directed through a nozzle over the turbine's blades, spinning the turbine and powering the compressor. Energy is extracted in the form of shaft power, compressed air and thrust, in any

combination, and used to power aircraft, trains, ships, generators, and even tanks.

BIODIESEL SAFETY AND BEST MANAGEMENT PRACTICES

N.Mukilarasan[1],J.Ravikumar[2]
1 Assistant Professor, Department of Mechanical Engineering, Jeppiaar SRR Engineering College, Chennai – 631604, Tamil Nadu, India.
2Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

This paper mainly to address the processing and safety issues associated with making biodiesel fuel. Biodiesel is a clean, renewable fuel that can be made from various biomass oil feed stocks such as waste vegetable oil, yellow grease, animal fats, and virgin vegetable oils. Small-scale biodiesel production has been growing due to higher fuel prices, a desire for energy independence, and interest in environmentally friendly renewable fuel production. Although the biodiesel manufacturing process is fairly straightforward, there are several aspects of biodiesel production that need careful attention to detail for a productive, safe, and environmentally sound practice. First, some chemicals used could pose serious risks to the operator or to the environment, unless the proper precautions are taken for storage, process safety, handling, ventilation, and use. Second, disposal of glycerol by-product and waste water generated from biodiesel production could cause environmental harm, unless approved practices are used. Finally, operators need to pay close attention to the quality of the biodiesel produced and proper storage to avoid costly engine problems or excessive emissions during use.

DESIGN AND SIMULATION AUTOMOBILE ACTIVE SUSPENSION SYSTEM

N.Mukilarasan[1],J.Ravikumar[2]
1 Assistant Professor, Department of Mechanical Engineering, Jeppiaar SRR Engineering College, Chennai – 631604, Tamil Nadu, India.
2Assistant Professor, Department of Mechanical Engineering, Jeppiaar institute of technology, Kunnam , Sriperumpudur, Chennai – 631604, Tamil Nadu, India.

An active suspension system has been proposed to improve the ride comfort. A degree-of-freedom (DOF) system is designed and constructed on the basis of the concept of a four-wheel independent suspension to simulate the actions of an active vehicle suspension system. The purpose of a suspension system is to support the vehicle body and increase ride comfort. The ride comfort is improved by means of the reduction of the body acceleration caused by the car body when road disturbances from smooth road and real road roughness. The main aim of suspension system is to isolate a vehicle body from road irregularities in order to maximize passenger ride comfort and retain continuous road wheel contact in order to provide road holding. The project work aims at developing an active suspension for the quarter car model of a passenger car to improve its

performance. Suspension systems have been widely applied to vehicles, from the horse-drawn carriage with flexible leaf springs fixed in the four corners, to the modern automobile with complex control algorithms.

MODELING AND ANALYSIS OF TEMPERATURE DISTRIBUTION AND THERMAL CYCLES ON A 316L STAINLESS STEEL JOINT DURING LASER WELDING

A. Jayanthi [a], *K. Suresh Kumar* [b]
[a] *Department of Physics, Jeppiaar Institute of Technology, Chennai, Tamil Nadu -631604*
[b] *P.T.Lee Chengalvaraya Naicker College of Engineering and Technology, Tamil Nadu, India-631502*

A three-dimensional analytical model was used to predict the temperature distribution and thermal cycles of a 2 mm thick 316L stainless steel during laser welding process. The welding parameters such as input power, welding velocity, various thicknesses and at various time steps are predicted the temperature distribution and thermal cycles of a 2 mm thick 316L stainless steel of moving laser heat source during welding process. The optimized laser welding parameters such as laser input power and welding velocity from the analytical modeling are used to weld the 2 mm thick 316L stainless steel using pulsed laser. The experimental observations are correlated with the results obtained from analytical modeling for welding of 2 mm thick 316L stainless steel and found very close association with each other.

OPTIMIZATION OF PARAMETERS FOR AISI 316L STAINLESS STEEL DURING LASER KEYHOLE WELDING BY AN ANALYTICAL MODEL

A. Jayanthi [a], *K. Suresh Kumar* [b]
[a] *Department of Physics, Jeppiaar Institute of Technology, Chennai, Tamil Nadu -631604*
[b] *P.T.Lee Chengalvaraya Naicker College of Engineering and Technology, Tamil Nadu, India-631502*

A three-dimensional analytical model used to optimize the laser power and welding velocity of a 2 mm thick 316L stainless steel during laser welding process. The welding parameters such as input power and welding velocity were altered in order to reach the full penetration of a 2 mm sample during welding process. The penetration depth and breadth of the thermal profile approached by the melting point of the sample that provide the sufficient data to find the keyhole structure of a weld sample. Thus, optimization of laser power and welding velocity are very useful to select laser power and its speed of an actual welding process that helps to reduce the number of trials, cost and time, also, ensure the full penetration depth in the weld joints.

AN ANALYTICAL MODEL FOR ESTIMATION OF THERMAL CYCLE AND COOLING RATE OF STAINLESS STEEL JOINTS DURING WELDING PROCESS

A. Jayanthi [a], *K. Suresh Kumar* [b]
[a] *Department of Physics, Jeppiaar Institute of Technology, Chennai, Tamil Nadu -631604*
[b] *P.T.Lee Chengalvaraya Naicker College of Engineering and Technology, Tamil Nadu, India-631502*

An analytical model proposed for prediction of thermal cycles and cooling rates are of stainless steel joints during welding process. Thermal cycles are the estimation of temperature distribution with respect to time during welding process that measured in the direction of welding and as well as radial direction from the centreline weld. The cooling rates are the estimation of fall of temperature with time of a transient heat source during welding. It is directly influencing the microstructure at the heat-affected zone and weld pool that plays vital role in strength and durability of the weld samples. Therefore, the risk of welding joint failures can be controlled by controlling thermal cycle and cooling rate through operational parameters optimizations.

OPTIMIZATION OF REMOVAL OF LEAD BY BIOSORPTION ON PARTHENIUM STEM POWDER USING BOX-BEHNKEN DESIGN

C.Kavitha
Professor, Department of Chemistry, Jeppiaar Institute of Technology, Sriperumbudur, Chennai – 631604
ckavitha@jeppiaarinstitute.org

In this paper, the studies on removal of Pb (II) by adsorption on Parthenium stem powder as adsorbent. Experiments were conducted based on a rotatable Box-Behnken design (BBD) and analyzed using response surface methodology (RSM). The biosorption process was investigated as a function of three independent factors (i) initial solution pH (4-5),(ii) initial lead concentration (15-25 mg/l) and (iii) biomass dosage (20-40 g/l). The optimum conditions for the lead biosorption were found to be 5 mg/l, 20 mg/l and 30 mg/l, respectively, for initial solution pH, initial lead ion concentration and biomass dosage Batch adsorption experiments were carried out to examine the effect of various parameters such as agitation time, pH of the aqueous solution, initial concentration, adsorbent dosage and temperature on biosorption. The kinetic studies showed that the adsorption process was very fast and equilibrium was reached after about 50 min of contact time. The pseudo-first-order Lagergren equation, pseudo second-order rate equation and second order rate equation were used to describe the kinetic adsorption process. Thermodynamic parameters were determined at different temperatures. The negative values of free energy change indicated the spontaneous nature of adsorption process.

