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ICASET-18

4TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCE ENGINEERING AND TECHNOLOGY

Tiruchengode, Tamilnadu

16th & 17th March, 2018

Organized at:
Sengunthar College of Engineering

Published by:
Institute For Engineering Research and Publication (IFERP)

Preface

This book reports the Proceedings of the ***"4th International Conference on Applied Science Engineering and Technology" (ICASET-18)*** held at ***Sengunthar College of Engineering – Tiruchengode, Tamilnadu*** on the 16 & 17 March – 2018, in association with Institute ***for Engineering Research and Publication (IFERP)***.

The publishing department has accepted more than 197 abstracts. After an initial review of the submitted abstracts, 131 papers were presented at the conference and were accepted for publication in the Conference Proceedings. The topics that are covered in the conference include Applied Science Engineering and Technology. We would like to thank all the participants for their contributions to the conference and the proceedings.

Reviewing papers of the ***ICASET-18*** was a challenging process that relies on the goodwill of those people involved in the field. We would like to thank all the reviewers for their time and effort in reviewing the documents.

Finally, we would like to thank all the proceeding team members who with much dedication have given their constant support and priceless time to bring out the proceedings in a grand and successful manner. I am sure this ***ICASET-18*** proceeding will be a credit to a large group of people, and each one of us should be proud of its successful outcome…

ICASET-18

Chairman

Thiru. Jansons T.S. NATARAJAN

Chairman, Sengunthar Group of Institutions,
Tiruchengode.

Chairman Message

I am delighted to know that Association of ECE, Medical Electronics Engineering & EEE, Association of CSE, IT and Association of Mechanical Engineering of Sengunthar College of Engineering are organizing a combined International Level Conference by the name ICASET-2018 on 16th & 17th , March, 2018.I hope that this conference will provide a Technical forum for young minds from various colleges to exchange their ideas and to present results of research in current subject and plays a significant role for the development of creativity and innovation among the scholars. I wish “ICASET - 2018” – a grand success.

Secretary & Correspondent

Prof. A. BALADHANDAPANI M.A., M.Phil.,
Secretary & Correspondent,
Sengunthar Group of Institutions, Tiruchengode.

Secretary & Correspondent Message

To move along with fast changing scenario, the Department of CSE, ECE, EEE, IT, MECH and Medical Electronics Engineering Conduct ICASET - 2018, a international level Conference to exhibit the Talents of the Youth, Smart and Spirited students ICASET - 2018, is the platform for swapping you into bright and competitive world. On this auspicious occasion, I wish to congratulate the Principal, Head of the Departments, the Staff members and students for organizing ICASET – 2018 in a successful way. Let the Blessings of almighty shower on all of us to the efflorescence of ICASET – 2018 into a great success!. It is very happy to know that articles presented at ICASET – 2018 will be available for citation at reputed scientific repositories like science direct, research pedia and academic library.

CEO

Er. A.B. Madhan B.E., M.E (CAD/CAM).,

Chief Executive Officer,
Sengunthar Group of Institutions, Tiruchengode.

CEO Message

In this 4G technology era, the international Level Conference “ICASET - 2018” organized by the most demandable of CSE, ECE, EEE, Medical Electronics Engineering, IT & Mechanical Engineering made me feel exultant. The Conference ICASET – 2018 has become an annual event and is now attended by representatives from academia for Engineering disciplines and present with us each year.

Director – CRT

Mr. Aravind Tirunavukarasu
Director - Corporate Relation & Training,
Sengunthar Group of Institutions, Tiruchengode

Director – CRT Message

It is a wonderful opportunity to the students & Scholars to prove their caliber in their field of study. My best wishes to staff and students of ECE, Medical Electronics Engineering, EEE, CSE, IT, & Mechanical Engineering department of our institution to conduct this International Level Conference in a successful manner.

Principal

Dr. R.Satish Kumar, B.E., M.E., Ph.D.,
Principal,
Sengunthar College of Engineering, Tiruchengode

Principal Message

I am much elated that our Sengunthar College of Engineering is releasing a proceedings on the occasion of the International Level Conference ICASET – 2018 on 16th & 17th March 2018. I wish all Faculty members and students of the Departments who have engaged in organizing the conference for its grand success. I wish this conference ICASET – 2018 will kindle the spirit in the participants for developing their organizing skill, presentation skill and technical skill to address contemporary technological challenges for engineers. This is an opportunity for technocrats to keep abreast of Emerging Technologies

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From Director's Desk ....

Rudra Bhanu Satpathy.,
Director,
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** and in association with ***Sengunthar College of Engineering,*** Tiruchengode, Tamilnadu. I am delighted to welcome all the delegates and participants around the globe to ***Sengunthar College of Engineering, Tiruchengode, Tamilnadu*** for the ***"4th International Conference on Applied Science Engineering and Technology (ICASET-18)"*** Which will take place from ***16th -17th March '18***

Transforming the importance of Engineering, the theme of this conference is ***"4th International Conference on Applied Science Engineering and Technology (ICASET-18)"***

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator **(IFERP & SCE)** and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at ***Tiruchengode, Namakal (dt), Tamilnadu.***

Sincerely,

Rudra Bhanu Satpathy

ICASET-18

4th International Conference on Applied Science Engineering and Technology

Keynote Speakers

Dr. P.C.Srikanth.,

Professor,
Dept. of ECE.,
Malnad College of Engineering, Hassan
Vice Chairman - IEEE Photonic Society (USA),
Karnataka Chapter
INDIA

MESSAGES:

It is my pleasure to be the part of ***4th International Conference on Applied Science Engineering and Technology*** (ICASET-18) to be held on 16th - 17th March, 2018, being organized by ***IFERP and Sengunthar College of Engineering***, Tiruchengode, Tamilnadu. It is a well thought conference topic and hope to provide an opportunity to all research community and students to interact and share their experience and knowledge in their effort to convert scientific invention to technology.

The conference aims to facilitate the exchange of new ideas in the fields of Engineering & Engineering and to create a dialogue between developer and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges and the problem solution adopted in the field of Engineering, Science and Technologies.

BIOGRAPHY

P. C. SRIKANTH had his schooling in the same town and graduated in Electronics & Communication Engineering in 1987 from Malnad College of Engineering, Hassan, Karnataka, India securing a first class with Distinction. Dr. P. C. SRIKANTH completed his M.Tech. Degree in 1996 from Indian Institute of Technology, Kanpur in the area of LASERS, and obtained his Ph.D. from VTU Belgaum . He worked in the applied photonic lab IISc, Bangalore during his PhD. Starting as a Lecturer 1987, he became Assistant Professor In 1999, Professor in 2011 in Malnad College of Engineering, Hassan, Karnataka, India.

Dr. P. C. SRIKANTH is Senior Member IEEE (USA), Life Member ISTE, Currently he is s Vice Chairman - IEEE Photonic Society (USA), Karnataka Chapter Bangalore and Secretary of All India IEEE Photonic society. Dr. P. C. SRIKANTH had a deep involvement in Optical networks, was awarded as TOP 100 ENGINEERS-2011 by International Biographical Centre, St Thomas' Place, ELY, CB7 4GG Great Britain. He was Selected for Marquis Who's Who in Science and Engineering 2011-2012 (11th Edition), and also in 2016-2017 (12th Edition) New Providence, NJ 07974, USA.

He received Best paper award for the following papers, Modeling of Photonic Crystal Ring Resonator Temperature Sensor during 2014, A Novel Quantum Dot Automata Based Design For Multiplexers during 2015 and Detection of Fluoride Contaminated Water in Dental Applications during 2015 at International Conferences. His Research areas includes, Optical Communication and Networks, Photonic Band gap Crystals, Wireless Networks, LASERS and Quantum Electronics.

Dr. Vaibhav A Meshram.,

Professor,
Dept. of ECE.,
Dayananda Sagar University,
Bengaluru, India.

MESSAGES:

I welcome you to the 4th International Conference on Applied Science Engineering and Technology (ICASET-18). The event is going to be held on 16th - 17th March 2018 ,organized by IFERP-International and Sengunthar College of Engineering, Tiruchengode, Tamilnadu. The ICASET-18 provides an opportunity to research scholars, delegates and students to interact and share their experience and knowledge in technology application. ICASET-18 also provides an excellent international forum for sharing knowledge and results in Recent Challenges in Engineering Technology. The aim of the Conference is to provide a platform to the researchers and practitioners from both academia as well as industry to meet the share cutting-edge development in the field.

Institute For Engineering Research And Publication(IFERP) is India's one of the largest professional Organization meant for research development and promotion in the field of engineering and technology. IFERP is a paramount body which has brought technical revolution and sustainable development of science and technology. The IFERP-forum constitutes of professional wizards and overseas technical leaders who have left no stones unturned to reinforce the field of science, engineering and technology.

ICASET-18 was fortunate to attract a high interest among the community, and the high number of submissions provided an excellent opportunity for a high-quality program, but also called for a demanding and laborious paper evaluation process. The main program of ICASET-18 covers two days and includes streams of parallel sessions. The program is further enriched by keynote presentations offered by world-renowned researchers in the field. I am grateful to all authors who trusted us with their work; without them there would be no conference.

The final result would not have been possible without the dedication and hard work of many colleagues. Special thanks are due to the Track chairs, Session chairs, the members of the Technical Program Committees, the General Chair, and to all external Referees for the quality and depth of the reviews, and their sense of responsibility and responsiveness under very tight deadlines. Thank you all. We hope that the proceedings will serve as a useful reference of the state-of-the-art in application-specific systems research.

Dr. Vaibhav A Meshram

ICASET-18

4th International Conference on Applied Science Engineering and Technology

Tiruchengode, Tamilnadu, March 16th - 17th, 2018

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Acknowledgement

It is indeed a privilege to acknowledge and thank all the supporters and organizers of the International Conference on International Conference on **"4th International Conference on Applied Science Engineering and Technology (ICASET-18)"**, who contributed greatly to organize the conference successfully.

I wish to express my gratitude to my Directors at IFERP, for their guidance and supervision.

I would like to acknowledge and thank the Chief Guest for his/her valuable speech in ICASET-18. I extend my gratitude to our distinguished Keynote Speakers and to our Session Chairs. I also wish to thank the valuable services provided by the reviewers and editors. My special thanks to all of our Special Guests who so graciously accepted our Invitation to participate in the conference. I also wish to acknowledge and thank the sponsors of the conference whose financial support was extremely grateful.

I would like to specially thank our Advisory Committee Members from various Institutions whose continuous support have helped us plan and execute the conference successfully.

I am highly indebted to the contribution given by all the Students, Researchers & Industrialists to the conference.

Finally I would like to thank my dear Colleagues at IFERP and the Organizing Committee Members from Sengunthar College of Engineering who contributed gratefully to organize the conference successfully.

Conference Coordinator

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ICASET-18

4th International Conference on Applied Science Engineering and Technology

Tiruchengode, Tamilnadu

16th – 17th March, 2018

ABSTRACTS

ICASET - 18

Organized by

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and
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Plant Health Monitoring Using Image Processing

Vignesh Dhandapani., Department of Computer Science Engineering,VSB Engineering College, Karur, Tamil Nadu, INDIA
S. Remya., Department of Computer Science Engineering,VSB Engineering College, Karur, Tamil Nadu, INDIA
T. Shanthi., Department of Computer Science Engineering,VSB Engineering College, Karur, Tamil Nadu, INDIA
R. Vidhya., Department of Computer Science Engineering,VSB Engineering College, Karur, Tamil Nadu, INDIA

Abstract:--

Agriculture has become much more than simply a means to feed ever growing populations. It is very important where in more than 70% population depends on agriculture in India. That means it feeds great number of people. The plant diseases affect the humans directly or indirectly by health and also economically. Identification of the plant diseases is a very vital process to avoid the losses in both quality and quantity of leafs in agricultural production system. This Project deals with digital image processing techniques for detection, processing and identification of plant diseases. Diseases can affect at any part of plant especially in leaf. This Project includes only those methods to identify disease in leaves. Disease symptoms will be visible on leaves. It is very tough job to monitor the plant diseases manually. Manual plant disease monitoring system needs more processing time and expertise in the plant disease. So a fast, automatic and accurate approach to identify the plant diseases is needed. Hence, image processing techniques are used for the detection, processing and identification of plant diseases because these techniques are fast, automatic and accurate. Traditional method of checking diseases in plants is through visualization but this method is not so relevant in detecting the diseases associated with plants. So we can provide a better alternative, fast and accurate detection by using image processing techniques which can be more reliable than some other old methods.

Keywords:--

plant, disease, SVM, image processing, clustering, segmentation

Predictive Energy Saving In Search Engine Using Query Processing

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Brindha.T., Department Of Computer Science And Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India
Anbarasi.G., Department Of Computer Science And Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India
Anitha.G., Department Of Computer Science And Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India

Abstract:--

Web search engines are widely used by everyone in the world. They are searching their each and every queries through search engines. As a result, the number of users increases day by day. When the users increase, there is a need to increase the data centers and servers that holds the data. There may be some allocation or scheduling for every server in the data centers. When more number of users try to search for a same query, the processing load increases results in CPU overhead. In order to overcome this problem, we are introducing Predictive Energy Saving Online Scheduling Algorithm (PESOS) in web search engines not in the web servers. With the help of this algorithm the query is scheduled before processing. When a single query is to be processed million times, at that time this algorithm with the help of predictors, direct that query to the CPU's which are idle or which are having low process overhead. By redirecting we can improve the utilization of idle CPU's and can reduce the overhead in some CPU's. Hence overall performance is increased.

Education with Braille and Typography

Siddhesh Sushil Shirsekar., Sir J.J Institute of Applied Art, Mumbai, India

Abstract:--

The document targets towards analysis current braille characters, emphasis it's insufficiencies at instructing approaches aimed at little kids with recommend apparent results. This document concentrates largely upon the practice of braille and typography collectively with the fundamental braille writing system and is essential for constructive progress in association for blind kids. The principal thought at the back of the document was to develop a specimen for educational purpose for the blind kids in upcoming and thus providing an educational aid.

Keywords:--

Learning comfort; Braille and typography; Experiment; Legibility; Fundamental characters acquiring manuscript; ongoing exploration design.

A Brief Survey on Multilevel Inverter Topology

G.Yoga., PG Scholar,
B.Paranthagan., Associate Professor,
M.Marimuthu., Assistant Professor,
K.Kalyani., PG Scholar,

Abstract:--

In this paper, a brief review of different multilevel inverter topologies is discussed. An inverter is a power electronic device that adapts DC power into AC power at desired output voltage and frequency. Multilevel converter nowadays has become an interesting area in the field of industrial applications. Conventional power electronic converters are able to produce an output voltage that switches between two voltage levels only. In the view of Multilevel inverter topology (MLI), several DC voltage levels are added together to generate a continuous output waveform. Multilevel inverter generates the desired output voltage from several DC voltage levels at its input. The input side voltage levels are usually obtained from renewable energy sources, capacitor voltage sources, fuel cells, etc. The different multilevel inverter topologies are: Cascaded H-bridge converter, Diode clamped inverter and Flying capacitor multilevel inverter. Multilevel inverter nowadays is used for medium voltage and high power applications. The different field of applications includes its use as UPS, High voltage DC transmission, Variable Frequency Drives, in pumps, conveyors, etc. The disadvantage of MLI is the need for isolated power supplies, design complexity and switching control circuits.

Keywords:--

Multi-Level Inverter topologies, MLI, PWM, sinusoidal pulse width modulation, THD.

An Approach for Classification of Plant Leaf Disease Using Back Propagation Neutral Network

Mrs.V.Gayathri., Final Year PG CSE Student, Sree Sowdambika College of Engineering, Aruppukottai, Tamilnadu State, India
Mr.S.Sakkaravarthi., Asst. Prof of CSE, Sree Sowdambika College of Engineering, Aruppukottai, Tamilnadu State, India

Abstract:--

The project presents leaf disease diagnosis using image processing techniques for automated vision system used at agricultural field. In agriculture research of automatic leaf disease detection is essential one in monitoring large fields of crops, and thus automatically detects symptoms of disease as soon as they appear on plant leaves. Image processing techniques for this kind of decision analysis involves preprocessing, feature extraction and classification stage. At Processing, an input image will be resized and region of interest selection performed if needed. Here, color and texture features are extracted from an input for network training and classification. Color features like mean, standard deviation of HSV color space and texture features like energy, contrast, homogeneity and correlation. The system will be used to classify the test images automatically to decide leaf either abnormality or good one. For this approach, automatic classifier BPN with FF will be used for classification based on learning with some training samples of that two category. This network uses tangent sigmoid function as kernel function.feature extraction are using gray level co occurance matrix. Finally, the banana leaf are classified in BPN classifier

Keywords: Image processing, Genetic algorithm, Plant disease detection, Classification.

"A cloud based bus alert system for navigation of blind people"

R.Thendral., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.
A.Gayathri., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.
P.Kalaivani., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.
T.Kiruthika., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.

