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INTERNATIONAL CONFERENCE ON EMERGING INNOVATION IN ENGINEERING AND TECHNOLOGY

ICEIET-2017

25th March, 2017

Organized by

INTERNATIONAL INNOVATIVE RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY- (IIRJET)

In Association with

CHRIST INSTITUTE OF TECHNOLOGY – PUDUCHERRY

(Formerly Dr. S.J.S. Paul Memorial College of Engineering and Technology)

Ramanathapuram Revenue Village, Villianur Commune, Puducherry

Souvenir of

INTERNATIONAL CONFERENCE

ICEIET-2017

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Ramanathapuram Revenue Village, Villianur Commune, Puducherry

CHIEF MINISTER MESSAGE

V. NARAYANASAMY
CHIEF MINISTER
GOVERNMENT OF PUDUCHERRY

✆ Off : 0413-2333399, 2335530
2335528, 2335522
Fax : 0413-2333136
Res. : 0413-2339099

Date : 18.03.2017

MESSAGE

It gives me immense pleasure to recognize that "**Christ Institute of Technology-Puducherry**" associated with "International Innovative Research Journal of Engineering and Technology" is conducting the "International Conference on Emerging Innovation in Engineering and Technology, ICEIET-2017" on 25th March, 2017.

I am sure that the "International conference on Emerging Innovation in Engineering and Technology-2017" organized by "International Innovative Research Journal of Engineering and Technology', Puducherry in association with Christ Institute of Technology, Puducherry would focus on the outstanding capabilities of the learning community and the emerging technocrats to make breakthroughs in the sustained competitiveness of the globalized country. I firmly believe that the conference would give a unique opportunity for the participants to showcase their talents and incessant thirst for Research and Development in the field of Engineering.

I am glad to say that in the area of Technical Education, this kind of conference will create an awareness and motivation among the learners to observe the spirit of latest trends in Engineering Science and Technology.

I am very much sure that the outcome of the conference will bring practical and useful information to the learning community and pave way for producing high-profile and talented techies.

My hearty congratulation for the grand success of the International Conference on Emerging Innovation in Engineering and Technology – 2017.

(V. NARAYANASAMY)

MESSAGE FROM MINISTER

A. NAMASSIVAYAM
MINISTER FOR Public Works, Local Administration, Excise, Town & Country Planning, Animal Husbandry, Economics & Statistics and Stationery & Printing
GOVERNMENT OF PUDUCHERRY

PUDUCHERRY

Date : 17-3-2017

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My sincere and hearty wishes for the grand success of the International Conference on emerging Innovation in Engineering and Technology-2017. I extend my sincere thanks and wishes to all the members to bring this innovative Conference.

A. Namassivayam

(A. NAMASSIVAYAM)

MESSAGE FROM MINISTER

M.O.H.F. SHAHJAHAN
MINISTER for Revenue, Industries & Commerce, Transport, Information Technology, Forest, Wakf Board and Minority Affairs
GOVERNMENT OF PUDUCHERRY

PUDUCHERRY

Date :

18 MAR 2017

MESSAGE

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(M.O.H.F. SHAHJAHAN)

✆ Off. : 0413-2337722, 2337733 Fax : 0413-2223466 Res. : 0413-2202271

CHAIRMAN'S MESSAGE

Dr.S.R.S.Paul, M.E.,Ph.D.,LL.B.,
CHAIRMAN & MANAGING DIRECTOR,
Sam Paul Educational Trust.

I take immense pleasure to present the message for the First International Conference on Emerging Innovations in Engineering and Technology to be held on 25th March 2017 in CHRIST Institute of Technology. I convey my best wishes to all our persistently advancing departments in this campus. This conference brings together academicians, research scholars and engineering students from different corners of India and offers a great opportunity for them to learn from each other's experience. I am sure, ICEIET 2017 will definitely serve as a platform for exhibiting some of the latest advancements in the field of Engineering and Technology.

I congratulate the organizers of ICEIET 2017 for their enthusiasm with which they have gone about organizing this conference and wish the conference all success.

Dr. S.R.S.Paul

DIRECTOR MESSAGE

Dr. A.Ravichandran, M.E.,Ph.D.,
DIRECTOR,
CHRIST College Of Engineering And Technology &
CHRIST Institute Of Technology.

It is with great pleasure I extend a warm welcome to all participants of the First International Conference on Emerging Innovations in Engineering and Technology, ICEIET 2017 to be held on 25th March 2017. I am happy that CHRIST Institute of Technology has earned a position in the higher educational setup in the Union Territory of Puducherry and is hosting its first international conference.