BIOCOMPATIBLE NANO COMPOSITE COATING ON 316L STAINLESS STEEL SURFACE FOR BONE IMPLANT APPLICATION

C.Kavitha
Professor, Department of Chemistry, Jeppiaar Institute of Technology, Sriperumbudur, Chennai – 631604

This work is mainly concerned about the influence of nano titanium dioxide addition into nano hydroxyapatite to get more adhesion coating on 316L stainless steel by electrophoretic deposition method. An adherent thin nano composite coating was obtained on metal surface at 30 V and 2 minutes sintering at 700°C. Surface morphology and surface topography were characterized by

XRD, FESEM with EDS and surface profilometer studies respectively. The adhesion strength of the composite coatings was evaluated using tape test method and mechanical strength measured by Vickers microhardness test. Further, the corrosion behavior of the coated and uncoated samples was tested in Hank's solution using electrochemical impedance spectroscopic and cyclic potentiodynamic polarisation studies. In vitro study carried out with MC3T3-E1 osteoblast cell. The nano composite coated sample exhibited higher adhesion, enhanced corrosion resistance with improved cell attachment and more cells proliferation compared to uncoated sample, which controlled the release of metal ions into the biological system.

STAINING OF FLEECE DRAPERY WITH SUSTAINABLE TINTS ATTAINED FROM SWEET INDRAJAO

C. Kavitha
Professor, Department of Chemistry, Jeppiaar Institute of Technology, Sriperumbudur, Chennai – 631604
ckavitha@jeppiaarinstitute.org

In the long run, synthetic tints were found to be harmful to the chemicals. As a result natural tints have come to be used for their many intrinsic values. The main reason being, then availability of local plants as the main source of natural colorants. Their easy availability in the country being zero cost – effective and planted for other purposes are the main reasons for utilizing them as natural tints. Almost all the parts of the plants, namely stem, leaves, fruits, seeds, barks etc are used for extracting natural colour. In addition, they are antimicrobial antifungal, insect – repellant deodorant, disinfectant and they also have medicinal values. The perspective of this research is to explore *Sweet Indrajao.L* which has been found to have good ultrasonic potential as a stain plant. The stain uptake as well as the fastness properties of the fleece drapery was found to enhance when metal mordant was used in conjugation with ultrasonication for the extract of *Sweet Indrajao***.**

NONAUTONOMOUS SOLITON INTERACTION IN EXTERNAL POTENTIAL

S.Vijayalekshmi[1] , M.S.Manirajan[2]*
Department of Physics, Jeppiaar Institute of Technology,Sriperumbudur 631604, India
Department of Physics, University College of Engineering, Anna University, Ramanathapuram 623513, India

In this paper, we derive the laxpair of a generalized INLSE and the analytical multisoliton solutions are obtained by the Darbaux transformation method. Through choosing different parameters, the influences of them on soliton interactions are discussed. Interactions between solitons propagating in different directions are analyzed. Results are beneficial to the effective transmission of information in the optical system.

SOLITORY WAVE PROPAGATION IN INHOMOGENEOUS FIBER WITH PHASE MODULATION

S.Vijayalekshmi[1] M.S.Manirajan[2]*
Department of Physics, Jeppiaar Institute of Technology,Sriperumbudur 631604, India

Department of Physics, University College of Engineering, Anna University, Ramanathapuram 623513, India

The variable coefficient nonlinear Schrödinger (VCNLS) equations can be used to describe the propagation of nonlinear waves in inhomogeneous media. The nonuniformities influence various effects such as loss (or gain), dispersion, phase modulation, etc. Therefore it is desired to obtain the stable soliton transmission in fibers and the question arises: how to properly manage the dispersion and nonlinearity in fibers with external potentials even in the presence of dissipation and/or gain? The solution for this problem is discussed in this paper. The main feature of the system considered includes gain/loss parameter which is directly related with phase modulation term. Hence, phase modulation can be controlled through gain/loss and vice versa.

INVESTIGATION ON NONAUTONOMOUS SOLITONS IN GENERALIZED EXTERNAL POTENTIAL

S.Vijayalekshmi
Department of Physics, Jeppiaar Institute of Technology,Sriperumbudur 631604, India

Optical soliton transmission has been greatly improved by using the dispersion management technique in nonlinear optics. Considering the importance of such dispersion managed systems, in this research work, a generalised nonautonomous NLS system with an external generalised potential is proposed to analyse the control of solitons for an inhomogeneous media. By choosing the inhomogeneous nonlinear coefficient and the dispersion parameter suitably solutions for specific soliton management systems such as boomerang solitons, oscillatory solitons are found.

TOXICITY OF NITRATE IN THE KORTALAIYAR RIVER, TAMILNADU, INDIA

N. Bhuvana *[,a], *P. Prakash* [b]
[a] *Department Of Chemistry, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
bhuvana_jerin@yahoo.com
[b] *Department Of Chemistry, Thiagarajar College, Madurai, Tamilna*du

Urban and industrial activities in metropolitan cities all over the world have grown very rapidly in recent years and a significant amount of contaminants are introduced in aquatic regions especially in the rivers. The contamination level is increasing day-by day without any major process to control the level of pollution. This type of contamination disturbs the aquatic environment severely and affects the adjacent area with major ecological degradation. A variety of physico-chemical effects takes place in aquatic region with major environmental changes with no effective monitoring system and it also makes it difficult to draw any major conclusions on the long-term effects of human activities. The objective of the present study is to assess the contamination level in Kortalaiyar River by Nitrate. Kortalaiyar river plays an inevitable role in the water supply, food security and economic development of the Chennai city. Water samples were collected from 30

locations starting from Poondi Lake to Ennore creek to analyze the concentration of Nitrate in it.In the present study nitrate in the river Kortalaiyar varies from 6.6 ppm to 9.3 ppm in PRM-1, 7.0 ppm to 9.6 ppm in PRM-2, 6.8 ppm to 10.2 ppm in POM-1 and 7.2 ppm to 10.2 ppm in POM-2.

ACCUMULATION OF COPPER IN THE KORTALAIYAR RIVER, TAMILNADU, INDIA

N. Bhuvana *[,a], *P. Prakash* [b]
[a] *Department Of Chemistry, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
bhuvana_jerin@yahoo.com
[b] *Department Of Chemistry, Thiagarajar College, Madurai, Tamilnadu*

Copper is a widely distributed trace element as most copper minerals are relatively insoluble and is sorbed to solid phases, hence only low concentrations are normally present in natural waters. Kortalaiyar river is one the three rivers that flow through the Chennai Metropolitan. Thirty samples of water were collected from 30 locations along the river. Copper was analyzed in the river waters using Atomic Absorption Spectroscopy. In the present study the concentration of Copper varies from 0.001ppm to 1.800 ppm in Pre-Monsoon, PRM-1, 0.001 ppm to 1.9 ppm in PRM-2, 0.001 ppm to 1.8 ppm in Post- Monsoon, POM-1 and 0.001 ppm to 1.6 ppm in POM-2. Highest concentration of 8 ppm is also observed in the industrial end of the river.

COMPUTATION OF POLLUTION INDICES IN STUDY OF THE KORTALAIYAR RIVER, TAMILNADU, INDIA

N. Bhuvana *[,a], *P. Prakash* [b]
[a] *Department Of Chemistry, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
bhuvana_jerin@yahoo.com
[b] *Department Of Chemistry, Thiagarajar College, Madurai, Tamilnadu*

Several approaches to determine heavy metal contamination and classification by quantitative indexes were attempted.to infer anthropogenic input from geogenic input. The pollution Indices are an effective tool to evaluate the extent of pollution in the Kortalaiyar River. The pollution indices assessed in the present study are Geo-accumulation index (Igeo) by Muller's method, Enrichment Factor (EF) by Ergin's method and Contamination Factor (CF) by Hakanson's method. It is evident from the pollution indices that heavy metals contribute to contamination of the river much more than major metals. Chromium metal adds to the pollution of the river by being a major factor of pollution. Unlike Chromium, other heavy metals show contamination in few sampling locations.