Abstract:--

Generally, journey in bus is a safe and comfort factor, but due to increase in number of buses and passengers its going be tougher and it will be more difficult for blind people to travel in bus. In this project, we proposed a novel system which can help blind people to find the bus at the bus stop. The main problem is navigation in real time traffic and checking the available buses along with their routes. In this project the blind person will get the information from the bus depository database. The data information is given to the user by his handset through earphones and the bus is tracked by GPS. The blind people in the bus station are provided with a smart phone which is connected by the cloud. The cloud will store the information about the bus number and timings. Blind people instructions goes to cloud platform then cloud will process the corresponding response then get the desired result. So that blind people can clearly know about bus location and timings of bus arrival to their respective places. This project we used Voice Activity Detector algorithm, Route Selection algorithm, DTW algorithm for location estimation.

Power Consumption in Smart Home Using Raspberry Pi

S.Prabakaran., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.
S.Sugambari., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India.
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T.Sujitha., Department of Computer Science and Engineering, V.S.B Engineering College, Karur-639111, Tamil Nadu, India

Abstract:--

Controlling home appliances by controlling electrical or electronic appliances remotely, things can be done automatically in the desired environment. Very first few implementations of Automation included simple security systems like alarms, but today automation can be applied in every system of gadgets. Using Home automation can make you do some very important things very easily and with higher controllability. Other than combining sensors and code to make things work automatically, Home automation can also be applied as an implementation of remote computing by giving remote access of the system to the user so that the user can monitor and control the system according to the need. In this project we have automated a 220v supply which can have the load of a bulb or any electrical device, we have used a temperature sensor to monitor the room temperature and the temperature can be seen on the web interface on any mobile device and we have also automated a small 5v D.C supply which can be used to attach a motor or can have various applications like controlling the latch of a door or it can be made to work sporadically by integrating it with sensors and readings. In this paper we developed project using raspberry pi as a server for operating the home electronic/electrical appliances automatically.

Cloud Security Using Privilege Separation Access Control

Ishwarya Nagendran., Department Of Computer Science and Engineering, K S Rangasamy College of Technology, Tiruchengode, Tamilnadu, India

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Abstract:--

Cloud computing has given the users the accessibility to deploy a number of files to the centralized cloud and share those with the number of users. The flexibility of cloud computing always comes with the hurdles of security concerns. The data owner always needs to encrypt the files before uploading and it must decrypt before end users. Usage of Group Key Controller is implemented for more security along with communication between two clouds by eliminating the drawbacks in the existing system.

Key words:--

Cloud Security, Data Sharing, Privacy Protection, Anti Collusion Data Sharing.

Design of Ultrasonic Water Flow Measurement

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Abstract:--

The main objective of this design is to flow measurement of water by using ultrasonic sound waves which is ideal for providing highly accurate measurement across wide-flow ranges as low as 1.4 GPM. The design is fully compatible with RF-Plug-in evaluation module for Wireless advanced metering infrastructure (AMI) which is used in Smart grid application. The implantation of demand response and demand control programs are supported by AMI, communication is performed well through wireless medium.AMI is an architecture for automated, two-way communication between a smart utility meter. The goal of an AMI is to provide utility with real-time data about power consumption by through Centralized routing which reduces operational cost and remote meter control. This system is based on single Ultra-Low power Ferroelectric RAM (FRAM) Microcontroller, processes optimized signal processing with the frequency of 1GHZ and 2.4GHZ for RF wireless communication modules. It consists of several devices featuring Embedded non-volatile FRAM, so called 16 bit CPU.FRAM Microcontroller provides speed, flexibility and reliability of flash, all at lower power consumption. On concluding that, the test results captured by varying the flow of water multiplies times throughout the day to validate the system across time and temperature, which consumes current of very low at 20UA.The accuracy error of the system is likely to be 1% of captured test data.

An IoT – Cloud Based ECG Tele Monitoring System for Smart Healthcare

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Abstract:--

Internet of Things (IoT) promises to revolutionize the health-care sector through remote, continuous, and non-invasive monitoring of patients. However, there are two main challenges faced by the IoT-enabled medical devices: energy efficiency and security/privacy concerns. An ultra-low power IoT platform for prediction of Cardiovascular Diseases using a Signal Quality Aware-IoT-enabled ECG telemetry system, intervals detection application has been presented that contains a level-crossing ADC and alert physician for emergency through SMS. It is helpful for the physician to analysis the heart disease as easy and accurate. We are developing a continuous ECG monitoring system by which people can check their ECG signal even at their home, identify any problem in heart or identify cardiovascular diseases and alert the physician for emergency. The size of system is small and it requires less maintenance and operational cost.

Moving Object Detection by Using Fast Corner and Regular Features of Optical Flow Algorithm

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Abstract:--

In this paper, The detection of human face from images plays a vital role in Computer vision, cognitive science and Forensic Science. The various computational and mathematical models, for classifying face including Scale Invariant Feature transform (SIFT) and Dominant Rotated Local Binary Pattern (DRLBP) have been proposed yields better performance. This is done by pre-processing the face image at first and then extracting the face features using SIFT. Then the detection of human faces is done using Optical flow. The process of combining SIFT and DRLBP perform better rather using separately. The face tracking stage is based on Optical Flow algorithm. Optical Flow is implemented in the proposed framework with two feature extraction methods, Fast Corner Features, and Regular Features.It also relies on a pixel-level feedback scheme that automatically adjusts internal sensitivity to change and update rates. Our approach continuously monitors both local model fidelity and segmentation noise to guide these adjustments, allowing for fast responses to intermittent dynamic background motion. As such, it can be effectively used in complex surveillance scenarios presenting many different challenges simultaneously

Keywords:

Moving object detection, optical flow, Scale invariant feature transform (sift), Dominant Rotated Local Binary Pattern(DRLBP)

Pervasive Cloud Based Healthcare Data Processing In Smart Cities

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Abstract:--

Nowadays, hospitals and clinics are using cloud computing to store the patient details. It is accessed by professional such as doctor and nurse in the hospitals. It can help the professionals to make the treatment in correct way. Access the information in remote location is necessary for the treatment to any patient. It is available in the cloud to access the information. Some security risks are involved in the m-health service. In today's world, cloud computing play a vital role in storing much information to access that in remote location. We can access the stored information from anywhere. Sometimes the information is stolen or modified by some hackers or intruders. To make a data secure in cloud we use optimal asymmetric encryption padding algorithm. Optimal Asymmetric Encryption Padding is a type of data encryption that produces a cipher text. The OAEP algorithm is used to process the original text to asymmetric encryption which uses oracle G. Treatment details stored in the cloud to reduce the patient from keeping the record safe in their daily life.

Experimental Analysis of Single Walled Carbon Nanotubes- Biocomposites

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Abstract:--

In this study, a technique is presented for developing constitutes models for polymer composite systems with single walled carbon nanotubes (SWNT). Because the polymer molecules are on the same size scale as the nanotubes, the interaction at the polymer/nanotube interface is highly dependent on the local molecular structure and bonding. It is proposed herein that the nanotube, the local polymer near the nanotube, and the nanotubes polymer interface can be modeled as an effective continuum fiber by using an equivalent-continuum modeling method. The effective fiber serves as a means for incorporating micromechanical analyses for the prediction of bulk mechanical properties of SWNT/polymer composites with various nanotube lengths, concentrations and orientations. This experiment results the importance of composites in aviation industry and also explains in details about carbon nanotubes composites that can be used in aircraft structures. Considerable growth has been seen in the use of biocomposites in the automotive and decking markets over the past decades. The dispersion of nanotubes in composites has been investigated as a means of deriving new and advanced engineering materials, these composite materials have been formed into fibers and thin films and their mechanical and electrical properties determined. The remarkable properties of carbon nanotubes offer the potential for fabricating conducting polymers without impairing the other desirable polymer properties. Aircraft wing is made up of SWNT-biocomposites, which is allowed to test in a wind tunnel. These results in the determination of drag force and pressure distribution. The strength of the wing can be increased by using this biocomposites materials in recent works at laboratories, SWNTs have been dispersed in polymer and pitch solutions using high energy ultrasonic probes.

Human body sensor health monitoring system in the Fusion of iot and cloud computing.

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Abstract:--

Human body is one of the greatest creations of god. There are certain times where the body condition needs to be checked and monitored continuously or on a timely basis. It can be a normal healthy human or a patient with certain deficiencies, anyone could be taken into account. Here in this project work we propose a model where an individual's body parameters are monitored and the monitored values are then transmitted via CLOUD to a remote location to a doctor or anyone who is related to the patient. IoT sensors are interconnected to a microcontroller and the microcontroller further to CLOUD is the concept.

Android enabled waste management system

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Abstract:--

With rapid urbanization, industrialization and population growth in India, waste management is becoming the key challenge for state governments and local municipal bodies. It will seriously affect the society and the quality of life of people. Waste collection is one of the important services provided by corporations that require huge investment and execution of this operation is high-priced. The garbage containers that are placed at public places are found to be overflowing frequently due to increase in the daily waste disposal. In this research, Android enabled waste management system using GSM network is proposed to determine filled status of the garbage container and whenever the level of the garbage reaches the threshold limit it provides the communication link between coordinator and the server.

TOP SCORER - Improving user data and information access using Boolean and Wild Card algorithm over Android application

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Abstract:--

The Android is a growing technology which have started to fulfil need with lots of application to make things handy. Top scorer application deals with both the faculty members and the students, and make the notes become more portable and handy. In our application faculty member by using their login they upload or maintain the notes in web server through mobile. These notes can be able to view or downloaded by the students who had already registered and saved in the form of pdf in android mobiles. By using web methods, we upload and download data from the web server through internet. We also provide chat application to the registered students to ask any queries from their respective staff to uploaded the notes in the webserver. Our application will be more compact and it is supported by most of the android mobiles.

EBV: Expectation Based Validation for Vehicle-To-Vehicle Communication Using 3des

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Abstract:--

In vehicular systems, communicate correspondences are basically critical, the same number of security related applications depend on single-bounce guide messages communicate to neighbor vehicles. Be that as it may, it turns into a testing issue to plan a communicate verification conspire for secure vehicle-to-vehicle communication. Particularly when an expansive number of reference points touch base in a brief span, vehicles are powerless against calculation based Denial of Service (DoS) attack that unreasonable signature check depletes their computational assets. In this paper, we propose a proficient communicate confirmation conspire called Expectation based Validation (EBV) to guard against calculation based DoS attack, as well as oppose parcel misfortunes caused by high portability of vehicles. Rather than most existing confirmation conspires, our EBV is a proficient and lightweight plan since it is principally based on symmetric cryptography. To additionally lessen the confirmation delay for some crisis applications, EBV is intended to misuse the sender vehicle's capacity to foresee future reference points ahead of time. What's more, to counteract memory-based DoS attack, EBV just stores abbreviated re-keyed Message Authentication Codes (Macintoshes) of signatures without diminishing security. We dissect the security of our plan and reproduce EBV under changing vehicular system situations. The outcomes show that EBV quick checks very nearly 99% messages with low stockpiling cost in high-thickness activity situations as well as in lossy remote conditions.

Keywords:--

VANETs, broadcast communication, signatures, DoS attacks, expectation based validation

Effective Web Search using HAPIT Algorithm

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Abstract:--

Nowadays, in IT industries several aspects of information retrieval with focus on ranking and user-friendly nature of web search engine are used. This proposed HAPIT work integrates Hubs & Authorities, Page Ranking, HITs, which has several concepts and components of an information retrieval system than existing system. This work also discusses an important theoretical models of IR and how IR systems are evaluated. This work compared with existing case studies of the available search engines and its problems in common. In future, the work is extracted with upcoming trends in search based on image search, location search.

Video Dehazing and Defogging Method Using Multiscale Guided Filter

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Abstract:--

Fog is a type of cloud, which touches the ground, fog may be dense thick or thin, based on dense and thin fog the visibility of human varies. It limits our ability to view other objects on the road side in foggy weather. It just creates an illusion leading to misjudging the distance between objects causing road accidents. During the process of condensation, water molecules combine with each other to focus the liquid droplets. Hence during night time when light is intended on the water droplet, it scatters the light in all the direction, and some of the light is even scattered towards the vision of the driver, so it will reduce the possibility of viewing the foreground details, this process is called back scattering of light or backscattered veil. Proposed work deals with the Radiation fog which causes night time visibility problem. Fog distorts our perception of speed, it makes difficult to distinguish between moving objects and stationary objects, hence leading to loss of life. Hence we need a method to detect the fog and tackle with it. So we propose a method to detect the fog using Multi-scale guided filter approach. In this method calculate the scene radiance by using guided filter for selected frames. Finally create refined transmission map to provide dehazed or defogged images

Fabrication of Shaft Driven Bicycle

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Abstract:--

The main gist of this project is to develop a chainless bicycle. An ordinary bicycle uses a chain drive system is less convenient during off road conditions and angular transmission. The shaft driven bicycle that is developed will have a shaft which has modified material than the previous shaft driven bicycles. In addition a universal joint is attached in between the drive shaft, this U-joint will provide angular transmission without power loss. This "chainless" drive system will provides smooth, quiet and efficient transfer of energy from the pedals to the rear wheel. It is attractive in look when compared to chain driven bicycle.

Keywords:

bicycle, shaft, torque, transmission system.

An efficient reversible data hiding Approach on digital video for secret data Communication

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Abstract:--

The project proposes the enhancement of security system for secret data communication through encrypted data embedding in Color images. In this study, the authors propose a steganalytic scheme for digital video spread spectrum (SS) data hiding. The proposed method estimates both the hidden message and the gain factor of the SS embedding rules. In this method, the cover frames are first estimated and are compared with the received video frames. Then, the residual matrix is computed and specific features are extracted from this matrix as well as the video frames and estimated frames. The support vector machine, then applies to the extracted features to classify the video as either clean or suspicious. If the video is declared suspicious, both the hidden message and the embedding process gain factor are estimated and consequently the original video is reconstructed. The simulation results confirm the success of the authors' proposed method in detecting the stego video, estimation of the hidden message and gain factor as well as reconstruction of the original video..

Keywords:--

Reversible datahiding,CoverVideo, Encryption, Decryption, Secret Message,Hash Function, GLCM, Video Steganography.

Automatic Vehicle Accident Detection System

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Abstract:--

Speed is one of the essential purposes behind vehicle mishap. Numerous lives could have been spared if crisis administration could get mishap data and reach in time. Nowadays, GPS has become an integral part of a vehicle system. This paper deals with collision and hazard detection for motorcycles via inertial measurements. For this sort of vehicles, the most troublesome test is to recognize street's abnormalities from genuine perils. This is typically done by setting supreme edges on the accelerometer estimations. These thresholds are heuristically tuned from expensive crash tests. This empirical method is expensive and not intuitive when the number of signals to deal with grows. We propose a method based on self-organized neural networks that can deal with a large number of inputs from different types of sensors. The method uses accelerometer, ultrasonic and gyro measurements. The proposed approach is capable of recognizing dangerous conditions although no crash test is needed for training. The technique is tried in a recreation domain; the correlation with a benchmark strategy demonstrates the upsides of the proposed approach.

SUPERMAN: Security Using Pre-Existing Routing for Mobile Ad hoc Networks

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Abstract:--

The flexibility and mobility of transportable Ad hoc Networks (MANETs) have made them rising popular in a wide range of use cases. To protect these networks, security protocols have been developed to protect routing and application data. However, these protocols only protect routes or communication, not both. Both protected routing and communiqué protection protocols must be implemented to provide full protection. The use of communiqué security protocols originally developed for wire line and Wi-Fi networks can place a heavy burden on the limited network resources of a MANET. A novel secured framework called SUPERMAN is proposed to solve these issues. The structure is designed to allow existing network and direction-finding protocols to execute their functions, whilst providing node authentication, access control, and communication security mechanisms. Simulation conclusion compare SUPERMAN with MANETs, IPSec, SAODV and SOLSR are offered to display the future frameworks suitability for wireless communiqué security.

Dynamic Resource Allocation for Distributed File System in Cloud Computing

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Abstract:--

Distributed computing enables clients to utilize assets in view of the requirements of the relating applications. A standout amongst the most critical strategy in the distributed computing is virtualization method which is utilized for multiplexing of assets, servers, and so on. In spite of the fact that an Inter cloud is an interconnected around the world "surge of fogs" that enables each cloud to exploit asset of various fogs, joint efforts among Inter cloud accomplices are mind boggling in light of the way that Inter cloud assets are scattered and controlled by different fogs. "Administrator based disseminated registering" incorporates the improvement of experts for fortifying disclosure, planning, assurance, association, course of action, arranging, work process, and checking of Inter cloud asset. An authority is a PC system that is fit for settling on decisions self-sufficiently and associating with various administrators through support, coordination, and exchange. Using an administrator based approach, traits related with watchful practices of masters, for instance, conveying socially through interest, coordination, and exchange can be joined with fogs. This paper 1) inspects the vitality and good conditions of using an authority perspective for Inter cloud asset appropriation, 2) overviews designate models of administrator based Inter cloud Resource assignment and gives a relationship among these models, 3) contemplates pro based and non-administrator based procedures for undertaking executions in different fogs, and 4) offers pointers to future headings.