The conference is a multidisciplinary event covering all streams of Engineering. The advantage of such a wide variety of presentations is that delegates may sample technologies that are not their main field of interest. So, this conference will be an exchange of ideas, sharing of knowledge and networking. Such cross fertilization of ideas often lead to the development of new ideas and technologies.

I would like to credit all volunteers in the organizing committee for their dedication and commitment towards organizing the conference related events.

I wish the conference a grand success!

Dr. A.Ravichandran

PRINCIPAL'S MESSAGE

Dr.R.Nakkeeran, M.E.,Ph.D.,
Principal,
Christ Institute Of Technology.

As a convenor, I feel happy and honored to welcome all the distinguished guests and participants for the First International Conference on Emerging Innovations in Engineering and Technology, ICEIET 2017 to be held on 25th March 2017. This conference is hosted by CHRIST Institute of Technology in coordination with Melange Publications, Puducherry.

The aim of the conference is to provide an opportunity to the researchers by bringing academicians and eminent resource persons to a common platform to expose and share their experiences in the engineering field.

Fruitful efforts like this will advance the college to a brighter future.

I wish the conference all success!

Dr.R.Nakkeeran

VICE PRINCIPAL MESSAGE

Dr. C. Vijayaraghavan
Vice Principal
Christ Institute of Technology
Ramanathapuram, Puducherry

I am indeed very happy to note that the International Conference on Emerging Innovation in Engineering and Technology (ICEIET 2017) is being organized by the Christ Institute of Technology, Puducherry.

Conference of such nature provides a great opportunity to Engineering Community, not only to update knowledge and keep obsessed with latest developmental scenario in the respective Engineering and Technology field, but also an occasion for the resource persons / delegates / observers to exchange ideas and interact with each other.

It is a high time to create research activities among the Engineers. I take this opportunity to extend warm welcome to the resource persons and delegates registered for the Conference.

I hope our humble effort will go a long way in putting the college at information super high way for making the institution a real instrument for improving the quality of Engineering education and Research.

I wish the Conference all the success.

Dr. C. Vijayaraghavan

MESSAGE FROM PUBLICATION CHAIR

S.V.MANIKANTHAN,
Director
Mélange Publications

Dear Authors, Reviewers and Readers,
It gives me great pleasure to welcome you to International Conference on Emerging Innovations in Engineering and Technology (ICEIET-2017) which I have acted as Publication Chair.

Peer review remains a vital component of our assessment of submitted articles. There have been criticisms of this process, including delaying publication, unreliability of decision making, overly conservative approach automatically rejecting 'non-standard' ideas, and that peer review is poor at detecting errors and misconduct. However, these weaknesses can be managed by an effective and active editorial office, and I believe they are outweighed by the benefits. There is strong consensus that accepted articles are often improved by peer review after referees' comments and criticisms are dealt with; this explicit appraisal process also helps to engender trust of the reader.

Here editorials and commentaries play a key role in exploring more contentious issues in a balanced way, allowing the reader to make an informed decision on how or whether their clinical practice should be altered.It is important we have a good balance of different article type within the publication. These papers underwent a rigorous two-round review process and were recommended for acceptance to be published by the editorial board of the ICEIET. It helps to improve the overall quality and visibility of conference publications through a rigorous review. This objective clearly has been achieved reading through this special issue. ICEIET should lead to a timelier exchange of new ideas, foster rapid dissemination of recent works via an integrated forum for both publications and presentations, and further expand and grow our community. Many individuals have committed their time and effort and I would like to thank them for their excellent work.

Lastly, I should thank all our submitting authors, Dignitaries who have toiled in the production of their work, and have chosen International Conference on Emerging Innovations in Engineering and Technology in support with Melange Publications they would like to publish in. The success and reputation of ICEIET reflects the outstanding work by our reviewers and authors who are dedicated to publication of only the best quality papers.

Sincerely,
IIRJET-Publication Chair,
Melange Publications.