SUPERSTABILITY OF THE FUNCTIONAL EQUATION $f[(xy)^t] = tf(xy)$

K.Ravi *[,A], *S. Suresh* [B]
[A] *Department Of Mathematics, Sacred Heart College, Tirupattur, Tamilnadu*
[B] *Department Of Mathematics, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
Suresh25187@gmail.Com

In this paper is to find the differentiable solution of the functional equation $\boldsymbol{f}[(xy)^t] = tf(xy)$ and also to investigate the superstability of the above functional equation in the conventional sense as well as in the sense of Ger.

ORTHOGONAL STABILITY OF THE NEW GENERALIZED QUADRATIC FUNCTIONAL EQUATION

K.Ravi *[A], *S. Suresh* [B]
[A] *Department Of Mathematics, Sacred Heart College, Tirupattur, Tamilnadu*
[B] *Department Of Mathematics, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
Suresh25187@gmail.Com

In this paper, the authors investigate the Hyers - Ulam - Rassias stability and J. M. Rassias mixed type product- sum of powers of norms stability of a orthogonally generalized quadratic functional equation of the form $f(nx+y)+f(nx-y)\,n[f(x+y)+f(x-y)]+2n(n-1)f(x)-2n(n-1)f(y)$

Where f : A -> B be a mapping from a orthogonality normed space A into a Banach Space B, $\perp$ is orthogonality in the sense of Ratz with $x \perp y$ for all x, y ∈ A.

FUZZY STABILITY OF A NEW MIXED TYPE ADDITIVE AND QUADRATIC FUNCTIONAL EQUATION

K.Ravi *[A], *S. Suresh* [B]
[A] *Department Of Mathematics, Sacred Heart College, Tirupattur, Tamilnadu*
[B] *Department Of Mathematics, Jeppiaar Institute Of Technology, Chennai, Tamilnadu.*
Suresh25187@gmail.Com

In this paper, we obtain the general solution and investigate the fuzzy stability of a new mixed type additive and quadratic functional equation

$$f(2x+y)+f(2x-y)=2[f(x+y)+f(x-y)]+2[f(x)+f(-x)]-[f(y)+f(-y)]$$

ON THE MEASUREMENT OF FINITE GRAPH

J. Arokia Mary[1], *R Amuda*[2]
[1]*Department of Mathematics, DMI College of Engineering, Chennai, Tamilnadu*
[2] *Department of Mathematics, Jeppiaar Institute of Technology, Chennai, Tamilnadu*

A lot of vertices settle a graph if each vertex is exceptionally controlled by its vector of separations to the vertices in G . The measurement of a graph is the base cardinality of a settling set. In this paper we study the measurement of unending diagrams with the end goal that all its vertices have limited degree. We give vital conditions for those graph to have limited measurement and portray vast trees with limited measurement. We likewise build up certain outcomes about the measurement of the Cartesian result of limited and unbounded graph, and give the measurement of the Cartesian result of a few groups of diagrams.

FUZZY STRETCH ESTEEMED MULTI MEASURES BASED DYNAMIC FOR POSITIONING HIGHLIGHTS IN MULTI-MODULAR 3D FACE ACKNOWLEDGMENT

J. Arokia Mary[1], R Amuda[2]
[1]Department of Mathematics, DMI College of Engineering, Chennai, Tamilnadu
[2] Department of Mathematics, Jeppiaar Institute of Technology, Chennai, Tamilnadu

arokia.john@gmail.com

This paper depicts a use of multi-standards dynamic (MCDM) for multi-modular combination of highlights in a 3D face acknowledgment framework. A dynamic procedure is sketched out that depends on the presentation of multi-modular highlights in a face acknowledgment task including a lot of 3D face databases. Specifically, the fluffy span esteemed MCDM method called TOPSIS is applied for positioning and settling on the most ideal decision of multi-modular highlights at the choice stage. It gives a conventional component of benchmarking their exhibitions against a lot of models. The procedure shows its capacity in scaling up the multi-modular highlights.

AN EPQ MODEL FOR FALLING APART THINGS WITH INVENTORY LEVEL-SUBORDINATE INTEREST AND PASSABLE DEFERRAL IN INSTALMENTS

C.Senthilkumar[1], M.Ranjith Kumar[2]
[1]Assistant professor, Department of Mathematics, Kingston College Of Engineering, Vellore, Tamilnadu
[2]Assistant Professor, Department of Mathematics, Jeppiaar Institute of Technology, Chennai, Tamilnadu
csenthilkumarmaths@gmail.com

This article builds up a stock model for exponentially falling apart things under states of passable delay in instalments. In contrast to the current related models, we expect that the things are recharged at a limited rate. The interest pace of the things is subject to the current stock level. The goal is to decide the ideal renewal approaches so as to expand the framework's normal benefit per unit of time. A straightforward strategy is appeared for finding the ideal arrangement of the model dependent on the inferred properties of the goal work. What's more, we conclude some recently distributed outcomes as the extraordinary instances of the model. At last, numerical models are utilized to represent the proposed model. Some administrative bits of knowledge are likewise derived from the touchy investigation of model boundaries.

THE IMPACTS OF EXPANSION AND TIME-ESTIMATION OF CASH ON A EOQ MODEL WITH AN ARBITRARY ITEM LIFE CYCLE

C.*Senthilkumar[1], M.Ranjith Kumar[2]*
[1]Assistant professor, Department of Mathematics, Kingston College Of Engineering, Vellore, Tamilnadu
[2]Assistant Professor, Department of Mathematics, Jeppiaar Institute of Technology, Chennai, Tamilnadu
csenthilkumarmaths@gmail.com

For quite a few years, the Economic Order Quantity (EOQ) model and its varieties have gotten a lot of consideration from specialists. As of late, there has been an examination concerning an EOQ model consolidating an arbitrary item life cycle and the idea of time-estimation of cash. This paper broadens the past examination in a few regions. To start with, we research the effect of inflation on the decision of recharging amounts. Second, the unit cost, which has been coincidentally discarded

in the past examination, is remembered for the target capacity to appropriately demonstrate the issue. Third, we consider the ordinary conveyance as an item life cycle notwithstanding the exponential appropriation. Fourth, we build up a reproduction model which can be utilized for any likelihood conveyance.

ALLOCATION OF OPTIMAL CONSUMER RESOURSCE IN CLOUD COMPUTING

[1]Dr. K.V. Karthikeyan, [2]Dinesh Kumar. M
[1,2]Professor, Department of CSE, Jeppiaar Institute of Technology

In Large scale distributing resource cloud computing is a pool available to users via the Internet. Resources, such as power for processing, storage database, software requirement, and network bandwidth, are represented to all the cloud consumers public accessible utility services. So, in a cloud computing, the cloud providers can offer two provisioning plans for computing resources, such as reservation and on-demand plans. The cost of utilizing computing resources can cheaper than that provisioned by on-demand plan, Because of cloud consumer because they have to pay to provider in advance. To overcome this problem OCRP algorithm is proposed for formulating a stochastic model.

MULTIPLE MAIL TRANSMISSON THROUGH MIME TECHNIQUE

[1]Hemamalani. J, [2]Angeline. J. A
[1,2]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

In this paper there are few ways of having different email accounts accommodated in one place to handle and to protect Email accounts. Suppose the user has 10 mail account and don't know how to manage all the mail account. In this case I have proposed the new technique of creating the multiple folder and it can be accessed through the server. Through this all the mail can be accessed through the folder created in the server. There is no need of retrieving all the list of messages.