Keywords:--

Autonomous specialist ,Cloud computing, Load rebalancing, Distributed file system, Inter cloud, Resource management

Distributed Data Transfer for Disaster Using Cloud Computing Infrastructure

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Abstract:--

The main objective of this project is to enhance the data storage security and secured data transfer during disaster. To resolve this IaaS (Infrastructure as a Service) methodology will be implemented here. As per survey most of the banking server and data centres are placed in metropolitan cities, most of the metropolitan cities are in sea shore. We proposed the system to find out a solution for safe hand the data centres and banking servers. In this paper, we aimed to achieve the minimum cost benchmark, so we proposed a novel highly cost-effective and practical storage strategy that can automatically decide whether a generated data set should be stored or not at runtime in the cloud. The main focus of this strategy is the local-optimization for the trade off between computation and storage.

Analysis of Nutrient Ratio of Farmland by Using Datamining

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Abstract:--

A SVM (Support Vector Machine) Classification have gained a great deal of importance in the area of soft computing and are widely used in making predictions . The work presented in this system is about the development of Support Vector Machine based models for the prediction of sugarcane yield in India. The SVM models have been experimented using different partitions of training patterns and different combinations of parameters. A support vector machine-based was developed by integrating developmental stage and yield prediction models. Experiments have also been conducted for different number of support vectors for training. For this work, data has been obtained from the website of Directorate of Economics and Statistics, Ministry of Agriculture, Government of India.

Secure Data Transmission with Blake2 Algorithm in E-Health Care System

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Abstract:--

The body sensor sort out (BSN) development is a champion among the most fundamental headways used as a piece of IoT-based present day human administrations system. In this Procedure, at first we address the few security requirements in BSN based present day human administrations system. By then, we propose a safe IoT based social protection structure using BSN, called BSN-Care, which can guarantee to successfully complete those requirements.BSN configuration made out of wearable and implantable sensors. Each sensor center is composed with bio-sensors, for instance, Electrocardiogram (ECG)Electromyography (EMG), Electroencephalography (EEG), Circulatory strain (BP), et cetera. These sensors accumulate the physiological parameters and forward them to a facilitator called Nearby Handling Unit (LPU).The LPU goes about as a switch between the BSN center points and the central server called BSN-Care server, using the remote correspondence mediums, for instance, compact frameworks 3G/CDMA/GPRS. In addition, when the LPU perceives any varieties from the standard then it gives provoke alert to the person that wearing the bio-sensors. In this wander, we delineate the key security necessities in IoT based social protection system using BSN.

Index terms:--

Internet of things (IoT), authentication, key establishment, Burrows-Abadi-Needham (BAN) logic, AVISPA, NS2 simulation, security.l

Hoverboard for Personal Transportation

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Abstract:--

The emission caused by internal combustion vehicle is increasing day to day and so the traffic due to automobiles in urban areas has risen tremendously over the years. Traffic congestion increases the vehicle emissions and decreases the ambient air quality. There can be no immediate solution to this issue but an alternate solution for the conventional personnel transport is Personal Electrical Vehicle. The transition from the conventional to fully electrical vehicles will be a slow process but it is in evitable. This project is focused on developing a Personal Electrical Vehicle with various charging methods which will be useful for short distance travel. Most people use the vehicle for shorter distance (i.e. 10kms), this Personal Electrical Vehicle will widen the means of travel for such short distances. This will also have a direct impact on the fuel scarcity, which has led to the raise in the fuel prices over the decade.

Index Term:--

Emission, Personal electric vehicle, Range, Future transport system, travelling.

Brain Gate: An Assistive Prosthetic Technology

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Abstract:--

Brain Gate is a brain implant system developed by the Bio-Tech company Cyber kinetics in 2003 in conjunction with the Department of Neuroscience at Brown University. The device was designed to help those who have lost control of their limbs or other bodily functions such as patients with spinal cord injury. The computer chip, which is implanted into the brain, monitors brain activity in the patient and converts the intention of the user into computer commands.

Brain continues to send neural signals for all voluntary actions even in paralysed patients but due to spinal cord injuries or some kind of stroke, the relay of signals is disrupted from reaching their destinations. This Brain Gate Neural Interface system fetches these neural signals through fibre optic cables, feed them to neural signal processing software which uses appropriate decoder algorithms to interpret the brain neural signals and execute the corresponding commands with the help of robotic arms.

Currently the chip uses 100 hair-thin electrodes that are targeted to the neurons in specific areas of the brain, for example, the area that controls arm movement. The neural signals are translated into electrically charged signals and are then sent and decoded using a program and thus the arm get moved, offering the user interaction pathway via the Brain Gate System. This Brain Gate technology is moving towards passing the neural signals through electrical nerve wires implanted inside human body thus eliminating the use of robots.

Index Term:--

Brain Gate Neural Interface (BGI), Cyber Kinetics, Neuroscience, Electrode, Neurochip, Neuroprosthetic

Combined Effect of Grooves and Cnt Coating on the Condensation Heat Transfer Characteristics

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Abstract:--

The present work deals with an experimental investigation on the heat transfer characteristics of modified copper in the condensation process. Two different types of surface modification were attempted in this study. In an attempt to modify the geometry of the condensation surface, grooves were machined on the copper surfaces using laser machining technique. Also, surface chemistry of the surface was modified using the CNT based coating, which was accomplished using dip coating technique. A condensation experimental setup was designed and fabricated, and the experiments were carried out to analyse the performance of modified copper surfaces. The values obtained from the bare copper surface served as a reference to compare the performance of various modified surfaces. Initially, individual effect of the grooved and CNT coated surfaces were evaluated and compared with the bare copper surface. As a next step, the combined effect of the grooves and the CNT coating were evaluated and compared with its counterparts. Wettability of the modified surfaces were calculated using contact angle meter which is very crucial for condensation heat transfer. Results corresponding to the modified surfaces were found to have improved performance as compared to the bare copper surface. In case of modified surfaces, the sample with the combination of grooves and CNT coating was found to excel regarding heat transfer performance when compared to its counterparts. CNT coated surfaces were characterized for its surface morphology and wettability, and the results are presented in this study. The CNT coated surface was superhydrophobic in nature, while the micron scale grooves reduced the departure diameter and increased the sweeping cycle rate which has a positive effect on the heat transfer rate

Key words: --

Condensation, Grooves, Carbon Nanotubes, Superhydrophobic, heat transfer

QART-MANET: Qualitative Analysis for Reliable Transmission of Data Using Rat Mechanism in Manet with 3des Algorithm

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Abstract:--

In Mobile Ad-hoc Networks (MANET), a new framework is essential to reduce the network congestion that occurs when a network node is carrying data more than it can handle. The crucial problem includes in network congestion are packet loss, delay rate and insecurity of data. We propose a new framework called (QART) the Qualitative Analysis for Reliable Transmission of data using (RAT) the Rate Analysis for Traffic reduction Mechanism to overcome the impact of congestion using End-to-End explicit loss recovery. The base station makes the congestion detection, the rate adaptation and the rate allotment decisions to achieve greater efficiency. The RAT has the greater flexibility since many different traffic approaches can be implemented. In order to reduce the network communication overhead and improve message delivery success rate we presented (MHT) a Merkle Hash Tree algorithm based on the node distance to be measure. For the security of data 3DES technique for secure data transmission while maintaining the authenticity and integrity of the message. In this, message is encrypted before the data transmission process starts. The encryption and decryption of data is done by using the Triple Data Encryption Standard algorithm. Finally, performance of our proposed method has also been analyzed and compared with existing method for evaluation.

Index Terms:--

Merkle Hash tree [MHT], Denial of Service [DOS], Triple Data Encryption Standard [3DES], Packet Loss, Delay Rate, Bandwidth

Secured Off-Line Payment Transaction Using Manet

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Abstract:--

Disaster is any event that is either occurred naturally or manmade which can create huge loss on people's belonging or lives. Payment through mobile in a disaster field gives the advantage to provide electronic transactions for people buying recovery items like foodstuffs, garments and medicine. Existing system uses a new mobile payment method which makes use of infrastructure less mobile adhoc networks to permit transactions that permit customers to buy in disaster areas. However, few issues arise in this system while payment is in process. In this paper, proposed a method for secured transaction between a vendor and a customer using offline MANET concept. The customer and the vendor should register with the bank and gets authenticated separately. The protocol used in this system works on two phases. (i) Pairing phase & (ii) Payment phase. At the completion of pairing phase, the vendor and the customer should share their public keys. This is done to improve message integrity & authenticity. Encryption and decryption is done thrice to improve security. Transaction dispute is not supported. Each off -line transaction is confirmed by the bank / card issuer at a later time. The proposed method is implemented in a real time environment using smartphones.

Total Harmonic Distortion Measurement For Energy Monitoring

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Abstract:--

Objective of our project is to measure the harmonic distortion in the power grid. Power quality measurement plays a vital role in reliability of the electricity grid. Total Harmonic Distortion (THD) method is used to measure distortion in voltage due to harmonics. Global completion is forcing the industries to increase the productivity by automating the production process. In this case, large amount of ac power is required to run the loads. More variable frequency drives, UPS systems and other non-linear loads are being installed to automate the system. The Non-linear loads act as the source for the harmonic distortion. Non-linear loads change their impedance by conducting current only near the peak of the voltage source. They draw non- sinusoidal current from the sinusoidal voltage source. The normal electric current is distorted by the non-linear load. This distorted pulse is reflected back to the power grid. When linear loads conduct this non sinusoidal current pulse, the device toggle between on and off state. This may lead to malfunction and failure of the device. Other devices connected to the power grid are also affected by the harmonic distortion. Periodic power monitoring is needed to avoid the damages caused by this distortion.

Secure Data Outsourcing with Verifiable Auditing on Encrypted Data in Cloud Environment

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Abstract:--

Cloud Computing platform provides powerful storage services to individuals and organizations. It brings great benefits of allowing on-the- move access to the outsourced files, simultaneously relieves file-owners from complicated local storage management and maintenance. However, some security concerns may impede users to use cloud storage. To address the above issues for securing outsourced data in clouds, this project proposes an identity- based data outsourcing (IBDO) system in a multi-user setting. A user and her authorized proxies can securely outsource files to a remote cloud server which is not fully trustable, while any unauthorized ones cannot outsource files on behalf of the user. The cloud clients, including the file-owners, proxies and auditors, are recognized with their identities, which avoids the usage of complicated cryptographic certificates. Our IBDO scheme achieves a strong auditing mechanism. The integrity of outsourced files can be efficiently verified by an auditor, even if the files might be outsourced by different clients. Also, the information about the origin, type and consistence of outsourced files can be publicly audited.

Information Secure Over Unauthorized Attack in Cloud Environment

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Abstract:--

Cloud computing is a platform to provide different services to the cloud users. Cloud provides various services to the users such as SaaS (Software as a Service), PaaS (Platform as a Service), IaaS (Infrastructure as a Service). In specific IaaS is used for storage services. In our project IaaS based service is used because providing of storage. User shared the sensitive data over the cloud which gives rise to security issues in cloud computing. So, to protect user's data a secure methodology called T-coloring using fragmentation and replication of data is used in this paper. The data is fragmented into pieces and then replicate them over the cloud nodes for maintaining the availability, performance level and backing up the data. T-coloring technology is used here which is not giving the details about locations of the fragments to an attacker. T-coloring method is used to assign the fragments and their replicas to improve the security. Three fish encryption algorithm used to provide high security. Data owner can use their secret key for encrypt the data. Then the files are in ciphertext form. These files are decrypted by the same key that is used for encryption on the receiver end. This system mainly focuses on the data and authentication system with good performance.

Improving Data Encryption Using Fine Grained Access Control and Semantic Keyword Search over Cloud Storage

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Abstract:--

In today's data intensive world, cloud computing is new type of computing paradigm which enables sharing of computing resources over the internet. The cloud characteristics are on-demand self-service, location independent network access, ubiquitous network access and usage based pay. Due to this charming features private and public organization are outsourcing their large amount of data on cloud storage. Organizations are motivated to migrate their data from local site to central commercial public cloud server. By outsourcing data on cloud users gets relief from storage maintenance. Although there are many benefits to migrate data on cloud storage it brings many security problems. Therefore, the data owners hesitate to migrate the sensitive data. In this case the control of data is going towards cloud service provider. This security problem induces data owners to encrypt data at client side and outsource the data. By encrypting data improves the data security but the data efficiency is decreased because searching on encrypted data is difficult. The search techniques which are used on plain text cannot be used over encrypted data. The existing solutions supports only identical keyword search; semantic search is not supported. In the proposed work, semantic multi-keyword ranked search system with verifiable outsourced decryption. To improve search efficiency this system includes semantic search by using fuzzy search.

Nonparametric Relational Model to Discover Hidden Topics

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Abstract:--

Nonparametric relational topic models provide a successful way to discover the hidden topics from a document network. Most of theoretical and practical tasks, such as dimensional reduction, document clustering, and link prediction, would benefit from this revealed knowledge. The sampling algorithm scalable to large networks by using new network constrain methods instead of MRFs. Current MRF-based methods do not make the inference efficient enough. Specifically, each document is assigned a Gamma process, Although this method provides an solution, it brings additional challenges when mathematically modeling the network structure of typical document network i.e.,two spatially closer document stend to have more similar topics. we require the topics are shared the documents through gamma process. Inorder to resolve these challenges, we use a subsampling strategy to assign each and every document a different Gamma process from the global Gamma process, and the subsampling probabilities of documents are assigned with a sampling technique instead of Markov Random Field constraint that inherits the document network structure. Through the posterior inference algorithm, we can discover the hidden topics and its number simultaneously. Experimental results on the capabilities of learning the hidden topics and, more importantly, the number of topics

Keywords:-

Text mining, network analysis, topic model, Bayesian nonparametric

Advanced Collision Safety System Using Airbag

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Abstract:--

The objective of this project is to develop a concept of grille airbags which is deployed in the bumper for improved vehicle compatibility during front impact. The airbags in the bumper is deployed upon signals from pre-crash sensors will help in reducing the damages during collisions. In vehicles in the case of collision, the major damage occurs severely at the frontal part. Even in the minimal speed, frontal collision results in more damage to the vehicle, especially engine compartment. Here an airbag is used in front of the vehicle bumper, which will inflate prior to the collision of the vehicle. As said, the vehicle tends to acquire damage even in minimal speed, the airbags are set to inflate at a vehicle speed of 30km/hr. Thus in this project, protecting the frontal part of the vehicle in the case of collision using frontal airbags.

Index Terms:--

Frontal airbags, pre-crash sensors, minimum speed, grille airbags, damage.

Effect of Silver Nanowire (Agnw) Coating on Pool Boiling Heat Transfer Characteristics

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Abstract:--

Pool boiling is an extensive area of research as it involves very high transfer coefficient associated with it. Many heat transfer equipment works on the principle of pool boiling including immersion electronics cooling systems. An experimental study was conducted to investigate the effect of Silver (Ag) nanowires based coating on pool boiling heat transfer using FC-72 as working fluid. Silver nanowires were grown on copper substrates using template-based electrodeposition technique. Anodic aluminum oxide (AAO) with different pitch values(260 + 20 nm, 320 + 20 nm and 360 + 20 nm) were used to grow nanowires on the copper test specimen. Other dimensions of the nanowires like height and the diameter were kept constant. In case of coated surfaces, important characteristics of the boiling process like critical heat flux (CHF) and the heat transfer coefficient were observed to be increased. Most importantly, the boiling incipience superheat which is very crucial for electronics cooling applications was found to decrease substantially as compared to the bare copper surface. The performance was found to increase with increase in the pitch of the nanowires. With increase in the pitch of the nanowires the density of the micro scale cavities increased. In addition to that, the resistance to fluid flow to the heating surface decreases at high heat flux values. This happens as the distance between the nanowires increased with increase in the pitch which in turn decreases the resistance to the fluid flow. In addition to this, CHF and HTC were enhanced due to enhanced superhydrophilic nature, capillary effect, and enhanced nucleation site density of the nanowire coated surfaces.

Keywords: - Immersion cooling, silver nanowires, electrodeposition, critical heat flux, heat transfer coefficient, cavity density.