SURVEILLANCE SYSTEM THROUGH VIDEO IMAGE PROCESSING

[1]Angeline. J. A, [2]Pavithra J, [3]Rabisha R
[1]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology
[1,2]Student, Department of CSE, Jeppiaar Institute of Technology

In the recent days, object tracking in video surveillance has gained the attention of many researchers. many attractive surveys. Using camera, moving object or multiple objects can be captured and tracked over a time. This paper proposes a Surveillance system through Video Image Processing that detects and tracks humans as well as vehicles. Objects detection, classification, tracking and identifying the behavior is studied in this paper. The internet protocol network camera and a video recorder are used to detect moving objects robustly against noises and environment. The RGB background color modeling is used to extract moving regions and the

noises are eliminated using the morphology techniques. The images are labeled and grouped using blob-labeling techniques. With this analysis, the object is identified in real time and provides a surveillance system.

PERFORMANCE ANALYSIS OF MEDIA CLOUD-BASED MULTIMEDIA SYSTEMS WITH RETRYING FAULT-TOLERANCE TECHNIQUE

[1]Dayana. R, [2]Kavitha Priya C J
[1,2]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

With advances of wireless communication and growth of multimedia services, there are strong demands for cloud computing. Due to the significant amount of computation required to number of internet or mobile users to access various types of multimedia tasks on any device anytime and anywhere, the cloud-based multimedia services are executed by the different type of resources in the cloud environment. The multimedia services are Video on demand, real-time conferencing, photo sharing and editing, image search, live broadcast, etc. In this paper cloud-based multimedia system trying to avoid the fault tolerance using the fault recovery technique. We also investigated the relationship between the percentile process time and each processing node failure rate. At last, the comparison results shown that the performance of a cloud service using the retrying technique can be better or worse than that of cloud services using the check-pointing technique depending on the required processing time, failure rate, and recovery rate of the check-pointing technique.

SECURED & EFFICIENT POLICY UPDATE IN CLOUD FOR BIG DATA ACCESS CONROL

[1]Muthuvel. S, [2]Neelakandan. S
[1,2]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

Attribute-Based Encryption (ABE) is a promising technique to ensure the end-to-end security of big data in the cloud. However, the policy updating has always been a challenging issue when ABE is used to construct access control schemes. A trivial implementation is to let data owners retrieve the data and re-encrypt it under the new access policy, and then send it back to the cloud. This method, however, incurs a high communication overhead and heavy computation burden on data owners. In this paper, we propose a novel scheme that enabling efficient access control with dynamic policy updating for big data in the cloud. We focus on developing an outsourced policy updating method for ABE systems. Our method can avoid the transmission of encrypted data and minimize the computation work of data owners, by making use of the previously encrypted data with old access policies. Moreover, we also propose policy updating algorithms for different types of access policies. Finally, we propose an efficient and secure method that allows data owner to check whether the cloud server has updated the cipher texts correctly. The analysis shows that our policy updating outsourcing scheme is correct, complete, secure and efficient.

E-COMMERCE IN FOOD SHOPPING

[1]*K.S Priya,* [2]*Muthuvel. S,* [3]*Muthukumaran*
[1]*Assistant Professor, Department of CSE, St. Joseph College of Engineering*
[2,3]*Assistant Professor, Department of CSE, Jeppiaar Institute of Technology*

Though there is a drastic change in the Technology, there is nothing solve the problem of "Hunger". Different varieties of food products are now available in the market. But not all the food products are good for health. There are even hybrid varieties. But still some people prefer organic foods directly from the farm fields. But they cannot get it or do not know the way to get it. They believe and buy the food products sold by the vendors. This must change. Main objective of this project is to deliver the food products directly from the farm field to the people. This can be done like Zomato deliveries, Swiggy deliveries etc. People can order the food products or ingredients to prepare food from the Mobile Android App developed by this project. They can search the product in the app and can order it. Every order should be at least at the minimum cost of Rs.50. By this process, people who are preferring for 'Organic food' will get benefitted. Also, they will feel free and relieved to buy the original 'Organic foods.

SECURE DATA TRANSFER USING PUSH E-MAIL TECHNOLOGY

[1]*Dr. K.V. Karthikeyan,* [2]*Kavitha Priya C J,* [3]*Arulratnaugave V*
[1,2]*Assistant Professor, Department of CSE, Jeppiaar Institute of Technology*
[3]*Student, Department of CSE, Jeppiaar Institute of Technology*

This project there was some way to have different email accounts integrate all at one place so It would be easy to handle and manage multiple Email accounts and here my wish takes a form of reality with mail fetcher. Think about having four to five multiple email accounts and then think about the hassle of managing and fetching mail from each email account. There comes mail fetcher to the rescue, with the new technology mail fetcher allows you to fetch mail from your, mail accounts. You will able to read email from additional accounts, all in one place, and take advantage of all mail fetcher concepts great features. Mail fetcher reduces systems calls since there is one file. Messages will be retrieved entirely even if don't need the attachment parts. To get the message list and the basic information, we have to send one command per message, which will result in high latency. To avoid retrieving the message each time you want to access them a unique identifier to recognize the messages. We can get the unique identifiers of messages by making a request. The mailboxes can be accessed using the server. That means that we can access our messages from everywhere. There are multiple folders are there in the fetcher. We can retrieve only MIME parts in the fetcher. Don't even have to retrieve the whole list of messages.

SPEECH RECOGNITION SYSTEM BASED ON WIRELESS AUTOMATION

[1]*Revathi. R,* [2]*Prabha S,* [3]*Angeline. J. A*

[1,2]*Assistant Professor, Department of Information Technology, Sri Ramanujar Engineering College*
[3]*Assistant Professor, Department of CSE, Jeppiaar Institute of Technology*

The home automation must make use of latest technological advancements. This project aims to style and develop a home automation system which is wireless and will be controlled in multiple ways to provide more accessibility and control over the system. On the opposite hand, ZigBee wireless modules are want to implement the wireless system. Supported the received data at the wireless receiver related to the appliances desired switching operations are performed. This technique must be trained of voice command just one occasion.

WIRELESS ACCESS POINTS DETECTION USING NESSUS METHOD

[1]*Dayana. R,* [2]*Dinesh Kumar*
Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

The detection of wireless access points has become a major challenging task in major enterprises. This paper proposes the techniques to efficiently detect the wireless access points using Nessus method. A large campus networks are exposed to security breaches from remote intruders. The conventional method of finding an unauthorized access points is time consuming. Security auditors using a Nessus vulnerability scanner uses a plugin named "Access Point Detection" that detects the WAPs and to achieve the scan, TCP ports 1-100 and 443 are enabled. To reduce the scan time TCP ports 21, 80, and 443 alone are enabled. The simplicity with the latest signatures will also detect Cisco and D-Link wireless access points. Nessus can also be used to identify the device's ID with File transfer protocol. This system also utilizes maps and histograms to discover, analyze, and manage vulnerabilities in a network.

A NOVAL SCHEME FOR FILTERING FALSE DATA INJECTION ATTACKS IN NETWORKED SYSTEM

[1]*M. Lakshmanan,* [2]*Muthukumaran S*
[1]*Assistant Professor, Department of IT, Indra institute of Engineering and Technology*
[2]*Assistant Professor, Department of CSE, Jeppiaar Institute of Technology*

The networked systems are monitored and controlled through sensors and actuators have become an important task in many environment and infrastructure applications. Wireless sensor networks sense the data through sensors and transmit the sensed data from one node to another node. CPNS consisting of sensor nodes, actuators, controller, and wireless networks have been widely used to monitoring and control of entities in the physical world. In Cyber-Physical Networked Systems (CPNS), the adversary can inject false measurements to the controller through compromised sensor nodes , which not only threaten the security of the system, but also consumes network resources. To deal with this issue, a number of en-route filtering schemes have been designed for wireless sensor networks in the past. In this paper, We propose a Polynomial-based Compromise-

Resilient En-route Filtering scheme (PCREF), which can filter false injected data effectively. Particularly, PCREF adopts polynomials instead of MACs (Message Authentication Codes) for endorsing measurement reports to achieve the resilience to attacks. Each node stores two types of polynomials: authentication polynomial and check polynomial, derived from the primitive polynomial, and used for endorsing and verifying the measurement reports.

CLOUD BASED ONLINE BLOOD MANAGEMENT SYSTEM

[1]Padma Priya. [2]R, Jasmine Naineta, [3]Dayana. R
[1,2]Assistant Professor, Department of ECE, Saveetha Engineering College
[3]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

The software system is an online blood bank management system that helps in managing various blood bank operations effectively. The project consists of a central repository containing various bloods. Deposits available along with associated details hosted on windows-based cloud server. These details include blood type, storage area and date of storage. These details help in maintaining and monitoring the Blood deposits. The project is an online system that allows checking whether required blood deposits of a group are available in the blood bank efficiently using cloud server. Moreover, the system also has added features such as patient name and contacts, blood banking and even need for certain blood group is posted on the website to find available donors for a blood emergency. This online system can be Developed on .net with azure cloud platform and supported by an SQL database to store blood and user specific details. The main aim of this project is to save lives of people by providing blood online using technology. Also, this project is developed by 3 perspectives (i.e.) Hospital, Blood Bank, and Patient/Donor. This project requires an internet connection and also through this project users/patients can view the information of nearby donors, hospitals, and blood banks easily from their mobile itself.

AGRICULTURE SHOPPING USING ARTIFICIAL INTELLIGENCE

[1]Eswaran. R, [2]Muthukumaran. S
[1]Assistant Professor, Department of IT, Satkthi Mariamman Engineering College
[2]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology

The proposal is to make the farmers to buy good quality products and reduce the effort of farmers in buying the agricultural products like fertilizers, pesticides, seeds. This will help the farmers in buying the good quality products with the correct price. The mobile application named Farm key which performs the same operation. But there are some drawbacks like no regional languages, and it is hard for the users to search in English. So in this proposal we are going to add voice commands, so that it will be easier to search. It will improve the farmer's lifestyle where

technology will be used by them and will reduce their burden.

A TRUSTED NEIGHBOUR RECCOMMDATION SYSTEM USING EFFICIENT DATA MINING APPROACH

[1]Muthuvel. S, [2]Neelakandan. S
[1]Assistant Professor, Department of CSE, Jeppiaar Institute of Technology
[21]Assistant Professor, Department of IT, Jeppiaar Institute of Technology

This paper gives the overview of trustable based recommendation system. In large database we get data or information by using Data Mining. Nowadays, People gather information related through online only. When we plan to go some unknown place, we check previous rating of places and reviews. The given rating is not a trustable one and we cannot say who will give the rating or review for that places. We cannot surely get proper trusted recommendation. From that two main problem arise DATA SPARSITY and COLD START. In this project we take 124 Hotels details and we provide individual rating like (Room, clean-lines, value, check-in, service & Business). Which is useful for user's needs. To overcome the two problem, we connect through Social Networks so, that we get rating from Friends and Friends of Friends. We get rating from social network which is 70% trustable one and we update the rating or review when we visit place. Further implementation is connected through Mobile application and represents in the graphical forms.

OMS- OFFLINE MESSAGING SYSTEM THROUGH FIREBASE OR NFC TECHNOLOGIES.

R.Annamalai, Assistant Professor Jeppiaar Institute of Technology
H.Shine, Assistant Professor Indira Institute of Technology
J.Aruna Jasmine Assistant Professor,Peri Institute of Technology

The development of the mobile phone has been rapid. From being a device mainly used for phone calls and writing text messages the mobile phone of today, or commonly referred to as the smartphone, has become a multi-purpose device. Because of its size and thermal constraints there are certain limitations in areas of battery life and computational capabilities.The Android-based instant message application is developed based on the Android operating system, using Eclipse with a plugin. The programming language is Java. The project is tested on an Android Emulator which is a tool that allows developers to easily test an application without having to install the application on a real device.The Android-based instant message application uses the client/server architecture. The client can add a registered user to be his/her friend and send or receive a text message while the friend is on-line. Currently, the communication in this application is using TCP.

A MySQL database is used as a backbone to store the user information.Unlike WhatsApp, WeChat and other chatting application, this application is based on Artificial Intelligence through that it will predict whether the file, audio, video, etc., is already seen or downloaded by the custom user.

Based on this, it will download the files automatically or resist it or it will notify the user, media files are scrutinized based on the parameter like size, length, format of the media files. Incase if the user seen the media and dropped it, the android-based instant messenger will identify whether the user seen it or not by comparing the special code addressed to codec while sharing media files. It also has repository to store regional, frequent, messaging style automatically through which messaging made much simpler, and many more advancements are made possible by integrating the Artificial intelligence with chatting application, personal assist is also there to help the users.We can use this application without internet based on OMS- Offline messaging system through firebase or NFC Technologies.

BLUE BRAIN –THE FUTURE GENERATION

Annamalai R ,Assistant Professor ,Jeppiaar Institute of Technology
Aruna Jasmine J Assistant Professor , Peri Institute of Technology

Human brain is the most valuable creation of God. The man is intelligent because of the brain. “Blue brain” is the name of the world’s first virtual brain. That means a machine can function as human brain. Today scientists are in research to create an artificial brain that can think, response, take decision, and keep anything in memory. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man .So, even after the death of a person we will not lose the knowledge, intelligence, personalities, feelings and memories of that man that can be used for the development of the human society.

CREATING THE JOY OF SIGHT FOR THE BLIND USING ARTIFICIAL INTELLIGENCE

Annamalai R ,Associate Professor ,Jeppiaar Institute of Technology
Prabhakaran N ,Assistant Professor , Mammallan Institute of Technology

Blindness is more feared by the public than any other ailment. Artificial vision for the blind was once the stuff of science fiction. But now, a limited form of artificial vision is a reality .Now we are at the beginning of the end of blindness with this type of technology. In an effort to illuminate the perpetually dark world of the blind, researchers are turning to technology. They are investigating several electronic-based strategies designed to bypass various defects or missing links along the brain's image processing pathway and provide some form of artificial sight.

PROCESSING DATA USING UAPI BY RANDOM KEY GENERATION IN CLOUD

Annamalai R Associate Professor ,Jeppiaar Institute of Technology

Aruna Jasmine Assistant Professor , Peri Institute of Technology

This paper presents a new Map Reduce cloud service model, (User Application Interface) UAPI, for provisioning cost-effective Map Reduce services in a cloud. In contrast to existing Map Reduce cloud services such as a generic compute cloud or a dedicated Map Reduce cloud, UAPI has a number of unique benefits. First, UAPI is designed to provide a cost-effective solution to efficiently handle Map Reduce production workloads that have a significant amount of interactive jobs. Second, unlike existing services that require customers to decide the resources to be used for the jobs, UAPI powers Map Reduce profiling to automatically create the best cluster configuration for the jobs. While the existing models allow only a per-job resource optimization for the jobs, UAPI implements a globally efficient resource allocation scheme that significantly reduces the resource usage cost in the cloud. Third, UAPI powers unique optimization opportunities when dealing with workloads that can withstand some slack. By effectively multiplexing the available cloud resources among the jobs based on the job requirements using secret key generation, UAPI achieves significantly lower resource usage costs for the jobs. In this paper, we discuss the cost-inefficiencies of the existing cloud services for MapReduce and propose a User Application Interface called UAPI that aims at a globally optimized resource allocation to minimize the infrastructure cost in the cloud data center.