Review of Solar Photovoltaic Based Water Pumping System for Irrigation System and Drinking Water Supplies

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Abstract:--

This paper discusses about scope and review of solar photovoltaic based water pump system. The amount of electricity and high diesel costs affects the necessary condition of pumping water supplies and irrigation. The usage of solar energy based water pumping method is a promising alternative to conventional electricity and diesel based pumping systems. Solar based water pumping depends on photovoltaic (PV) innovation that believes sun powered into electrical power to run a DC or AC motor based water pump. The principle goal of the examination is to introduce an extensive writing survey of sunlight based pumping innovation, assess the financial reasonability, distinguish explore holes and hindrances in the broad engendering of solar powered water pumping system and technology . The study focuses on update on solar based water pumping technology, execution investigation, ideal measuring, debasement of PV generator providing energy to pump, financial and ecological viewpoints and advances in PV materials and productivity enhancements. A report on flow condition of research and usage of sunlight based water pumping innovation is exhibited. Components influencing execution of PV water pumping framework, debasement of PV modules and proficiency enhancing methods of PV water pumping technology are distinguished. Solar based water pumping is observed to be financially suitable in contrast with power or diesel based technology for water system and water supplies in rural, urban and remote area. The investment payback for some PV water pumping technology is observed to be 4– 6 years. The current Indian motivations for PV pumping and arrangement activities for the advancement of sun based water pumping in creating nations are likewise examined. Potential follow-up research areas are recognized.

Keywords:-

Photovoltaic water pumping system, Irrigation Technology, Renewable energy, sustainable solution, motors.

Automatic Detection of potholes and humps for controlling the vehicle speed

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Abstract:--

Automatic detection of potholes and humps for alerting vehicle drivers to drive safely. The mobile application used in this system is an additional advantage as it provides timely alerts about potholes and humps. Identification types of surface distress such as potholes and humps to avoid accidents and vehicle damages. Ultrasonic sensors are used to identify the potholes and humps and also to measure the depth and height, respectively. It recorded the geographical location coordinates of the potholes and humps using a Global Positioning System receiver. The sensed-data includes pothole depth, height of hump, and geographic location, which is stored in the database. This serves as a valuable source of information to the government authorities and vehicle drivers. Once the fault will be rectified the database updated automatically. Alerts are given in the form of an audio.

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Nano-Robots as Guards Achieving Anti-Hiv

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Abstract:--

Nanorobotics is the technology of creating machines or robots close to the microscopic scale of nano-meters (10^{-9}meters),100 times lesser than the size of an animal cell and hence it can easily monitor the behaviour of cell inside the body at atomic, molecular and cellular level, maintaining and protecting the human body against pathogens in the bio-medical/health sector. Nanorobots are to likely be constructed of carbon atoms, generally in diamond structure because of inert properties and strength, glucose (or) natural body sugars and oxygen might be source at propulsion and power. Reduction of device-size also ensures its application in the treatment of AIDS. There is no specific technology for the treatment of AIDS. Some of the drugs of specific composition are given nowadays which increase their lifetime to a few years only. To make the treatment more specific, we use the Nanodevices that use Nano bio-sensor holding Ab for the Ag gp41 & gp120(HIV Ag) will be tagged on its surface. So, whenever it comes in contact of an infected cell the Ab will react with that by an immunochemical reaction and will identify infected cell. Nanochip will receive the signal from sensor and will perform its job. Nanotube, on receiving positive signal gets injected into the nucleus of the cell by nanochip. Nanocontainer will contain highly concentrated DNase and RNase enzyme which will be delivered into the infected cell and will cleave the whole genomic DNA into single nucleotides. Nanorobots will respond to acoustic signals. So, many Nano-robots streaming in blood accumulate there and perform exponentially to kill the infected cell. Thus, svirulency is lost and AIDS infected WBC's is converted back into original WBCs. By doing so, constant levels of WBC's are maintained in the blood stream. It operates at specific sites and has no side effects. Thus, the AIDS patient is provided with an immune system so that he can defend himself from diseases. In future, it is also believed that there is possibility to connect these nanorobots over internet to know the progress of the treatment, so that the killer disease AIDS could also be made in control in the hands of Human with the emerging new Nano- technology and Computer Science.

Keywords:--

Nanorobots, Anti-HIV, Ag gp41 & 120, Nano bio-sensor, Nano-chip, DNase, RNase, Virulency, Acoustic signal Transmission

Data Integrity Checking in Dynamic Cloud

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Abstract:--

Cloud storage is a model of data storage in which the digital data is stored in logical pools, the cloud providers are responsible for keeping data available, accessible with security. A public auditing protocol allows a TPA (Third Party Auditor) to check the integrity protection in cloud computing a formidable task. In fact, the end devices may have low computational capabilities. The proposed work for improving the integrity and data security by implementing the Hash Tree with partial signature. This work also provides signature and batch auditing to improve efficiency in preserving data.

Reduced Latency and Energy Saving Algorithm for Query Processing In Web Search Engine

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Abstract:--

The process of extracting the required information and discovering the patterns from large data sets and transforming the data sets to the understandable patterns or structures is the concept of data mining. The required essential methods are applied for data pattern extraction. The most significant sectors such as marketing organizations, finance, health care systems, educational institutions, banking etc., use the concept of data mining for their specific purposes. Major concern of this strategy is the energy consumption by the Central Processing Unit (CPU) during the extraction process of the required information from the servers and the processing time utilized for the data retrieval is also considered[1]. In this paper, we propose the Online Scheduled-Energy Saving (OSES) algorithm which increases the efficiency of the CPU in servers by reducing the energy and time consumption for the query process in the web search engines. When the query is entered in web search engines, the query efficient predictors calculates the processing time and processing volume and this algorithm forwards the query to the respective query processing node. Thus, due to this task by the algorithm, energy consumption of the CPU in servers can be minimized[2].

Keywords: -

Data set, Energy consumption, DES (Dynamic Equal Sharing), Heuristic online algorithm, Optimal online algorithm, Query Efficiency Predictors (QEP)

Color based Wavelet and Curvelet Transform Image Retrieval

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Abstract:--

The system proposes new approach in extension with local color and Fast curvelet transform and entropy measurement in RGB Space.Discrete curvelet transform is one of the most powerful approaches in capturing edge curves in an image. The project presents the robust object recognition using texture and directional feature extraction. The system proposes texture descriptors such as Fast Discrete Curvelet Transform (FDCT) based entropy feature which represents better texture and edges and Local Directional Pattern (LDP) which provides textural details about all eight directions.By using these methods, the category recognition system will be developed for application to image retrieval which proves Low computational complexity and high compatibility.The tests are performed more than 12 seat stamp regular scene and shading surface picture databases, for example, Corel-1k, MIT-VisTex, USPTex, Hued Brodatz, et cetera.

Key words:-

Image retrieval, local patterns, multichannel, LBP, color, textur

Secure Public Auditing Scheme for Cloud Data Share Supporting User Revocation

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Abstract:--

Today, distributed storage winds up noticeably one of the basic administrations, since clients can without much of a stretch change and offer information with others in cloud. Be that as it may, the honesty of shared cloud information is helpless to unavoidable equipment deficiencies, programming disappointments or human mistakes. To guarantee the trustworthiness of the mutual information, a few plans have been intended to permit open verifiers (i.e.,Third Party Auditors) to productively review information trustworthiness without recovering the whole clients' information from cloud. But this may reveal data owners personal information to TPA.Here We use homomorphic authenticable group signatures which is designed to protect privacy. Here, the TPA can verify the integrity of shared data on behalf of group users. The group users include Group Managers and ordinary members. Any of the GMs can add new members or revoke members from the group. In addition, our plan guarantees that group members can trace information changes through binary tree. Transmission of data will be encrypted and even the data is stolen, the corresponding key cannot be restored. User revocation is performed by the group manager via a publicly available revocation list.The main issue with the cloud is data integrity which can be resolved using MD5 algorithm.To support data tracing and recovery,a data structure based on binary tree is designed for cloud server to record every change of a data block.Through the records,the group users can easily trace data changes.

Keywords:-

Data Integrity; Homomorphic Verifiable; Nonframeability; Provable Security.

Web of things based student tracking monitoring system

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Abstract:--

In recent times there's increment in cases of kid seizure, missing kid, and kid harassment. It's ascertained that children's security faculty in class or at school buses and out of doors school premises is questionable. We proposed a system which tries to make sure absolute best safety of children exploitation sensible options that square measure additions in existing chase system for higher security. In this proposed system consists of school bus unit, faculty unit and humanoid application.GPS module attached to the current unit can track location and bus speed perpetually. Alcohol sensing element and meddling switch during this unit give secured transport to kid. Cloud property and live video streaming facility is provided by Raspberry pi unit that act as slave controller to AVR in bus unit. The varsity Unit identifies the kid at school exploitation RFID scan and update child location on server exploitation WLAN module.

Improve Energy Efficiency in Cognitive Radio Sensor Network Using Spectrum Allocation with Sink Relocation Method

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Abstract:--

In Cognitive wireless sensor networks, most important problem is to extend the lifetime and Energy efficient of the networks as long as possible. Network lifetime can be increased by conserving the limited power resources of sensors while accomplishment of the sensing and sensed data reporting its tasks. Energy efficient can be obtained by reduce the routing distance between sensor member with sink. In CR Sensor Network, each sensor node delivers the sensed data to sink by multi-hopping technique. Sensor nodes nearer to the sink will consume more battery power than further nodes. So these nodes will drain out their battery power rapidly and reduce the network lifetime. We propose a method called Adaptive Sink Rotation (Adaptive SR) method for mobile sinks in Sensor Network which is an efficient method to increase the network lifetime. This mechanism uses information of both transmission range of sensor nodes and scheme for sink relocation.

Keywords:--

WSN, EASR, Multi -hopping technique, Sink relocation.

Energy Efficiency Using Load Balanced Clustering - Dual Data Uploading In Wireless Sensor Networks

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Abstract:--

In mobile wireless networks, the developing vicinity based applications have prompted the requirement for very compelling and vitality productive neighbor disclosure conventions. The Primary worry in a Wireless Sensor Network is Energy utilization. The primary issue in the system is the point at which the information is sent from hub to sink, the information will be lost because of low vitality of node.The structure utilizes dispersed load adjusted grouping and double information transferring, which is alluded to as LBC-DDU. It comprises of three-layer (I) sensor layer (ii) group head layer, and (iii) portable gatherer (called SenCar layer). At the sensor layer, a disseminated stack adjusted grouping (LBC) calculation is proposed for sensors to self-arrange themselves into bunches. At the bunch head layer, the between group transmission extend is deliberately ensured the network among the bunches. Numerous group heads inside a bunch participate with each other to perform vitality sparing between bunch correspondences.

Keywords:--

Mobile wireless network, neighbor discovery, protocol design , dual data .

Analysis and Implementing the Ntru and Braid Group Cryptosystem Algorithms in Iot Devices

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Abstract:--

In this paper we give an overview of public-key cryptographic schemes based on non-commutative groups with special consideration to braid groups and we have to analysis several commonly used light weight algorithm public key-exchange protocols with the aim of establishing the best algorithms for lightweight cryptography in critical infrastructure and emergency scenarios. Most of the method currently in use are based on arithmetic over finite field .The potential advent of quantum computer is very troubling because all of these cryptosystem are easily broken by such machine.Braid group based on non-commutative algebraic structure over infinite field .Braid group have certain properties that make them easily amenable to digital computation. The main contributions of this paper are: 1.Performance analysis of several state-of-the-art public-key cryptographic algorithms like NTRU Encryption, Braid groups etc. In order to find those that are most suitable for low power computing platforms 2.Implementing security framework based on the analyses public-key key-exchange cryptographic algorithms in IOT devices. Internet of Things (IoT) enables physical things to communicate, compute and take decisions based on any network activity.

*This calls for a secure solution for communication among heterogeneous devices.

*In heterogeneous environment motive of each user in IoT can be different in form of communication and computation and is difficult to be judged.

Keywords:--

NTRU-Number theory research unit, Public key cryptography, Braid Group cryptosystem, Wireless communications,Dehornoy's algorithm.

Social Network based disaster analysis using user trust behavior model

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Abstract:--

To develop an enhanced web application, using web services for interconnecting three various servers like social network, E-commerce application and news channels. In this proposed work an Artificial Neural Network (ANN) and Text categorization is used which also enhance micro blogging information has been implemented for efficient client server process. Three tier architecture designs has been implemented for efficient data retrieval and data transfer. The real-time user message will be displayed, through this the social users can quickly get the latest updated news. Also the social users can get city or state wise information's.

Detection of Skin Cancer- A Genetic Algorithm Approach

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Abstract:--

In the present scenario skin cancer is found highly risk in human beings. Many forms of skin cancer are affecting the human life. One of the most unpredictable diseases is Melanoma cancer. Skin cancer the most deadly form is primarily diagnosed visually leads to death, if not diagnosed in its early stage. It can be identified by tedious lab testing with more time and cost. There are vast numbers of computational techniques helpful to predict diseases. A challenging task in skin lesion classification is due to the smooth variation, in the appearance of skin lesions. Image processing techniques like segmentation is used in medical science to detect the region of interest.

This paper focuses Genetic algorithms with adaptive parameters (adaptive genetic algorithms, AGAs), an important and promising alternative to genetic algorithms. The probabilities of crossover (pc) and mutation (pm) significantly determine the degree of solution accuracy and the convergence speed that genetic algorithms can obtain. Grouping genetic algorithm (GGA) is an evolution of the GA where the focus is shifted from individual items, like in classical GAs, to groups or subset of items.

Keywords:--

Segmentation, Lesion, Genetic Algorithm, Mutation, Crossover.

Building a virtual storage device to life for the secrets

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Abstract:--

This abstract states that the man is called intelligent because of the brain. But we loss the knowledge of a brain when the body is destroyed after the death. Virtual brain project will search for insights into how human beings think and remember. The main aim is to upload human brain into a VBOT Sensor. After the death of the body, the virtual brain will act as the man's brain. Such models will shed light on how memories are stored and retrieved. This could reveal many exciting aspects of the brain, such as the form of memories, memory capacity and how memories are lost. This project contains two sensors wireless body area sensor network named Nanobots.This sensor is a wireless network of wearable computing devices. BAN devices may be embedded inside the body.it gather energy from the body temperature and communicate with the VBOT Sensor. Next Sensor is VBOT Sensor it acts like virtual Brain. Through this sensor we can store our secret and our intelligence with the help of PC or Mobile. We can use the secret of a person after the death.

Keywords:--

Virtual storage device to life for the secrets.

Physiological parameter monitoring using RFID and GSM based automated alert system

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Abstract:--

This abstract states that community-based healthcare is increasingly important for the well-being of inhabitants of emerging economies. Here we are taking in account of the students health analysis. This Project is to escalate the existing Indian education system to the next level by means of smart card and smart band technology which will digitalize, monitor and record student's health parameters such as body temperature, pulse rate, in a student's database, which could be accessed by a single Smart Identity Card system using smart band. The vital information such as the history of academic and accounting details, health related issues, basic details of the student will be stored in a database. If any abnormality in the student health parameter is said to be found, then the notification is sent to the institutions medical center, management and as well as parents. These parameters could also be used to study the health change of the student. All these actions are linked with the student's Identity card. The database access will be granted by the RFID tag used in the ID card. The goal of an RFID-backed healthcare solution is to enable easy and reliable identification of individual patients, maintain more accurate medical records, facilitate better healthcare, and enhance the quality of life that are remote from a central medical facility. In addition, it can also help to relieve the workload pressure on the central medical facility when it is overcrowded and can increase revenue opportunities by broadening the base of students or patients to include more remote locations. It may also help to improve the efficiency of the central medical facility, allowing it to focus resources on cases that require more specialized attention and care.

Assistive tool for visually impaired with mobile application

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Abstract:--

At present there are 2.68 cores persons with disabilities in India constituting 2.21% of population, according to the census 2011.There is a no proper solution to require that kind of problem The main concept of the paper is to provide an electronic aid with mobile application as guidance to overcome the lacking of their visualization power by proposing a simple, efficient, configurable electronic guidance system for blind and visually impaired person .With the outburst of smart-phones today, the market is exploding with various mobile applications.These smart phones help the people by providing easy access to information and providing many basic functionalities to them .The basic aim was to propose a new technique within a mobile app for visually impaired persons. Our proposal have focused on four main purposes for visually impaired persons, 1).Guide direction to go for their desired place. 2).Indication of vehicles when it comes. 3).Overcomeobstacles 4).Communication Purposes

Real Time Monitoring of Syringe Pump Using Internet Of Things

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Abstract:--

A syringe driver or syringe pump is a small infusion pump (some include infuse and withdraw capability), used to gradually administer small amounts of fluid (with or without medication) to a patient or for use in chemical and biomedical research. Though this system has a pre- built alarm systems, it still needs someone to get watched continuously. Thus to avoid this controversy among the Nurse or caretakers, we are developing a IOT based alert system, which do alert on all Inbuilt Alarm set to the Nursing centers periodically and helps us to monitor the pump status in real time.

Keywords:--

syringe pump; fluid drive; real time monitoring; alarm system; Nursing centre;

A novel intelligent wheelchair control approach based on lip movement

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Abstract:--

Intelligent wheelchair plays a more and more important role in modern society, and the harmonious human-wheelchair interaction becomes one of the pop research subjects. In this paper, a novel intelligent wheelchair based on lip movement recognition approach is researched. By comparing the location of the lips with a fixed rectangular window, the lip gesture commands are determined and the intelligent wheelchair movement such as turn left, turn right, forward, backward are determined correspondingly. Experiments show that this approach can achieve the purpose of controlling the intelligent wheelchair by lip movement.

Real-time Monitoring of Narcolepsy Patients Using Neural Networks

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Abstract:--

Individuals with certain sleep disorders are subject to uncontrollable sleep episodes accompanied by cataplexy. These patients are more vulnerable to household and occupational accidents. Currently, narcolepsy has no cure, and this research pursues developing a portable medical device to assist in narcolepsy detection through providing diagnosis, real-time detection and logging of narcolepsy. The device uses accelerometer sensor, heartbeat sensor, GPS, EEG sensor. The raw data from the EEG sensors, heartbeat sensors and accelerometer sensor can be sent wirelessly to phones, tablets, etc., which enables individuals to collect their own data and allows both health professionals and individuals to view and monitor the data over time. In order to extract meaningful EEG signals, raw EEG device data has to be filtered and processed. EEG signal analysis consists of two phases. First is preprocessing, where noise and other impurities in raw EEG signal are removed or suppressed. Second phase is feature extraction where EEG data is analyzed and diagnostic information is obtained. Finally, the heart rate and location of the patient is send to the caretaker via GSM.

Keywords:--

EEGSensor, Heartbeat Sensor, Accelerometer Sensor, GPS, GSM.

Assistive Device for Stroke Patients to Execute Required Movements Using Robotic Arm

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Abstract:--

Hand impairment after stroke is quite debilitating. Present hand rehabilitation approaches, although useful, are still limited as they often require the constant help of a technician or caregiver and also because they are based on repetitive training which may be demotivating. This system only provide a rehabilitation approach for the stroke patient, assistive device for stoke patients has been developed by using robotic arm. A robotic arm is a type of mechanical arm, usually programmable, with similar functions to a human arm, robotic arm has been controlled by the motion of the user's healthy arm, sensors are used to detect the movements of the user' healthy hand, microcontroller makes the robotic arm to performs the functions based on the input from the sensors

Keywords:--

assistive device;data glove;microcontroller;

Driver stress detection using inertial motion and EEG sensor

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Abstract:--

Driver stress is an increasing problem in the transportation industry. It causes a lot of cognitive skills, resulting in poor driving and an increase in the likelihood of traffic accidents. Prediction models allow us to avoid or at least minimize the negative consequences of stress. The physiological signals of low frequency and voltages, after amplification and filtration can be easily transmitted with low noise interference in the signal. Here the accelerometer sensor has been incorporated on the driver's hand gloves which monitors the sudden rotation on the steering wheel. And the EEG sensor has been used to detect the abnormalities in the brain due to the occurrence of stress and also the heartbeat sensor can be used detect the changes in the heart rate and blood pressure. And these signals are given as an input to the arduino. Then the signals are transformed to the Max 232 , and GSM . The information has been transformed to mobile for further processing.

Posture Monitoring of Bone Dislocation using Criss-Cross flex sensors

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Abstract:--

The paper constitutes of a wearable criss- cross flex sensor which is used for the posture monitoring and sensing of bone dislocation during the period of rehabilitation which is used for enabling the patient, physician and the helper to be attentive on the monitoring of bone dislocation and sensing of posture for a patient who has undergone for an orthopedic surgery in an Hospital, and it also enables an easy mobility for the patient which gives path to the use of such products in the home care applications.

GSM Based Smart Epilepsy Prediction and Life Saver System

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Abstract:--

This paper presents a novel wearable biomedical Network on Chip concept development to monitor and predict irregular brain waves as advanced sensitive portable for an electroencephalogram (EEG) analysis device. The proposed device will monitor brain‟s spontaneous electrical activity in normal and abnormal situations for specific patients suffering from different types of epilepsy. This would be able to predict the severity of the forthcoming epileptic attack. Meanwhile, this device will alert epileptic patients by giving a sms on detection of any kind of abnormal brain electrical activity. The EEG NoC reads brain signals from a sensor on the located on the patient scalp, and runs parallel processing and filtering for the brainwaves. This process makes the detection of brain abnormalities possible, and many patients can be saved by predicting the time of epileptic seizure. When such a prediction occurs, alarm signals are sent to the patient to take protective measures.In this study, it is aimed to design an automatic pattern recognition system for the detection of epilepsy which distinguishes healthy and seizure electroencephalography signals. In order to perform epileptic seizures we combine a low complexity nonlinear transform applied to the EEG time-series with a fast support vector classifier (FSVC), a low complexity classifier. Results reported here confirm that very good performance can be obtained, while using a very low complexity solution which is easy to integrate in a portable device.

keywords:--

EEG electrode, GSM, LCD display.

The Early Detection and Analysis of Movement Disordres Due to Infantile Cerebral Palsy

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Abstract:--

This paper based on the monitoring of the patient that is done by the doctor continuously without actually visiting the patient. Health professionals have developed a brilliant and inexpensive health monitoring system for providing more comfortable living to the people suffering from various diseases using leading technologies like wireless communications, wearable and portable remote health monitoring device.

Keywords:--

ARDUINO , Accelerometer Sensor, Heartbeat Sensor, EMG Sensor, Temperature Sensor, Health Monitoring

Diagnosis of Hypercapnia Using Carbonic Anhydrous Based Co2 Bio Sensor and Photolithography

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Abstract:--

It is a global need to realize noninvasive, simple rapid, selective, inexpensive, and portable assessment methods for diagnosis of diseases. Enzyme-based bio-sensing system, compared with traditional analytical methods, have all such potential attributes. This paper proposes carbonic anhydrase enzyme (CA) (E.C. 4.2.1.1) based cost-effective, highly selective and reproducible CO2 bios ensing system that can measure CO2concentration (ppm level) in expired breath accurately to givevaluable information for assessing the respiratory disorders ofthe subjects. CA is extracted from spinach leaves andimmobilized on an electrode assembly. The assembly generates asensible electrical signal (mV) when brought in contact with theaqueous CO2. The sensor characterizes a linear response from160 ppm-2677 ppm of CO2 concentration dissolved in water,good sensitivity (~0.132mV/ppm) with excellent fast responsetime within 12 sec. The features include repeatability, shelf life(~5 months), re-usability (~ 20 times) and selective responsivenesso the CO2 molecules in the exhaled breath. The feasibility for theuse of the biosensor in a suitable set-up for homebasedmonitoring of CO2 in exhaled breath has been proposed andjustified. The device showed a good correlation between theresults obtained from the sensor and established clinical test.

An Adaptive Technique for Dosage Interval and Control of Anaesthesia by Predictive Control Model

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Abstract:--

This abstract states that we proposed a dosage control system for total intravenous anesthesia (TIVA) in order to help anesthesiologists and enable to manage multiple operations remotely by one anesthesiologist. In the general anesthesia, constraints of a drug dosage and the value of biological information indicating anesthetic depth must be taken into account. Also, introduction time of anesthesia and time to awake after surgery is required to be short with satisfying above restrictions. Furthermore, if surgery periods are extended, anesthetic effect should be maintained during surgery. From this point of view, we proposed an adaptive scheme of controlling the dosage and the dosing interval by model predictive control in order to satisfy such complicated requirements.

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Detection of blood glucose level for type 1 diabetic patient by using non-invasive breath measurement

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Abstract:--

There has been a constant demand for the development of non-invasive, sensitive glucose sensor system that offers fast and real-time electronic readout of blood glucose levels. In this article, we propose a new system for detecting blood glucose levels by estimating the concentration of acetone in the exhaled breath. A TGS822 tin oxide (SnO2) sensor has been used to detect the concentration of acetone in the exhaled air. Acetone in exhaled breath showed a correlation with the blood glucose levels. Effects of pressure, temperature and humidity have been considered. Diabetic ketoacidosis (DKA) is a potentially life-threatening metabolic complication of diabetes (Higgins, 1994). DKA is a state of relative or absolute insulin deficiency. In this system, Arduino board is used to read the sensor with sense the breath. Breath value level is log to system using wireless communication. Data collection is interfaced to web page. Ketone level is measured as the amount of breath acetone is collected when patients exhale into a mouthpiece that consists of gas sensor. The reading from Arduino is shared to the database via ESP 8266 Wi-Fi Module and can be accessed by the patients or registered doctors. This research is significant where patients can independently monitor their diabetic health and the IoT system can be alerted directly to medial officers in the hospitals.

Keywords:--

ketone, personal monitoring system, acetone, exhaled breath, Internet of Things, sensor.

Monitoring of Premature Baby Vital Signs Using Wireless ZigBee Technology

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Abstract:--

Wireless Body Area Sensor Network is one of the main application areas for ubiquitous computing. The potential for ubiquitous computing is evident in almost every aspect of our lives including the hospital, emergency and critical situations. The Zigbee is a wireless networks have enabled the design of low-cost, intelligent, tiny, and lightweight medical sensor nodes that can be placed on human body to monitor various physiological vital signs of patient for a long period of time and providing real-time feedback to the user and medical staff. In this paper, Developing a hardware which will sense heart rate, temperature of a person, and movement of the person using gsm modem all information lively transmitted to gsm mobile. The attached sensors on patient's body and they are able to sense the various heath parameters of patient such as heart rate, fall detection, and temperature contains. These health parameters are then communicated to physician's server. The physician holds various threshold values of the health parameters for each and every patient. This system can detect the abnormal conditions, issue an alarm to the patient and send a SMS to the physician.

Keywords:--

Wireless body area sensor network, GSMmodem, Microcontroller, heartbeat sensor, accelerometer, temperature sensors.

Chronic Obstruction Detection of kidney by using EEG sensor

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Abstract:--

In these days, chronic diseases are the imperative reason for death in the world. Therefore, there is a noteworthy increment in consideration being paid to individual wellness as a preventative methodology in healthcare. However, creating and building a prediction model for chronic diseases is an extraordinary change to healthcare technology on the premise of data-analysis and decision-making level. In this paper, effective mechanisms have been used for chronic disease prediction by mining the data containing historical health records. In this study, we also present comparative study of different classifiers to measure the performance based on accuracy rate.

Measurement and Monitoring the Blood Glucose and Spo2 Using Laser Light By a Non-Invasive Method

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Abstract:--

Current blood glucose monitoring (BGM) techniques are invasive as they require a finger prick blood sample, a repetitively painful process that creates the risk of infection. BGM is essential to avoid complications arising due to abnormal blood glucose levels in diabetic patients. Laser light based sensors have demonstrated a superior potential for BGM. Existing Near-infrared (NIR) based BGM techniques have shortcomings such as the absorption of light in human tissue, higher signal to noise ratio (SNR) and lower accuracy, these disadvantages have prevented NIR techniques from being employed for commercial BGM applications. A simple, compact and cost-effective non-invasive device using visible red laser light of wavelength 650 nm for BGM is implemented in this paper. The RL-BGM monitoring device has three major technical advantages over NIR. Unlike NIR, Red laser light has ~30 times better transmittance through human tissue. Furthermore, when compared to NIR the refractive index of laser light is more sensitive to the variations in glucose level concentration resulting in faster response times ~7-10 seconds. Red laser light also demonstrates both higher linearity and accuracy for BGM. The designed RL-BGM device has been tested for both in-vitro and in-vivo cases and several experimental results have been generated to ensure the accuracy and precision of the proposed BGM sensor.

Keywords:--

Non-invasive glucose monitoring,laser diode,photo diode.

Modeling and development of smart aid for akinesia disorder

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Abstract:--

Parkinson's disease (PD) is a chronic progressive disease caused by loss of dopaminergic neurons in the substantia nigra, degenerating the nervous system of a patient over time. Freezing of gait (FOG), which is a form of Akinesia(Akinesia is a term for the loss of ability to move your muscles voluntarily), is a symptom of Parkinson Disease. Meanwhile, recent studies show that the gait of Parkinson's Decease patients experiencing Freeze of Gait can be significantly improved by providing the regular visual and auditory patterns for the patients. In this paper, we propose a gait-aid system built upon smart glasses. Our system continuously monitors the gait and so on of a Parkinson's Decease affected patient to detect Freezing of Gait, and upon the detection of Freezing of Gait it projects visual patterns on the glasses as if the patterns were actually on the floor. Conducting experiments involving ten PD patients, we demonstrate that our system achieves the accuracy of 92.86% in detecting Freezing of Gait episodes and that it improves the gait speed and stride length of PD patients by 15.3~37.2% and 18.7~31.7%, respectively.

RFID Based Tracking System for Surgical Instruments

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Abstract:--

Every surgical item used during surgery (e.g., sponges) must be accounted for after surgery to ensure that none of these items is left inside the patient. Despite the numerous precautions in place, in approximately 1 in 1500 cases, something gets left behind inside the patient's body. This paper presents ASSIST, an automated system for surgical instrument and sponge tracking that increases the safety of surgical procedures. ASSIST utilizes RFID (Radio Frequency Identification) technology to aid in accounting for all items used during surgery. The design takes into account safety, simplicity, ease of deployment, and ease of use. An initial evaluation utilizing RFID-tagged sponges demonstrates that ASSIST can reliably track surgical sponges with minimal impact to current operating room procedures. Sources of error that can impact the reliability of the system are also discussed.

Wearable Jacket for Hyperthermia Analysing and Alerting For Infant

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Abstract:--

In this proposes the development and assessment of smart textile system containing sensing and processing. We demonstrate a wearable temperature sensing system for infant. The normal temperature for the infant is 37 °C. If the temperature rises on or above 38 °C the sensor will automatically sense the temperature and gives this information to the microcontroller. A running water of normal temperature is allowed to pass continuously through the jacket by using a pump motor for reducing the temperature of the infant. A GSM device is also connected with the device for sending the message to the doctor and also to the parents during each one minute. The water stops running only when the temperature of the baby falls below 38°C. The system will continuously monitor the temperature and will alert via the GSM incase of abnormalities. The advancement in modern technology has given its way to the human race.

Keywords:--

Microcontroller – ATMEGA8, Temperature Sensor - LM35, GSM, Fever Monitoring for Infant, Therapeutic Purpose.

IoT Based Smart Health Device to Access Psychological Stress and Management

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Abstract:--

In today's world many People feel stressed Out from school, work, or other life events. Therefore, it is important to detect stress and manage it to reduce the risk of damage to an individual's well-being. With the emergence of the Internet of Things (IoT), devices can be made to detect stress and manage it effectively by using cloud-based services and smartphone apps to aggregate and compute large data sets that track stress behavior over long periods of time. Additionally, there is added convenience via the connectivity and portability of these IoT devices. They allow individuals to seek intervention prior to elevated health risks and achieve a less stressful life.

keywords :--

stress detection, automatic, Stress detection, stress management.

An Investigation of Mechanical Properties of Banana Fiber Composites and Making of Window Door Model

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Abstract:--

The composite materials are replacing the traditional materials, because of its superior properties such as high tensile strength, low thermal expansion, high strength to weight ratio. The developments of new materials are on the anvil and are growing day by day. In this work the effect of glass fiber hybridization with the randomly oriented natural fibers are considered.The natural fibers are also low cost fibers with low density and high specific properties. The sisal(S), banana (B), E-glass synthetic fibers(G) are chopped and reinforced with polyester matrix is planned to prepare, six layers of the following stacking sequence of S/B/G, S/G/B, G/S/B, G/S/B/G/S/B/G, S/G/B//S/G/B, B/G/S/B/G/S. In this present study of Fiber Reinforced Composite an investigated and compared the mechanical properties like impact, flexural and tensile strength. Finally based on the result fabrication of window door will be fabricated.

Fabrication of Year Round Air Conditioner by Using Solenoidal Valve

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Abstract:--

The purpose of year round air conditioner is to make two in one equipment at constant temperature irrespective of ambient temperature .The cold air producing at temperature of 19°C to 27°C for the person who is working in hot environment, by using the summer air conditioner. The hot air is producing at 24°C to 35°C for the people who are working at cold circumstances, using winter air conditioner. In this year round air conditioner machine, two weather conditions are possible and the conditions are operated by solenoid valve. It is a multipurpose unit and portable one .it work under normal VCR system. Thermostatic switch, which is used to controlled the refrigerant. An evaporator and blower are fixed in front of air conditioner. At the same time condenser and fan are equipped on the rear of air conditioner. Then solenoid valves are fixed as per requiring position. The capacity of air conditioner is 1.5 TR. The atmospheric air is observed by an air conditioner, and blowed out hot and cold air as per requisition. It can be used for domestic purpose. The power consumption of the system is very minimum and space is less.