DEEP LEARNING FOR SEISMIC STAGE RECOGNITION AND PICKING IN THE DELAYED REPERCUSSION ZONE

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor ,Jeppiaar Institute of Technology

The expanding volume of seismic information from long haul constant checking spurs the advancement of calculations dependent on convolutional neural system (CNN) for quicker and progressively solid stage location and picking. Notwithstanding, a lot less examined locales come up short on a lot of marked occasions required for conventional CNN approaches. In this paper, we present a CNN-based Phase-Identification Classifier (CPIC) intended for stage discovery and singling out little to medium estimated preparing datasets. At the point when prepared on 30,146 marked stages and applied to one-month of constant accounts during the post-quake tremor successions of the 2008 MW 7.9 Wenchuan Earthquake in Sichuan, China, CPIC recognizes 97.5% of the physically picked stages in the standard inventory and predicts their appearance times with a five-times improvement over the ObsPy AR picker. What's more, not normal for other

CNN-based methodologies that require a great many preparing tests, when the disconnected preparing set size of CPIC is diminished to just a couple thousand preparing tests the precision remains above 95%. The sending of CPIC takes under 12 h to pick appearances in 31-day chronicles on 14 stations. Notwithstanding the inventory stages physically picked by examiners, CPIC discovers more stages for existing occasions and new occasions missed in the list. Among those extra identifications, some are affirmed by a coordinated channel strategy while others require further examination. At long last, when tried on a little dataset from an alternate locale (Oklahoma, US), CPIC accomplishes 97% precision after adjusting just the completely associated layer of the model. This outcome recommends that the CPIC created in this investigation can be utilized to distinguish and pick P/S appearances in different areas with no or least named stages.

A SCHEME ON BALANCING LOAD BASED ON DEEP-LEARNING IN IOT

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor ,Jeppiaar Institute of Technology

Expanding the current Internet with interconnected items and gadgets and their virtual portrayal has been a developing pattern as of late. The Internet of Things (IoT) commitment is in the expanded estimation of data made by the quantity of interconnections among things and the change of the handled data into information to support society. Advantage because of the administration constrained by correspondence between objects is presently being expanded by individuals who utilize these administrations, in actuality. The sensors are sent to screen at least one occasions in an unattended domain. An enormous number of the occasion information will be created over some stretch of time in IoT. Subsequently, the heap adjusting convention is basic contemplations in the structure of IoT. Accordingly, we propose a specialist Loadbot that estimates arrange burden and procedure basic setup by breaking down a lot of client information and system load, and applying Deep Learning's Deep Belief Network technique so as to accomplish productive burden adjusting in IoT. Additionally, we propose an operator Balancebot that forms a neural burden expectation calculation dependent on Deep Learning's Q-learning technique and neural earlier group. We address the key capacities for our proposed conspire and reproduce the effectiveness of our proposed plot utilizing scientific examination.

IOT-BASED INTELLIGENT FITNESS SYSTEM

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor ,Jeppiaar Institute of Technology

With the worldwide financial development, wellness club is growing quickly on the planet. In the mean time, the wellness business is blasting particularly for urban office populace. In the conditions, individuals need progressively logical and down to earth direction to manufacture their

body. In this paper, we structure an Internet of things (IoT) based wellness framework to screen the wellbeing statuses of exercisers. The framework gives direction to exercisers. When working out, the activity information is gathered by sensors and wellness band. Along these lines, these information are sent to the framework to be dissected. With the assistance of man-made consciousness innovation, the framework can remove valuable direction data for clients' weight training. In this paper, we will portray the subtleties of the framework and further connect with the execution innovations. The structure of this sort of framework is a pattern for the future wellness application.

A DEEP LEARNING FRAMEWORK FOR PREDICTING RESPONSE TO THERAPY IN CANCER

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor ,Jeppiaar Institute of Technology

A significant test in malignancy treatment is anticipating clinical reaction to hostile to disease drugs on a customized premise. Utilizing a pharmacogenomics database of 1,001 malignancy cell lines, we prepared profound neural systems for expectation of medication reaction and evaluated their presentation on different clinical associates. We exhibit that profound neural systems beat the present status in AI structures. We give a proof of idea to the utilization of profound neural system based structures to help accuracy oncology procedures.

BIG DATA AND DISTRIBUTED COMPUTING: ADVANCEMENT OPENINGS AND DIFFICULTIES

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor ,Jeppiaar Institute of Technology

Big Data has risen in the previous not many years as another worldview giving plentiful information and chances to improve or potentially empower exploration and choice help applications with exceptional incentive for computerized earth applications including business, sciences and designing. Simultaneously, This paper overviews the two boondocks – Big Data and distributed computing – and audits the favorable circumstances and results of using distributed computing to handling Big Data in the advanced earth and important science spaces. From the parts of a general presentation, sources, challenges, innovation status and examination openings, the accompanying perceptions are offered: (I) distributed computing and Big Data empower science revelations and application improvements; (ii) distributed computing gives significant answers for Big Data; (iii) Big Data, spatiotemporal reasoning and different application areas drive the progression of distributed computing and pertinent advances with new prerequisites; (iv) inherent spatiotemporal standards of Big Data and geospatial sciences give the source to discovering specialized and hypothetical answers for advance distributed computing and preparing

Big Data; (v) open accessibility of Big Data and handling ability present social difficulties of geo spatial noteworthiness and (vi) a mesh of developments is changing Big Data into geo spatial exploration, designing and business esteems. This audit presents future developments and an exploration plan for distributed computing supporting the change of the volume, speed, assortment and veracity into estimations of Big Data for neighborhood to worldwide computerized earth science and applications.

UTILIZATION OF DEEP LEARNING FOR EMERGENCY RESPONSE AND DISASTER MANAGEMENT

Aruna Jasmine Assistant Professor , Peri Institute of Technology
Annamalai R Associate Professor, Jeppiaar Institute of Technology

Every year, normal emergency and catastrophes, for example, seismic tremors, avalanches, flood and tropical storm sway wide territories of the world particularly local locations and man-made structures like structures. So as to diminish the negative effects of such occasions, openness to (close) ongoing and exact geo spatial data of corrupted zones is so essential at beginning times. In this examination, the utilization of profound learning calculations is acquainted with distinguish influenced regions, for example, structures. Additionally, a cutting edge structure including the blend of the procured pictures by Unmanned Aerial vehicles (UAVs) and profound learning calculations is proposed for (close) ongoing fiasco mapping. This structure is called Deep Eye which it is used the Convolutional Neural Networks (CNNs) to quick examination and programmed understanding of UAV pictures so as to figure exact areas just as the level of debased territories. The Deep Eye structure could be fundamentally valuable to remove a ton of data from gained pictures over corrupted territories in a brief timeframe in crisis reaction and calamity the executives applications.

TWITTER SENTIMENT ANALYSIS WITH DEEP CONVOLUTIONAL NEURAL NETWORKS

Daya Mary Mathew [1], Annamalai R [2]
[1]Project Manager, NTT Data, [2]Associate Professor, Jeppiaar Institute of Technology

This paper describes our deep learning system for sentiment analysis of tweets. The most contribution of this work may be a new model for initializing the parameter weights of the convolutional neural network, which is crucial to coach an accurate model while avoiding the necessity to inject any additional features. Briefly, we use an unsupervised neural language model to coach initial word embeddings that are further tuned by our deep learning model on a foreign supervised corpus. At a end , the pre-trained parameters of the network are wont to initialize the model. We train the latter on the supervised training data recently made available by the official system evaluation campaign on Twitter Sentiment Analysis organized by Semeval-2015. A comparison between the results of our

approach and therefore the systems participating within the challenge on the official test sets, suggests that our model might be ranked within the first two positions in both the phrase-level subtask A (among 11 teams) and on the message-level subtask B (among 40 teams). This is often an important evidence on the sensible value of our solution.