Experimental Investigation on Reducing the Harmful Exhaust Emission from Diesel Engine

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Abstract:--

The rapid growth of population and vehicles has resulted in the rapid increase in the energy demand. Due to the energy demand and fast depletion of fossil fuels, researchers are more focused on to find the suitable alternate fuel for diesel. It can be used for diesel engine without any modification.. The main focus of this research is importance of tyre pyrolysis oil as an alternative fuel for diesel engines. In this context, tyre pyrolysis oil has recently been receiving renewed interest. The tyre oil having high viscosity, high flash point, high density and lower calorific value is suitable fuel for compression ignition (CI) engine. The tyre oil was mixed blends 5%, 10%, by volume with diesel . The experimental analysis of engine parameters such as performance and emission characteristics of tyre oil and its blends in a compression ignition engine was carried out.

Analysing the Mechanical Behaviour of Aluminum Reinforced With Silicon Carbide Composites (AlSiC)

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Abstract:--

This study describes the erosion behavior of AL6063 aluminum alloy matrix filled with different weight proportions (10 wt. %, and 20 wt. %) of silicon carbide (SiC) particles and the composite being fabricated by using a widely accepted stir casting technique. Different sizes of angularly shaped alumina (Al2O3) particles are used, and the tensile and hardness tests are performed. Aluminium Metal Matrix composites is a relatively attractive material for automobile, aerospace and other engineering application due to its mechanical and tribological properties. To improve wear resistance and mechanical properties has led to design and selection of newer variants of the composite. The present investigation deal with the study of wear behavior of Al-SiC MMCs for varying reinforcement content, applied load, sliding speed, and distance. Aluminium MMCs reinforced with two different percentage of reinforcement prepared by stir casting method. An analysis of variance is employed to investigate the influence of controlling parameters, SiC content, Normal load of the composites.

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Fabrication of Air Brake System Using Exhaust Gas

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Jibin Baiju., Sengunthar College of Engineering.

Abstract:--

In this braking system, exhaust gas from the IC engines is used to operate air brake in the automobiles. Air brake is most used braking system in vehicles. In the proposed model, instead of air brake, exhaust gas is used to operate the brake lever. Exhaust gas from engine is stored in a specially designed pneumatic tank. This exhaust gas pressure is used to operate the pneumatic cylinder and brake lever. Two stoke petrol engine is used in the proposed exhaust gas braking system. Petrol engine is chosen because it produces less impurity in exhaust than diesel engines. This study can also be extended for diesel engines also with suitable design. The main aim of this project is to reduce the work loads of the engine drive to operate the air compressor. In this project, we used exhaust gas from the engine to rotate the generator turbine. Then the power is loaded to the D.C compressor and it is used to the pneumatic cylinder to apply brake.

Fabrication of Automatic Pneumatic Hammer

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Anchalsreenivas.P.., Sengunthar College of Engineering.

Abstract:--

Here we have fabricated the pneumatic Hammer machine; it's a new innovative concept. Hammer is the term for shaping metal by using localized compressive forces. Cold Hammer is done at room temperature or near room temperature. Hot Hammer is done at a high temperature, which makes metal easier to shape and less likely to fracture. Warm Hammer is done at intermediate temperature between room temperature and hot Hammer temperatures. This machine has been mainly developed for metal forming to the required shape and size. In machine we have used pneumatic cylinder for controlling the hammer. Pneumatic is air operated device. By doing the manual process it consumes more time and large amount of man power required for Hammer. By using this machine we can save the time and man power requirement in the industries.

Increasing the Efficiency of IC Engine By Using Air Pre Heater

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S. Kapilnath., Sengunthar College of Engineering.
S.Pradheep.., Sengunthar College of Engineering.
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Abstract:--

The increasingly worldwide problem regarding rapid economy development and a relative shortage of energy, the internal combustion engine exhaust waste heat and environmental pollution has been more emphasized heavily recently. Our foremost aim of selecting this research is to use efficiency increasing. It is also good with regard to economic considerations and engine efficiency. The concept of increasing the fuel efficiency of a petrol engine in this research is to preheat the intake air which is flowing through the carburetor .This type of system has not been introduced in two wheelers; this may be very useful to two wheelers without any complication and maintenance. But the pre-heater design depends on the exhaust pipe fitted to the particular two-wheeler. The design is simple, cheap and does not give any trouble to the engine.

Fabrication of Fuel Efficiency Impovement in a Petrol Engine by Using Water Injection

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Surya.R.., Sengunthar College of Engineering.
Punitha.S.., Sengunthar College of Engineering.

Abstract:--

In Internal combustion engines, water injection, also known as anti-detonate injection, is spraying water into the cylinder or incoming fuel-air mixture to cool the combustion chamber of the engine, allowing for greater compression ratios and largely eliminating the problem of engine knocking. This effectively reduces the air intake temperature in the combustion chamber. The reduction of the air intake temperature allows for more aggressive ignition timing to be employed, which increases the power output of the engine. Depending on the engine, improvement in power and fuel efficiency can also be obtained solely by injecting water. Water injection may also reduce Nitrous oxide or carbon monoxide emissions. The purpose of this experiment is to investigate the effect of water injection on the engine performance, exhaust gas temperature and exhaust gas emission of a SI engine, water is injected in controlled quantities with the compressed air. Single cylinder, four stroke, air cooled type, 100 cc petrol engines used in the experiment.

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Smart Vehicle Accident Prevention and Monitoring System Using Communication Protocol

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Abstract:--

The project two sections have been developed for the vehicle safety and automation system. The first section of this project is to monitor the accidents which occur on the highway using GSM&GPS technology. The propose of this project is to repor the monitoring section whenever accidents occurs on the highway and providing fastest helpline. Accident which occurs on the highway can be monitored using microcontroller accident identifier circuit, GSM & GPS. The accident information with location sends to the user and the ambulance service when accident occurs the project also monitors and provides the safety guidelines to passenger at the vehicle. The information of occurrence of the accident will be transmitted to the user and the police patrol room with the exact location of the vehicle. This project enhance with the vibrator for the passenger at vehicle which makes the safety journey for all users this type of system as a variety of application and can be used for other purpose such as guiding completely autonomous vehicle.

Keywords:--

Android, Image processing, Jammer, Sensors, Microcontroller .

Protection and Control of Stator Water Cooling System

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Abstract:--

Probabilities of heat inducing in the Stator Winding of the Generator are undoubted and hence automatic protection is absolutely necessary to detect and safeguard or to isolate the system from faults. Hence it is very important to provide all possible protection for the Generator's Stator Winding and accordingly Alarming / Trip signals should also to be made ready to handle the situation under odd hours.Our project deals with the cooling of the Stator Winding located in the Generator. Here the Winding part is cooled by using water by maintaining the level of the Conductivity Meter, Flow Meter and Pressure level. Here temperature of water and Stator winding's plays the major role and it has to be controlled within limit.Our Project shows how PLC is introduced in the place of present control logic to maintain the Conductivity, Flow and Pressure of the Water level thereby initiating Alarm and Trip signals for related operation and maintenance convenience. There-by ensuring Stator Winding for its efficient operation. The greatest advantage of PLC technology is Personal Computer (PC) connectivity. Its application is totally written as software and hence usage of physical control relays, timers and its associated wiring are avoided. Incorporation of Human Machine Interface and PC makes end-user to view system activities right through desktop screen.

Implementation of ARDUINO based spontaneous transportation scheme for physically challenged person by using photovoltaic cell

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Abstract:--

Artificial intelligence plays an integral and indispensable role in the advancing technology. In an era of expeditious human life, the demand for automated devices is increasing rapidly. The growth of smart technology has given room for many applications. Such systems analyze the situation and respond appropriately in accordance to the function they are to perform. In this paper, the mechanism of a smart car for a physically disabled is explained. The concept is based on the use of sensors for direction control and automatic sensing of the presence of any obstruction nearing it. Thus, alerting the driver in the form of a LED glow and speed of the car was automatically reduced. The smart car is also equipped with a separate ARDUINO and Ultrasonic sensor for safety alert system. The smart car ensures complete safety of the driver on seat and helps him to move about independently.

Keywords:--

Smart technology; Ultrasonic sensors; Arduino software; Arduino UNO.

Automatic Ream Handling For Automatic Storage and Retrieval System

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Abstract:--

Tamil Nadu Newsprint and Papers Limited (TNPL) produces sheet bundle which is called ream can be stored in AS/RS (Automatic Storage and Retrieval System) of 7000 tons capacity. Reams which are stored in AS/RS can be retrieved and ready for loading point at any time. AS/RS system process is controlled by PLC (Programmable Logic Controller using the PLC process can be controlled manually and automatically as well. In TNPL finishing house area, the reams are packed manually by using brown sheet and being sent to the shrink wrapping machine. In which reams are packed by polythene cover. A single ream bundle contains 500 sheets and 4 or 5 reams are sent for eight fans for reams packing operation. From shrink wrapping machine the packed reams are collected and fed in to the AS/RS input conveyor manually. In our project the system eliminates manual handling and will be controlled by PLC with automation and manual control. By extending the output conveyor from shrink wrapping machine reams are pushed to the next perpendicular conveyor using hydraulic pusher and collected by input conveyor of AS/RS. The system also comprises storage conveyor to control the ream flow during maximum production. This system will produce the time consumption and manual efforts.

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Design and Implementation of Microcontroller Based Automated Dust Cleaning System to Improve Efficiency of Photovoltaic Cells

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Abstract:--

The solar cell modules are generally employed in dusty environments which is the case in tropical countries like India. The dust and particulate matter gets accumulated on the reflecting surface of the module and blocks the incident light from the sun. It reduces the power generation capacity of the module. The power output will be decreased as much as up to 50% if the module is not cleaned for a long time. In order to regularly clean the dust, an automatic cleaning system has been designed, which senses the dust on the solar panel and also cleans the module automatically. This automated system is implemented using ARDUINO microcontroller which controls the DC geared motor. This mechanism consists of a two sensors (LDR and PPM). For cleaning the PV module, a mechanism consists of sliding brushes has been developed. In terms of daily energy generation, the presented automatic-cleaning scheme provides about 30% more energy output when compared to the dust accumulated PV module.

Keywords

Solar Cell, Cleaning, ARDUINO, DC Geared Motor, PV Module

Rescue and Protection System for Underground Mine Workers Based On Zigbee

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Abstract:--

There are a great many risks to your health which can be linked to coal mining operations. Though there are obvious workplace hazards associated with working in a coal mine, these are not the only risks associated with mining activities. Simply living within proximity of a mine can actually cause a variety of health concerns, and both types of mining (deep and surface) pose their own set of problems. A smart helmet has been developed that is able to detect hazardous events in the mines industry. In the development of helmet. The concentration level of the hazardous gases such as CO,SO_2,NO_2, and particulate matter. Hazardous event was classified as a miner removing the mining helmet off their head. The environment temperature and heart beat rate also finds to identify the worker's health conscious. The concentration level of the hazardous gases such as methane, carbon monoxide, hydrogen sulfide and particulate matter. This project, aims to design a mine safety system using wireless sensor networks with measurement of parameters such as temperature, air-flow, humidity, noise , dust, and gas concentration.

Keywords:--

Hazardous gas, temperature measurement, sensor system, mining industry

Speed Monitoring and Controlling of Motor Using Internet of Things (IoT) Enhanced With Wi-Fi

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Abstract:--

This Paper we use internet to establish communication between the user and Monitoring unit. Here we are monitoring and controlling the speed of DC motor as well as direction of the motor. The advancement of technology has resulted in reduction of human efforts, the main reason for which being machines. Machines are playing an important role in our life. It consists of microcontroller, Temperature sensor, DC motor, voltage & current sensors and WI-FI module. Here we are monitoring and controlling the speed of the motor using webpage through WI-FI. we can also control the direction of the motor whether to be rotated in clockwise or anticlockwise direction. We can measure the temperature, voltage, current, speed of the DC motor using temperature, voltage, current & speed sensors.

Key words:--

WIFI, Anti Clockwise, Sensor, Buzzer.

Building a Virtual Brain to Life for the Secret

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Abstract:--

Human brain, the most valuable creation of God. The man is called intelligent because of the brain. But we loss the knowledge of a brain when the body is destroyed after the death. Virtual brain project will search for insights into how human beings think and remember. The main aim is to upload human brain into a VBOT Sensor. After the death of the body, the virtual brain will act as the man's brain. Such models will shed light on how memories are stored and retrieved. This could reveal many exciting aspects of the brain, such as the form of memories, memory capacity and how memories are lost. This project contains two sensors wireless body area sensor network named Nanobots.This sensor is a wireless network of wearable computing devices. BAN devices may be embedded inside the body.it gather energy from the body temperature and communicate with the VBOT Sensor. Next Sensor is VBOT Sensor it acts like virtual Brain. Through this sensor we can store our secret and our intelligence with the help of PC or Mobile. We can use the secret of a person after the death

Trust Based Service Management For Malicious Application In Manet

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Abstract:--

With the expansion of genuinely capable cell phones and pervasive remote innovation, we see a change from customary portable specially appointed systems (MANETs) into another period of administration arranged MANETs wherein a hub can give and get administrations. Asked for administrations must be decayed into more dynamic administrations and after that bound; we define this as a multi-target advancement (MOO) issue to limit the administration cost, while amplifying the nature of administration and nature of data in the administration a client gets. The MOO issue is a SP-to-benefit task issue. We propose a multidimensional confide in based calculation to take care of the issue. We complete a broad suite of reenactments to test the relative execution of the proposed trust-based calculation against a non-trust-based partner and a current single trust-based beta notoriety plot. Our proposed calculation successfully sift through malevolent hubs showing different assault practices by punishing them with loss of notoriety, which at last prompts high client fulfillment. Further, our proposed calculation is effective with straight runtime multifaceted nature while accomplishing a near ideal arrangement.

E-Toll Plaza Using Zigbee

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Abstract:--

The main task of the ETC system is to decide whether user has driven through a road segment or not and charge him if he has. This decision, which is known as geo-object recognition, can be taken as a function of the number of user positions lying inside the geo-object boundaries. Electronic toll collection system based on GNSS provides more flexibility and reduced roadside infrastructure compared to normal toll booth. I propose electronic toll collection booth with several features like detection of toll booth along the travel , message intimation to mobile users such that amount of money that swapped, if money is not enough then automatic recharging machine is in build in the electronic toll booth and count the number of vehicles in each lane in the toll booth. GNSS-based ETC schemes are particularly interesting because they are free- flow highly flexible systems with a reduced quantity of roadside infrastructure. GNSS-based ETC systems are liability-critical applications because excessive and uncontrolled positioning errors may lead to incorrect toll invoices. GNSS signal may be perturbed by errors and failures so it produce a wrong information to the controller. Use of receiver autonomous integrity monitoring (RAIM), which are algorithms run within the GNSS receiver and, therefore, are easier to tune to ETC needs than other systems based on external information. The weighted least squares residual RAIM used in civil aviation is analyzed, and an algorithm modification for ETC is proposed.

Fishermen Nautical Border Alert System

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Abstract:--

In day-to- day life we hear about many Tamil fishermen being caught and put under srilankan custody and even killed. The sea border between the countries is not easily identifiable, which is the main reason for this cross border cruelty. Here we have designed a system using embedded system which protects the fishermen by notifying the country border to them by using Global Positioning System (GPS) and Global system for mobile communication (GSM). We use GPS receiver to find the current location of the fishing boat or vessel. Using GPS, we can find the current latitude and longitude values and is sent to the microcontroller unit. Then the controller unit finds the current location by comparing the present latitude and longitudinal values with the predefined value. Then from the result of the comparison, this system aware the fishermen that they are about to reach the nautical border. The area is divided into four zones- normal zone, warning zone, zone near to restricted zone and finally the restricted zone. If the boat is in normal area, then the LCD displays normal zone. Thus they can make it clear that the boat is in normal area. In case it moves further and reaches the warning zone, the LCD displays warning zone. If the fisherman ignores the warning or fail to see the display and move further and if the boat enters the zone nearer to the restricted zone the alarm will turn on and the speed of the boat engine automatically gets controlled by 50%. If the fisherman did not take any reaction about the alarm and move further, then the boat will enter into the restricted zone, the alarm continues to beep as before, and once it touches the restricted zone, the boat engine gets off by the control of fuel supply to engine.

Vehicular Communication by Intelligent Transport System

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Abstract:--

Vehicular Ad Hoc Network (VANET) is an emerging application of Intelligent Transport System (ITS) with a wide range of safety and non-safety applications. Data communication in VANET is challenging is due to its high mobility, short link lifetime, and frequent network fragmentation. These challenges demand efficient spectrum utilization for ensuring reasonable network performance. The use of Cognitive Radio (CR) can facilitate efficient spectrum utilization by Dynamic Spectrum Access (DSA). It allows the vehicles to use an existing road side network infrastructure without interfering its users. We point out the detailed procedure of evaluating the performance of DSA algorithms in CR-vanets using discrete-event simulation.

Fire Fighting Robot

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Prithiya.S., Sona College of Technology.
Tharani.K., Sona College of Technology.