EVALUATION OF BIDIRECTIONAL LSTM FOR SHORT-AND LONG-TERM STOCK MARKET PREDICTION

Daya Mary Mathew [1], Sonia Jenifer Rayen [2]
[1]Project Manager, NTT Data, [2] Assistant Professor, Jeppiaar Institute of Technology

Recently, there has been a rapidly growing interest in deep learning research and their applications to real-world problems. during this paper, we aim at evaluating and comparing LSTM deep learning architectures for short- and long-term prediction of monetary statistic . This problem is usually considered together of the foremost challenging real-world applications for time-series prediction. Unlike traditional recurrent neural networks, LSTM supports time steps of arbitrary sizes and without the vanishing gradient problem. We consider both bidirectional and stacked LSTM predictive models in our experiments and also benchmark them with shallow neural networks and straightforward sorts of LSTM networks. The evaluations are conducted employing a publicly available dataset for stock exchange closing prices

SENTIMENT ANALYSIS OF TWITTER DATA USING DEEP LEARNING MODIFIED NEURAL NETWORK

S.Neelakandan,AP/IT,Jeppiaar Institute of Technology
R.Annamalai, AP/IT,Jeppiaar Institute of Technology
S.Velmurugan AP/Vel Tech MultiTech Dr.RR & Dr.SR Engineering College

The developing wonders of internet based life, for example, Facebook, Twitter, LinkedIn, and Instagram, with every one has its own qualities and its usages. Growth in the area of opinion mining and sentiment analysis has been rapid and aims to explore the opinions or text present on different platforms of social media through machine-learning techniques with sentiment, subjectivity analysis or polarity calculations. The widespread and different types of information on Twitter make it one of the most appropriate virtual environments for information monitoring and tracking. This paper reports on the design of a sentiment analysis, extracting a vast amount of tweets. In Twitter everybody in the system does not really have a responded association with others. For this situation, the relationship is either coordinated or undirected. In this paper, we center around twitter for information investigation, where twitter is an internet organizing administration that empowers clients to send and peruse short 140-character messages called "tweets". Not with standing its exposure, twitter is open for unregistered clients to peruse and screen most tweets. Twitter is likewise a huge long range

interpersonal communication microblogging website. The enormous data given by twitter, for example, tweet messages, client profile data, and the quantity of adherents/followings in the system assume a noteworthy job in information examination, which consequently make most examinations research and look at different investigation methods to get a handle on the ongoing utilized innovations. In this paper, we take a gander at one such popular microblog called Twitter and build models for classifying "tweets" into positive, negative and neutral sentiment and give the efficient accuracy using Deep Learning Modified Neural Network (DLMNN) algorithm. The process includes data collection (tweets), pre-processing of data, feature extraction, classification of sentiment using machine learning algorithms.

AN EFFICIENT METHOD OF PREDICTING PHISHING WEBSITES USING MACHINE LEARNING ALGORITHM

S.Neelakandan,AP/IT,Jeppiaar Institute of Technology
R.Annamalai, AP/IT,Jeppiaar Institute of Technology
S.Velmurugan AP/Vel Tech MultiTech Dr.RR & Dr.SR Engineering college

Phishing assault is currently a major risk to individuals' every day life and systems administration condition. Through masking illicit URLs as genuine ones, assailants can initiate clients to visit the phishing URLs to get private data and different advantages. Powerful techniques for recognizing the phishing sites are desperately expected to lighten the dangers presented by the phishing assaults. As the dynamic taking in ability from huge informational collections, the neural system is generally used to distinguish the phishing assaults. Be that as it may, in the phase of preparing informational collections, numerous pointless and little impact highlights will trap the neural system model into the issue of over-fitting. This issue ordinarily causes the prepared model that can't adequately recognize phishing sites. So as to ease this issue, this paper proposes OFSNN, a compelling phishing sites location model dependent on the ideal component choice technique and neural system. In the proposed hybrid intelligent phishing website prediction approaches, the most influential features and the optimal weights of website features are heuristically identified with the genetic algorithm (GA) to help in increasing the accuracy of phishing website prediction. Accordingly, the. website features selected and weighted by the GA are utilised to train DNNs to accurately predict the phishing websites. The methodology can lessen the discovery time for setting a limit. Testing on a dataset containing a great many phishing URLs and real URLs, the exactness arrives at 98.99%, and the bogus positive rate is just 0.59%. By sensibly modifying the edge, the test results show that the recognition effectiveness can be improved.

AN AUTOMATED LEARNING MODEL OF CONVENTIONAL NEURAL NETWORK BASED SENTIMENT ANALYSIS ON TWITTER

S.Neelakandan,AP/IT,Jeppiaar Institute of Technology
R.Annamalai, AP/IT,Jeppiaar Institute of Technology
S.Velmurugan AP/Vel Tech MultiTech Dr.RR & Dr.SR Engineering college

Twitter has appear as a major micro-blogging website, having over 100 million users producing over 500 million tweets every day. With such large audience, Twitter has consistently tempt users to convey their opinions and position about any issue, brand, company or any other topic of interest. Twitter is a social media widely used by people to convey their opinions and display sentiments on different situations. Sentiment analysis is an technique to survey data and recover sentiment analysis that it embodies. Twitter sentiment analysis is an application of sentiment survey on data from Twitter (tweets), in series to remove attitude fetch by the user. In the past decades, the research in this field has consistently grown. The reason behind this is the testing format of the tweets which makes the handle difficult. The tweet format is tiny social media services which initiate a complete new dimension of communications like use of slang, abbreviations etc. In this paper, we aim to analysis on Twitter data's, to describing the methodologies adopted and comparative analysis of existing techniques for mining like lexicon based approaches. Also we used various machine learning algorithms to evaluate metrics like Naïve bayes, and Support vector Machine. We have also discussed applications of sentimental Analysis and general challenges on twitter.

ANALYSIS OF NATURAL LANGUAGE-BASED INTERFACE FOR QUERYING A VIDEO DATABASE PROCESSING

N. Prabhakaran, AP / IT, Maamallan Institute of Technology
S. Pradeep Kumar , AP/ IT, Rajalakshmi Institute of Technology
S. Neelakandan, AP / IT, Jeppiaar Institute of Technology

Make a characteristic language based interface for inquiry particular. This regular language preparing (NLP)- based interface lets clients. Detail inquiries as sentences in English by utilizing a grammatical feature (POS) labeling calculation. It sends the inquiries built as Prolog realities to the inquiry preparing motor to react to client questions. The framework sends the conclusive outcomes to customers. In our work is the requirement for a helpful and adaptable normal language-based interface to supplement the content based inquiry interface and the visual question interface of the Video framework, since determination of spatial inquiries utilizing text or visual interfaces isn't extremely simple for beginner clients. The POS-based example coordinating methodology we use in recognizing inquiries assists clients with indicating questions without adjusting to exacting guidelines. Grammatical feature labeling is the way toward increasing the words in a book with their comparing grammatical forms. Grammatical form labeling is the way toward increasing the

words in a book with their comparing grammatical forms.