Abstract:--

The project is used to develop a robot by using ZIGBEE technology for remote operation. Water tanker and a pump is connected with a robotic vehicle which is controlled through wireless communication to throw water. Here we are using PIC micro controller. Through mobile phone ,commands are sent to the receiver to control the movement of the robot either to move forward and backward or left and right. Four motors are used at receiving end. Two of them are used to control the movement of bot in forward and reverse directions. One of the motors is use to control movement in left and right directions. Fourth one controls the spraying of water using pump. Overall operations are controlled by the PIC micro controller .A motor driver IC is interfaced with micro controller through which the driver drives the motor.

Keywords:--

PIC 16F877A,Ultrasonic sensors, Temperature Sensor, Water pump, ZIGBEE module, DC motor.

Embedded Based Automatic Phase Change and Monitor by Using Zigbee

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Abstract:--

Now a day in an electrical field, they change one phase (three phases) to other phase (single phase) manually. If there is low voltage in any two phase and want to change over the phase from three phase into single phase automatically. So we proposed a system RTC based phase change and monitor automatically by using zigbee.This paper is for monitoring and phase change over by implementing ZIGBEE based wireless sensor network. The designs of the system maintain security, provide high reliability and are susceptible to many types of faults.

A Lightweight Secure Data Sharing Scheme for Mobile Cloud Computing

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Abstract:--

With the popularity of cloud computing, mobile devices can store/retrieve personal data from anywhere at any time. Consequently, the data security problem in mobile cloud becomes more and more severe and prevents further development of mobile cloud. There are substantial studies that have been conducted to improve the cloud security. However, most of them are not applicable for mobile cloud since mobile devices only have limited computing resources and power. Solutions with low computational overhead are in great need for mobile cloud applications. In this paper, we propose a lightweight data sharing scheme (LDSS) for mobile cloud computing. It adopts CP-ABE, an access control technology used in normal cloud environment, but changes the structure of access control tree to make it suitable for mobile cloud environments. LDSS moves a large portion of the computational intensive access control tree transformation in CP-ABE from mobile devices to external proxy servers. Furthermore, to reduce the user revocation cost, it introduces attribute description fields to implement lazy-revocation, which is a thorny issue in program based CP-ABE systems. The experimental results show that LDSS can effectively reduce the overhead on the mobile device side when users are sharing data in mobile cloud environments.

A Novel Authentication and Key Agreement Scheme for Implantable Medical Devices Deployment

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Abstract:--

Implantable medical devices (IMDs) are man-made devices, which can be implanted in the human body to improve the functioning of various organs. The IMDs monitor and treat physiological condition of the human being (for example, monitoring of blood glucose level by insulin pump). The advancement of information and communication technology (ICT) enhances the communication capabilities of IMDs. In healthcare applications, after mutual authentication, a user (for example, doctor) can access the health data from the IMDs implanted in a patient's body. However, in this kind of communication environment, there are always security and privacy issues such as leakage of health data and malfunctioning of IMDs by an unauthorized access. We propose a new secure remote user authentication scheme for IMDs communication environment to overcome security and privacy issues in existing schemes. We provide the formal security verification using the widely-accepted Automated Validation of Internet Security Protocols and Applications (AVISPA) tool. We also provide the informal security analysis of the proposed scheme. The formal security verification and informal security analysis prove that proposed scheme is secure against known attacks.

IoT Based Automated Irrigation Using Sensors

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Abstract:--

This paper presents that the Cultivation Management System mansion here is based on cloud. The architecture of system allows user to achieve the above mentioned activities in prearranged time so that farmers can examine their farm field data details from anywhere in between the range. Monitor system mainly consist Hardware module that situated in farm or farm field that has various sensors, devices, ICs for data transformation and transfer. Then Cloud implemented as Software as a Services (SaaS) so that the Android smart phone used as a remote control to make Arduino based automated irrigation system easy-to-use.

The system design includes a soil moisture sensor placed in different direction of farm field that provides a voltage signal proportional to the moisture content in the soil which is compared with a predefined threshold value. On basis of this comparison result the appropriate data are fed to the ATMEGA-328" microcontroller which is on ARDUINO- UNO processor, which is linked by HC-05 module to an Android phone. Android phone allows the user to switched on/off the drive motor. System has a potential to be used in the real time precision agriculture application.

Keywords:--

Arduino, SaaS, Cloud, ATMEGA-328

Secure and verifiable policy update outsourcing big data in cloud computing

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Abstract:--

Due to the high volume and velocity of big data, it is an effective option to store big data in the cloud, as the cloud has capabilities of storing big data and processing high volume of user access requests. 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.

Seperable Reversinle Data Hiding In an Encrypted Image

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C.Aravinth., Final Year Students, Department of Cse,Sengunthar College of Engineering, Tiruchengode, Tamilnadu, India
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Abstract:--

This work proposes a novel scheme for separable reversible data hiding in encrypted images. In the first phase, a content owner encrypts the original uncompressed image using an encryption key. Then, a data-hider may compress the least significant bits of the encrypted image using a data-hiding key to create a sparse space to accommodate some additional data. With an encrypted image containing additional data, if a receiver has the data-hiding key, he can extract the additional data though he does not know the image content. If the receiver has the encryption key, he can decrypt the received data to obtain an image similar to the original one, but cannot extract the additional data. If the receiver has both the data-hiding key and the encryption key, he can extract the additional data and recover the original content without any error by exploiting the spatial correlation in natural image when the amount of additional data is not too large. Proposed new security for encryption using new elliptic curve digital signature algorithm (ECDSA) and OTP system using for internal encryption.

Cloud Based Plant Leaf Disease Detection System Using an Android Application

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Abstract:--

Most of the population in India depends on agriculture and farming. Indian economy directly depends on agricultural production. The proper maintenance of plant growth includes various steps such as to examine the environmental factors and manage water supply for proper cultivation of plants. A traditional way of irrigation is not efficient and unreliable. Around 18% of crop yield is lost worldwide due to pest attack every year. Identification of plant disease is key to preventing the losses in the yield of agriculture product which is difficult to do manually. The project therefore involves a system architecture which allow user to achieve all above activities in real time so that farmers can view their farm details from remote location. It includes- 1.A module placed in a farm that contains various sensors and device for data conversion and transfer such that farm details and environmental factors are monitored and controlled correctly 2.Image processing for disease detection of visually seen symptoms of plant. Using an application the treatment is suggested to reduce the damage levels. The proposed system will thus improve in the productivity and benefit irrigation sector.

Key Words:

Internet of Things, Image processing, Wireless Sensors, Disease Detection, Smart Irrigation System.

A New Technique for Secured Authentication with Pc Control through Sms

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Abstract:--

Short message service (SMS) is a technology that can use mobile devices to send and receive text message, with wide coverage area, high popularity, high reliability, low expenditure, easy development and other characteristics. Using GSM modem or short message platform of network, short messages can be send and receive between the computer and the mobile terminal. PC can be secured by using GSM without internet.Any user trying to misbehave in the system, then the application will send alert message to the administrator's mobile, then the administrator can shut down the system from any remote location through his mobile by sending a SMS.

Keywords:--

SMS service, GSM, text message, Computer, Mobile.

Developing a Neural Network Based Approach for Sentiment Classification

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K.K.Yuvaraj kumar., B.TECH-Information Technology, Sengunthar College of Engineering, Tamilnadu,India

Abstract:--

The study of sentimental analysis and opinion mining deals with attitude and emotions. Opinion mining has several challenges. The first challenge is that a word is either positive in one situation or negative in another situation. Therefore, sentiment can be performed using social media messages.. To overcome this problem, social media messages are used which are free of cost and produced in world wide. In this the public concern can be measured using two-step word alignment approach. In the first step, raw reviews are separated into personal reviews and news reviews. In the second step, personal reviews are further classified into personal negative and personal non-negative. In both steps, the trained data is generated automatically using an emotional-oriented, clue-based method and the trained dataset can be tested using machine learning model such as Naïve Bayes. The proposed algorithm will increase the accuracy for epidemic domain.

Keywords:--

Classification, emotion, emotion analysis, Naïve Bayes, SVM and IBK.

Online Based Authenticated Election Voting System

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Abstract:--

The identity proofs(voter ID and Aadhar id) are used in Online Voting System for voter verification. The user doesn't need to carry their ID which contains person's required details. The user information must be already stored in the database of election commission of India. The online voting system reads the details of the person from the database. The online voting system fetches the data which is given by the person at the time of election and compares this data with already existing data during registration. The data must be matches with the pre-stored information , then only the person is allowed to cast their vote.

Keywords:--

Voter ID;Aadhar ID;OTP;Verification.

Denoising algorithm for LISS – III Remotely sensed data using Filters and Wavelet transform

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Maghilan L., K.S.Rangasamy College of Technology.

Abstract:--

In this paper, we have used the satellite image for the purpose of denoising. The prime focus of this paper is to provide a comparison between the Median filter, Wiener filter and adaptive median filter. As a further matter, we have showed the performance of these filters which has been analyzed by providing a short interpretation of Peak Signal to Noise Ratio, Mean Square Error, L2rat, Maxerr. The satellite image data which has been chosen consists of four spectral bands of Salem region. The image which is being selected for the process of denoising is put through conversion to JPEG format and then subjected to Impulse noise comprising both Gaussian noise and Salt and pepper noise. The filtering techniques are then applied for denoising which includes Median 3x3, Median 5x5, Wiener 3x3, Wiener 5x5, Adaptive Median 3x3, Adaptive Median 5x5. For achieving a better image quality, Multilevel 2D Haar wavelet transform is used. Thus this work furnishes the simulated results and a clear comparison of the efficiency of the above mentioned filters and Haar wavelet transform on noisy remote sensing images.

Keywords:--

Wiener, Median, Adaptive Median, Haar.

Deep Learning with CNN Based Scene Classification

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Abstract:--

Scene classification has been widely explored. It promotes computer vision tasks including object recognition and image retrieval. A classical image will be pre-processed for scene image classification. During pre-processing classical image will be resized and color image will be converted into gray scale image and unwanted noise will be removed by using bilateral filter. Here feature is extracted using Fisher Kernel vector, which is an extension of the standard Fisher vector to this Bag-of-Words. The latent semantic representation derived from correlation Topic Model(CTM) with the conventional way that just considers the latent topic distributions to perform well consistently. The Correlated Topic Vector (CTV) is introduced to capture the correlations between themes for scene image classification. The image is classified using deep learning based convolution neural network. The deep learning method classifies the scene according to feature values of CTV. The simulations are done using MATLAB and the classification accuracy is compared with previous schemes.

Removal of Duplicate Storage of Encrypted Data in Cloud Computing Environment

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S.Priya., V.S.B Engineering College, Karur.

Abstract:--

Duplication removal is the important aspect of data storage in cloud. Cipher text-policy attribute based encryption(CP-ABE)scheme supports deduplication. Attribute-based encryption(ABE) has been widely used in cloud computing where a data provider provide encrypted data to a cloud service provider and share the data with user who have specific credentials. It can be used to share data confidentially with users by specifying access policies rather than sharing decryption keys. It also achieves the standard idea of semantic security for data confidentiality but existing systems only achieve it by defining a weaker security for data confidentiality. In this, a method used to modify ciphertext of one access into ciphertext of the same plaintext but under other access policies without revealing the underlying plain text. In proposed ABFE(AES with Blowfish)algorithm is used. ABFE algorithm is used to encrypt the files before storing it on the cloud. ABFE has high security and fastest algorithm. For checking duplication Cyclic Redundancy Checking(CRC) algorithm is used. In this we avoid both duplication of data and unauthorized access of data in cloud environment.

Performance evaluation of multicarrier pwm methods for 7-level cascaded multilevel inverter.

Jenitha J., Bannari Amman Institute of Technology
Maheswari KT., Bannari Amman Institute of Technology

Abstract:--

Multilevel inverters are becoming more popular in field of high power energy control due to their capability for high power applications. On the other hand, they require switching control methods to generate sinusoidal output with less harmonic. Cascaded H-bridge inverter has desirable features compared to diode-clamped and flying capacitor inverter; it can prevent extra clamping diodes or voltage balancing capacitors, Furthermore, each level has the modular structure, and there are no voltage balancing capacitors or extra clamping diodes, so packaging and modularized circuit layout is possible. In this paper, 7-Level Cascaded Multilevel Inverter is designed and four various Multicarrier PWM methods namely, Phase Disposition (PD), Phase Opposition Disposition (POD), Alternative Phase Opposition Disposition (APOD), Phase Shifted (PS) have been analyzed using MATLAB Software.

Intelligent Beamforming Schematic Nature Design with Multi-Time-Scale Strategies for Multi-Cell Network

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T.Mohanapriya., V.S.B Engineering College
A.Mythili., V.S.B Engineering College.
N.Dharanya., V.S.B Engineering College

Abstract:--

Contemporary wireless devices are increasing the demand for higher wireless data usage. Unfortunately, progressive physical layer techniques such as e.g. Long Term Evolution (LTE) and Multi-User (MIMO) approach, are not operated efficiently in a coordinated fashion across multiple densely deployed access points. Several access points in the specific region are not able to receive a balanced transmitting and receiving capacity factor while accessing the resources. In this paper, we introduce a new coordination architecture which can achieve the high- performance gains of the hypothetically synchronized MIMO approach without higher overhead and efficiency losses, thus making the vision of high capacity wireless access via multiple nodes located in multiple regions. Herein, we propose another algorithm which overcomes the inefficiency of the existing algorithm with SINR key metrics. The basic idea is to select the access points based on the required places on the network, which will increase the accuracy level of the architecture. The proposed system used the multi-time-scale architecture along with the divide and conquer algorithm implementation without the need of a synchronized timer with delay conditions in a communication region. Our performance results will achieve the faster processing with the elimination of path loss in the longest communication range by using the NS-2 Simulator. Our experiment will give higher efficiency rather than the existing experiments with multi-time-scale workflow for the multi-cell network.

UWB Antenna for Brain Stroke Detection

Kaushick Easwar J., K.S.Rangasamy College of Technology.
Jayashree P., K.S.Rangasamy College of Technology.

Abstract:--

In worldwide, stroke is the leading cause of adult disability, the brain stroke is the third cause of death, ranking only behind heart disease and cancers. Here the proposed antenna is used to detect the brain stroke. It is fabricated in FR4 with relative permittivity 4.4 and thickness 1.5mm. It is operating at a band from 3.3568-12.604 GHz in free space and from 3.818 to 9.16 GHz on the normal head model. The antenna has dimensions of 44x30mm2. The antenna is simulated on the HFSS software and measured using the network analyzer. The measured and simulated result of the return loss of the antenna on human's head and head phantom has good results.

Keywords

Brain stroke, HFSS, UWB antenna.

Effective Analysis in Agriculture using Blue tooth Technology

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Dr.M.Meenakumari., Associate professor, Dept of ECE, SNS College of Engineering, Coimbatore

Abstract:--

Bluetooth low energy (BLE) is the recent technology for communication, due to inherent support for mobile phone accessibility This paper describes the analysis of soil using moisture sensor, temperature sensor, humidity sensor and BLE technology intended for use in agriculture wireless sensor network system. The output is evaluated based on its effectiveness in agriculture environment. This paper describes the application of Bluetooth Low Energy in analysing moisture level of soil, temperature and humidity in agricultural field. Thus the data extracted from all sensors are admitted to arduino board in which that has an inbuilt program. The required information about the soil is fetched from mobile application as it is acting as a receiver. Monitoring the agriculture system using BLE consumes less power

A Voronoi Based Multi-Demands Target Coverage Optimization in Directional Sensor Networks

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K. Priya., PG Scholar, Dept of ECE, National Engineering College, Kovilpatti.
V. Suvitha., PG Scholar, Dept of ECE, National Engineering College, Kovilpatti.
S. N. Sorna Latha., PG Scholar, Dept of ECE, National Engineering College, Kovilpatti.

Abstract:--

Coverage is the important and main challenging issue in the Wireless sensor networks. For a directional sensor network the sensor direction is fixed in a particular direction to cover the target. Many related studies have been exploited to improve the coverage quality and minimize the movement of sensors, which consumes more energy of sensors and thus shortens the network lifetime significantly. To solve the problem proposed work addresses the mobile sensor deployment problem and how to deploy the mobile sensors with minimum movement to form a WSN network and to provide a good coverage quality. For a case of target coverage problem in the direction sensor network voronoi based TV-Greedy algorithm is proposed.

Keyword:--

coverage, minimizing movement, network lifetime, WSN.

Synthesis of some 2r, 4c-Diaryl-7c-(t- Butyl)-3-Azabicyclo [3.3.1] Nonan–9-One Oximes

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Abstract:--

Six 2r, 4c-diaryl-7c-(t- butyl)-3-azabicyclo [3.3.1] nonan–9-one oximes 4a-f have been synthesized. It is prepared by condensation reaction of 2r, 4c-Diaryl-7c-(t- Butyl)-3-Azabicyclo [3.3.1] Nonan–9-One, hydroxyl amine, hydrochloride and sodium acetate in ethanol. All the compounds have been characterized by IR, 1H and 13C NMR spectral analysis.

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Evaluation of Bus Arbitration Techniques for SoC Design

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Abstract:--

Network on chip is part of a System on Chip and Network on chip is used for on chip communication. It acts like router switches. NoC router made up of FIFO buffer to store the data, Crossbar switch (multiplexing and De-multiplexing), and Arbitration technique. Arbiter is the most important part in the Network on Chip and arbiter is used when number of input port are request for same output port. Round Robin arbiter and Matrix arbiter are used to forward the data based on the priority and these results are compared. Here we offer Modified Index - based Round Robin arbiter. The attitude and architecture of our arbiter give on to lower power consumption and chip area, low latency than aforementioned arbiters. The design of Modified Index based round robin arbiter is coded in VHDL, synthesized and simulated in XILINX 13.2 version.

Detecting and Monitoring the Environmental Contamination through Lifi

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S.Ramesh., Professor, Dept of ECE, Mahendra Institute Of Technology, Anna University, Chennai

Abstract:--

Every vehicle has its own emission of gases, but the problem occurs when the emission is beyond the standardized values. The primary reason for this breach of emission level being the incomplete combustion of fuel supplied to the engine which is due to the improper maintenance of vehicles. This emission from vehicles cannot be completely avoided, but it definitely can be controlled. The aim of the project is to monitor and control the pollutants in the vehicle by using the pollution control circuit. This pollution control circuit consists of various sensors like smoke sensor, sound sensor and lifi kind of devices, and all of them are integrated and connected to a Controller. It is a real time work where a demo application has been made in which PIC16F877A processor is used and a controller board is made where all these devices get integrated and work accordingly. The vehicle is controlled by this circuit. When a vehicle attains certain threshold pollution level then the engine gets automatically switched off and an SMS is generated and sent to the pre-defined number stored in the memory through the GSM module.This paper demonstrates an effective utilization of technology by which we save our environment by controlling the pollution of vehicles.

Keyword:--

Standardized Values, Incomplete Combustion , Pollution Control Circuit, Threshold Pollution Level.

Design and Analysis of Toroidal Pressure Vessels Using Cad and Cae Softwares

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N.Ram Kumar., Deportment of Mechanical, Christ Deemed To Be University.

Abstract:--

The design of pressure vessels for operating at very high pressure is a complex problem. The pressure vessels used in wide applications such as in thermal and nuclear power plants, in chemical industries, in space and ocean depths, in hydraulic units of aircrafts and fluid supply systems in industries. The pressure vessels have different shape of opening like manholes, hand holes, and nozzles and have different size of opening such as small drain to full vessel size opening with body flange. The opening cannot be avoided in the pressure vessels because of various piping attachment. Due to openings in the vessels shell around the opening are weakened. This cause stress concentration because of geometrical discontinuity in the vessels. Such discontinuities are called as stress raiser and region in which they occur is called the area of stress concentration. Stress concentration factor is used to quantify how the stress is concentrated in a component. So the present study makes an attempt to find the effect of diameter and position of openings on toroidal pressure vessels. The pressure vessels shall be analyzed by using ANSYS for composite materials. This paper is an attempt to study of the effect of openings of 50 mm to 100 mm on toroidal pressure vessels. Also find out the variation of stress concentration factor for different diameter of hole for composite materials. To find the effect of position of hole, the holes of different diameters are placed at two different locations of the shell.

Detecting Stress Based on Social Interactions in Social Networks

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S.Rama priya., Student, Department of Computer Science and Engineering, SNS College of Technology, Coimbatore, India

Abstract:--

Mental pressure is undermining individuals' wellbeing. It is non-unimportant to distinguish pressure opportune for proactive care. With the prominence of web-based social networking, individuals are accustomed to imparting their day by day exercises and associating to companions via web-based networking media stages, making it doable to use online interpersonal organization information for push discovery. It is find that clients push state is firmly identified with that of his/her companions in online networking, and a huge scale dataset from certifiable social stages is utilized to deliberately ponder the relationship of clients' pressure states and social collaborations. It is first characterized an arrangement of stress-related literary, visual, and social properties from different angles, and after that propose a novel half breed display – a factor diagram demonstrate joined with Convolutional Neural System to use tweet substance and social connection data for stretch location. In this paper, we find that clients push state is firmly identified with that of his/her companions in online networking. To examine the connection of clients push states and social cooperations with the prominence of online networking , individuals are accustomed to imparting their day by day exercises and collaborating to companions via web-based networking media stage to characterize an arrangement of stress related literary visual and social traits from different perspectives

Synthesis, characterization and anticancer studies of Co (II), Ni (II) and Cu (II) complexes with Schiff base derived from 2-hydroxy-1-naphthaldehyde and 3-(1H-imidazol-1-yl) propan-1-amine

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S.Sivajiganesan., Department of Chemistry A.V.V.M Sri Pushpam College (Autonomous) Poondi, Thanjavur, Tamilnadu, India

Abstract:--

Synthesized and characterized by Co^{II}, Ni^{II} and Cu^{II} complex has been elemental analysis, UV-Vis, FT-IR and thermal analysis binding of this Co^{II}, Ni^{II} and Cu^{II} complex with calf thymus DNA was investigated by UV-Visible absorption, fluorescence spectroscopy techniques. The intrinsic binding constants K_b of complex with CT-DNA obtained from UV-Vis absorption studies. Further, the *in vitro* cytotoxic effect of the complexes examined on cancerous cell line, such as human breast cancer cells (MCF-7).

Keyword:--

Co^{II}, Ni^{II} and Cu^{II} complex, DNA interaction,Electrochemical studies And cytotoxicity activity.

Analysis of Diverse Transforms for Finger Vein Recognition

Mr.P.Gopinath., Assistant Professor/ECE, Sengunthar Engineering College, Tiruchengode.
Dr.R.Shivakumar., Professor/EEE, Sona College of Technology, Salem.

Abstract:--

In the field of biometric authentic system finger vein is the promising and securing personal identification and authentication in terms of security and convenience. Finger vein has gained much attention among the researchers because of its accuracy, performance, efficiency and reliability. It helps in low forgery risk, aliveness detection and spoofing resistance. The system has four parts: Finger vein image acquisition, preprocessing, feature extraction and recognition. In every biometric system, the special attention is given to the recognition part. The finger vein recognition system has various parameters like recognition rate, response time, FAR, FFR, EER, mismatch ratio. In this analysis various transforms are taken on finger vein system and analyzed the performance.

Key Words:
Biometric, Finger vein, Recognition, Transforms.

Smart Way of Current Monitoring and Controlling the Electrical Devices Using IoT

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N. Sangeethapriya., Assistant Professor, Department of Ece, Snugnthar College of Engineering, Tiruchengode

Abstract:--

In this paper, we propose a system which measures the current consumption unit through IR sensor unit. The IR transmitter is placed in the rotating unit of the EB meter. The receiver photo diode is placed in a certain place which is used to find no of rotation. By getting the number of rotation we get the current consumption. After getting the current consumption the Atmel will reduce the unit given for specific user. The unit here is taken as numeric value. If the unit is reduced to minimum value it will intimate the user through alarm and LCD unit. If the user wants to add more units for him, he has to send a message to EB section. From the EB section the required value will be sent to the Atmel controller through GSM modem. From the obtained value the Atmel will increment the unit in the memory. Thus recharge process is done quickly with less manual interactions. Our system may be applied in Industrial control, medical system and access control. The Toll free number is given to user, the users can make a call from mobile the reading is received by user mobile.

Wireless Sensor Network Security and Military Sevices

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S.Sanjay kumar., Student,Department of Computer Science and Engineering
S.Shanthini., Student,Department of Computer Science and Engineering
K.Vishal., Student,Department of Computer Science and Engineering

Abstract:--

A couple of years back, remote sensor systems (WSNs) utilized by just military. Presently, we have seen a large number of associations utilize WSNs for a few purposes, for example, climate, contamination, activity control, and social insurance. Security is getting to be on nowadays a noteworthy worry for remote sensor organized. In this paper I centre on the security sorts of assaults and their location. This paper dissects the security necessities and security assaults in remote sensor systems. Likewise, demonstrate to the benchmarks for the security in WSNs. The utilization of WSN is various it appears that they are supported inside basic applications where life and security are included, for example, military observation and human services. The touchy idea of the information traded over these systems puts security angles at the highest point of theoretical and usage contemplations. Actually this is expected to the intrinsic WSN helplessness issues that are caused by the unfriendly situations in which they are sent.

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Human- animal conflicts impediment using technology and future prospects

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P.Gowtham., R.M.K College of Engineering and Technology, Electronics and Communication Engineering.
S K.Thasbir., R.M.K College of Engineering and Technology, Electronics and Communication Engineering.

Abstract:--

Controlling human-animal conflicts has always been a daunting challenge. Every year in India, around 1500-2000 casualties occur due to such conflicts. Although lot of traditional methods have been followed till date, it requires either man power (which are invasive or destructive) or they have not been very effective in controlling this problem. So,technology is by far the best way to improve the efficiency. Thus, this project aims to mitigate such conflicts by enhancing the past and present systems.

A Coverage Optimization in Directional Sensor Networks Using Multi-Demand Target Approach

J. Lakshmi Priya., PG Scholar, Dept of ECE, National Engineering College, Kovilpatti.
K. Subramanian., Assistant Professor, Dept of ECE, National Engineering College, Kovilpatti.

Abstract:--

Coverage is the important and main challenging issue in the Wireless sensor networks. For a directional sensor network the sensor direction is fixed in a particular direction to cover the target. Many related studies have been exploited to improve the coverage quality and minimize the movement of sensors, which consumes more energy of sensors and thus shortens the network lifetime significantly. To solve the problem proposed work addresses the mobile sensor deployment problem and how to deploy the mobile sensors with minimum movement to form a WSN network and to provide a good coverage quality. For a case of target coverage problem in the direction sensor network voronoi based TV-Greedy algorithm is proposed.

Keyword:--

coverage, minimizing movement, network lifetime, WSN.

Analysis of Diverse Transform for Finger Vein Recognition

Mr.P.Gopinath., Assistant Professor/ECE, Sengunthar Engineering College, Tiruchengode.
Dr.R.Shivakumar., Professor/EEE, Sona College of Technology, Salem.

Abstract:--

In the field of biometric authentic system finger vein is the promising and securing personal identification and authentication in terms of security and convenience. Finger vein has gained much attention among the researchers because of its accuracy, performance, efficiency and reliability. It helps in low forgery risk, aliveness detection and spoofing resistance. The system has four parts: Finger vein image acquisition, preprocessing, feature extraction and recognition. In every biometric system, the special attention is given to the recognition part. The finger vein recognition system has various parameters like recognition rate, response time, FAR, FFR, EER, mismatch ratio. In this analysis various transforms are taken on finger vein system and analyzed the performance.

Keyword:--

Biometrics; Finger vein; Recognition;Transforms.

Driving Automation Model on Shared Steering Control System for Intelligent Vehicles Using Labview

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Abstract:--

Now-a-days the automatically controlled by increasingly implemented for vehicle control system. In this paper the shared steering control frame for the obstacle avoidance and stability control was discussed. The main objective of this project is to avoid accident that occurs in NH road. In the existing system there is no fully automatic steering control and it has serious problems. When it is made automatic the system complexity is more. So the shared steering concept is used in the proposed system to avoid accident. Based on the road pattern and the obstacle present on the road is found using web camera installed infront of the vehicle which is connected to the pc installed with LabVIEW. Using LabVIEW the image is processed to check the road characteristics. The system improves lane keeping performance and reduce the risk of accidents this project help us to overcome from accident reporting.

Keywords:--

LabVIEW, Shared steering control, Vehicle control system.

Structural Static Analysis of Aircraft Fuselage with Aluminium and Composite Material

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Abstract:--

The fuselage is an airplane's main body section that holds crew and passengers or cargo. The fuselage also serves to position control and stabilization surfaces in specific relationships to lifting surfaces, required for aircraft stability and maneuverability. The design of a fuselage for a commercial transport is impacted by the interaction of its functional requirements and its basic strength, stiffness, and life requirements. Functional systems, such as the ingress and egress systems, passenger accommodations (seats, windows, lavatories, etc.), environmental control, and cargo containment interact with and modify the basic design features of the fuselage structure. The design of a fuselage must provide the necessary strength and rigidity to sustain the loads and environment that it will be subjected during the operational life of the airplane. The finite element analysis of the fuselage with aluminum and composite material's shall be carried out to check the structural strength .

Keywords—

Aircraft, Fuselage, structural strength, aluminium, composite material

5-Level Cascaded Multilevel Inverter with Reduced Number Switches

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Abstract:--

Multilevel converters offer high power capability, associated with lower output harmonics and lower commutation losses. Their main disadvantage is their complexity, requiring a great number of power devices and passive components, and a rather complex control circuitry. This work reports a new multilevel inverter topology using an H-bridge output stage with a bidirectional auxiliary switch. The new topology produces a significant reduction in the number of power devices and capacitors required to implement a multilevel output. The new topology is used in the design of a five-level inverter; only five controlled switches, eight diodes, and two capacitors are required to imple ment the five-level inverter using the proposed topology. The new topology achieves a 37.5% reduction in the number of main power switches required (five in the new against eight in any of the other three configurations) and uses no more diodes or capacitors that the second best topology in the literature, the Asymmetric Cascade configuration.

Keywords—

Capacitor clamped, diode clamped,Hbridge, multilevel inverter.

Two Conical Tank Interacting Level Control System Using Dynamic Matrix Control

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Abstract:--

The implementation of control algorithms for such MIMO systems are often complicated due to variations in process dynamics that occur because of change in operating point and nonlinear dynamic coupling. To solve this problem, there exists several control schemes that can be centralized (multivariable structure) or decentralized (multi-loop structure). Dynamic matrix control (DMC) is the most popular Model Predictive control (MPC) algorithm which has become a leading form of advanced multivariable control in chemical industries. The objective of the proposed work is to implement the Dynamic Matrix Control (DMC) algorithm to maintain the level of Two Conical Tank Interacting Level Control System (TCTILCS) which is highly a non linear process. The DMC algorithm uses the linear convolution model which is derived from step-response of the process and a quadratic performance objective function. The objective function minimized over a prediction horizon to compute the optimal controller output to reduce problem, based on the current value of the measured process variable and also provides Sridhar & Cooper tuning methodologies for tuning the parameters like prediction horizon and control horizon. The first stage of the study is to create the step response model of the plant. The next step is to tune the parameters and to develop the DMC algorithm. Finally the observed result were made to analyse the performance of DMC for Two Conical Tank Interacting Level Control System (TCTILCS).

Keywords—

Two conical tank interacting system, Dynamic Matrix Control, Model Predictive Control, Level Control .

Smart Emergency Based Traffic Signal System

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Abstract:--

Traffic light control systems are widely used to monitor and control the flow of automobiles through the junction of many roads. Smart emergency based traffic light system vision to provide way for emergency vehicles. However, there are various parameters are to be taken into consideration. We propose a system based on Raspberry pi and image processing technique (color processing) that evaluates the emergency vehicles in the overcrowded roads using Raspberry Pi and accomplishes path for the emergency vehicles by switching the red signal into green. The opencv tool as software for image processing by displaying the various conversion of image in the screen and create a way for emergency vehicles. Thus the device is made available to solve the problem of emergency vehicles stuck in the overcrowded roads.

Keywords—

Raspberry Pi, and Emergency vehicles, color processing.

An Improved Pro-Active Vehicular Traffic Re-routing System for Congestion Avoidance

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Abstract:--

Roads overload leftovers a critical issue while they are invariably increased in order to extend their capacity and enhance their effectiveness. This is likely to cause many troubles such that ecologically, financially and socially. The progress of urban traffic management systems, structure and development of roads are solutions to address this problem and get better the performance of the road transmission, but these solutions are high-priced and also need more space for the establishment and lasting maintenance. A substitute would be to use the novel technologies in the field of communication for dispatch traffic information such as dangerous road conditions and accident sites and also vehicles leaves warning message to the emergency vehicles. In this paper, we present a VANET framework to avoid traffic congestion and also other vehicles in the network are warned of moving emergency vehicles. The emergency vehicles receive the detail information about the emergency vehicle and additional route information. The driver will take possible right action timely by receiving detailed information. This kind of applications rescues the lives and save the precious time.

Keywords—

VANET,Traffic,emergencyalert,road congestion.

Neodymium Magnetic Suspension System

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Abstract:--

Our project aims is to do magnetic suspension for two wheelers, without depending upon hydraulic & pneumatic suspension system. The neodymium magnet is used as a shock absorber in this magnetic suspension. The aim of this project is to study & investigate the response of the system, to give a good comfort even at irregularities of road surface. The neodymium magnet & spring as passive dampers, by using these things as dampers. We can absorb more number of shocks, displacement & acceleration of spring mass. It has many advantages from the conventional suspension systems like leakage of oil, less maintenance.

Keywords—

Neodymium magnet, spring, cylinder.