ANALYSIS OF ONLINE DETECTION AND PREVENTION OF PHISHING ATTACKS

N. Prabhakaran, AP / IT, Maamallan Institute of Technology
R. Annamalai, AP / IT, Jeppiaar Institute of Technology
S. Elavarasi, AP / M.B.A., GRT Institute of Engineering and Technology

Phishing is another sort of system assault where the aggressor makes a copy of a current site page to trick clients in to submitting individual, budgetary, or secret key information to what they believe is their specialist organization's site. The idea is an end-have based enemy of phishing calculation, called the Link Guard, by using the conventional attributes of the hyperlinks in phishing assaults. The connection Guard calculation is the idea for finding the phishing messages sent by the phisher to get a handle on the data of the end client. Connection Guard depends on the cautious investigation of the qualities of phishing hyperlinks. Each end client is executed with Link Guard calculation. In the wake of doing so the end client perceives the phishing messages and can abstain from reacting to such sends. Since Link Guard is attributes based it can identify and forestall referred to phishing assaults as well as obscure ones. We proposed investigation is to distinguish that the phishing hyperlinks share at least one attributes. An end-have based enemy of phishing calculation which we call Link Guard, in view of the attributes of the phishing hyperlink. Since Link Guard is character-based, it can distinguish and forestall referred to phishing assaults as well as obscure ones. We have executed Link Guard in Windows XP, and our investigations show that Link Guard is light-weighted in that it expends almost no memory and CPU circles, and above all, it is powerful in distinguishing phishing assaults with negligible bogus negatives. Connection Guard distinguishes 195 assaults out of the 203 phishing chronicles gave by APWG without knowing any marks of the assaults.

RIDE SHARING SCHEME AND CARPOOLING IN AUTONOMOUS VEHICLES

[1]Annamalai R, [2]Sonia Jenifer Rayen
[1]Associate Professor, Jeppiaar Institute of Technology, [2]Assistant Professor, Jeppiaar Institute of Technology

City transport frameworks regularly battle to adapt to high volumes of traffic and become clogged, in spite of the utilization of different traffic the board techniques. The convergence of traffic around downtown areas brings about contamination and poor urban air quality, in spite of the fact that the expanding prominence of electric vehicles is enhancing these impacts. One purpose behind the developing force behind electric vehicles is the rise of versatility administrators, for example, vehicle sharing organizations, who target clients wishing to lease vehicles on a momentary premise. There is as of now quick development in single direction vehicle sharing, in which the vehicle can be dropped off at an alternate area to the pickup point. Significantly, single direction

vehicle sharing gives the open door for explorers to use vehicle partaking related to different modes, for example, open vehicle modes, for their excursion gave the imperative multi-purpose associations are available. This paper takes a gander at how single direction electric vehicle sharing frameworks can possibly become significant segments of future city transport frameworks. The future job of shared self-sufficient vehicles is likewise thought of.

UNIFORM EMBEDDING FOR EFFICIENT JPEG STEGANOGRAPHY

Sonia Jenifer Rayen,AP/IT,Jeppiaar Institute of Technology
Grace Winsolin.T, AP/IT,Jeppiaar Institute of Technology
Aruna Jasmine,AP,Peri Institute of Technology

Steganography is the science and art of covert communication, which aims to cover the name of the game messages into a cowl medium at the same time as achieving the least feasible statistical detectability. To this end, the framework of minimal distortion embedding is extensively adopted within the improvement of the steganographic system, wherein a properly designed distortion function is of vital importance. In this paper, a class of recent distortion features known as uniform embedding distortion feature (UED) is presented for both side-informed and non side-informed steady JPEG steganography. By incorporating the syndrome trellis coding, the great codeword with minimum distortion for a given message is decided with UED, which, in place of random modification, tries to spread the embedding modification uniformly to quantized discrete cosine transform (DCT) coefficients of all feasible magnitudes. In this way, less statistical detectability is achieved, thanks to the reduction of the average changes of the first- and second-order records for DCT coefficients as a whole. The effectiveness of the proposed scheme is verified with evidence received from exhaustive experiments using popular steganalyzers with various function sets at the BOSS base database. Compared with previous arts,the proposed scheme profits favorable performance in phrases of secure embedding capacity towards steganalysis.

SAFE DRIVING USING MOBILE PHONES

Sonia Jenifer Rayen,AP/IT,Jeppiaar Institute of Technology
Aruna Jasmine,AP,Peri Institute of Technology
Grace Winsolin.T, AP/IT,Jeppiaar Institute of Technology

As vehicle producers keep to increase their emphasis on safety with advanced motive force help systems (ADASs), we suggest a tool this is not simplest already in abundance however portable sufficient as well to be one among the best multipurpose devices which might be able to research and advise on safety conditions. Mobile smartphones nowadays are equipped with numerous sensors that can assist to aid in protection enhancements for drivers on the road. In this paper, we use the three-axis accelerometer of an Android-primarily based phone to document and analyze

various driving force behaviors and outside road situations that would potentially be dangerous to the health of the driving force, the neighboring public, and the automobile. Effective use of those information can train a doubtlessly risky driver on the way to accurately and effectively operate a vehicle. With real-time evaluation and auditory alerts of these factors, we can growth a driving force's overall recognition to maximize safety.

EFFECTIVE PRE-RETRIEVAL QUERY PERFORMANCE PREDICTION USING SIMILARITY AND VARIABILITY EVIDENCEZ

Sonia Jenifer Rayen,AP/IT,Jeppiaar Institute of Technology
Grace Winsolin.T, AP/IT,Jeppiaar Institute of Technology
Aruna Jasmine,AP, Peri Institute of Technology

Query overall performance prediction targets to estimate the best of answers that a search system will return in response to a selected query. In this paper we endorse a new family of pre-retrieval predictors primarily based on data at both the collection and record level. Pre-retrieval predictors are crucial because they may be calculated from data that is to be had at indexing time; they are consequently more green than predictors that incorporate information obtained from actual seek results. Experimental evaluation of our technique shows thatthe brand new predictors give greater steady overall performance than previously proposed pre-retrieval strategies across a selection of information sorts and seek tasks.

ENERGY-AWARE SCHEDULING OF MAPREDUCE JOBS FOR BIG DATA APPLICATIONS

Sonia Jenifer Rayen,AP/IT,Jeppiaar Institute of Technology
Grace Winsolin.T, AP/IT,Jeppiaar Institute of Technology
Aruna Jasmine,AP,Peri Institute of Technology

The majority of big-scale information in depth programs executed by using records facilities are based totally on MapReduce or its open-source implementation, Hadoop. Such programs are achieved on massive clusters requiring big quantities of strength, making the energy costs a widespread fraction of the records center's overall fees. Therefore minimizing the electricity intake while executing every MapReduce job is a important difficulty for records centers. In this paper, we propose a framework for enhancing the power efficiency of MapReduce applications, at the same time as pleasing the provider level agreement (SLA). We first model the problem of power-conscious scheduling of a unmarried MapReduce activity as an Integer Program. We then advise heuristic algorithms, called energy-conscious MapReduce scheduling algorithms (EMRSA-I and EMRSA-II), that discover the assignments of map and reduce responsibilities to the system slots in orderto reduce the electricity consumed whilst executing the application. We perform sizeable experiments on a Hadoop cluster to determine the power consumption and execution time for numerous workloads from the HiBench benchmark suite inclusive of TeraSort, PageRank, and K-

means clustering, and then use this statistics in an extensive simulation study to investigate the overall performance of the proposed algorithms. The results display that EMRSA-I and EMRSA-II are able to locate near gold standard process schedules eating approximately 40 percentage less energy on average than the schedules received through a not unusual practice scheduler that minimizes the make span.