ORGANIZING COMMITTEE

CHIEF PATRON

Dr.**S.R.S.PAUL**, Chairman

Chairman, Sam Paul Educational Trust

PATRON

Dr.**A.RAVICHANDRAN**, Director

Christ Institute Of Technology –Puducherry

(Formerly Dr.S.J.S.Paul Memorial College of Engineering and Technology)

CONVENOR

Dr.**R.NAKKEERAN**,Principal

Christ Institute Of Technology –Puducherry

(Formerly Dr.S.J.S.Paul Memorial College of Engineering and Technology)

PUBLICATION CHAIR

Mr. S.V.MANIKANTHAN, Director

Melange Publications

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Dr.**C.VIJAYARAGHAVAN**,Vice Principal

Christ Institute Of Technology –Puducherry

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Mrs.T.PADMAPRIYA, MD

Melange Publications

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Dr.**S.SIVA KUMAR**,HOD/MECH

Mrs.**P.VENIL**,HOD/IT

Mrs.**KAVITHA**,HOD/EEE

Mr.**R.NAMACHIVAYAM**,HOD/S&H

Christ Institute Of Technology – Puducherry

(Formerly Dr.S.J.S.Paul Memorial College of Engineering and Technology)

PROGRAMME SCHEDULE

25th March 2017

8.00 AM – 9.30 AM	REGISTRATION
9.30 AM –10.00 AM	INAUGURAL FUNCTION
10.00 AM – 10.45 AM	KEYNOTE SPEAKER SESSION
11.00 AM – 1.00 PM	TECHNICAL SESSIONS – I
1.00 PM – 2.00 PM	LUNCH
2.00 PM – 4.00 PM	TECHNICAL SESSIONS-II
4.15 PM – 5.00 PM	VALEDICTORY FUNCTION

CONTENT

Analysis for Intruder Detection in Robotic Networks

P.Seralathan[1],A.Vinnarasi[2]
[1]M.Tech, Embedded System Technology, SRM University, Chennai, India
[2]Assistant Professor, ECE Department, SRM University, Chennai, India
✉: Vinnarasi.a@ktr.srmuniv.ac.in, Seralathanpbe@gmail.com

Paper ID: EC-03

This paper is to overcome the insecurity in the Border areas using the autonomous robots. Post-conflict countries rarely have a robust border security system, which is especially important for preventing intruders from destabilizing the state. Third person are considered as Intruders. The goal is to detect intruders by observing their behavior. Moreover, the detection itself must be performed by individual robots, based only on local information. The existing system can only monitor the process but cannot prevent. The project is to monitor the border of the nation by using robots. The image processing will be done by using MATLAB. The information will be transmitted through the WSN transmitter and the controller will control the mode of operation in Automatic and Manual mode. In robot section, Robot monitors the boundary and compares the information from the WSN receiver. The robot will emit the chloroform automatically, if any intruder igs found. Ultrasonic sensor used to find the obstacle. If human is detected around the robot then laser light will be turn on. If anyone attacks the robot, then it will self-destroy. It can be useful at the border security system to prevent the intruders.

Realtime Pedestrian Monitoring System

Praveen.B[1], Veni.N[2]
M.Tech, Embedded Systems Technology, SRM University, Chennai.
Asst.prof of ECE Department, SRM University, Chennai.
✉:[1]praveen_bhaktha@srmuniv.edu.in,[2]veninkrishnan@rediffmail.com

Paper ID: EC-04

An intelligent transport system is one of the essential needs for the future as the growth of urban population is on rise. In this paper, real time pedestrian crossing system is proposed for effective traffic management. This system includes a camera that records the video of pedestrian and feed this video to an algorithm that counts number of pedestrians. This can be implemented using MATLAB, where image segmentation, background subtraction is done to detect the no of pedestrians using face detection and time taken to cross will also be determined. The above algorithm can also be implemented in a system on board chips so that it can be effectively used for intelligent traffic surveillance.

Model Predictive Control for UAV Surveillance

Sujeeth J [1],Kolangiammal S [2]
[1]M.Tech,EmbeddedSystem Technology, [2]Dept. of ECE,
SRM University, Chennai, India
✉: [1]sujeeth.jk@gmail.com,[2]kolangiammal.s@ktr.srmuniv.ac.in

Paper ID:EC-05

Recent advancements in processing capabilities have enabled the use of new computationally costly control methods like the Model Predictive Control on real-time applications. We describe the application of model predictive control using state mapping to the automatic landing system of a space plane. The controller has to be designed to enable the vehicle to follow reference signals with respect to trajectory and velocity. To track the reference signals, a control input is generally designed so that one or more ideal transient responses are realized. We also have developed a flight control system based on this concept. There is large time delay in `man-in-the loop' unmanned aircraft vehicle system, especially for remote control flight by satellite communication. Current autopilots have limitation, as they may encounter situations where 3-D positioning information is lost or unavailable. The pilot will operate in a pseudo open-loop format by generating flight control signals based on time alone. It allows running independent of path data and positioning information.

An ADAS System Using Signal Performance Based On CAN Control

Ahin P M [1],Aarthy S T [2]
[1]M.Tech, Embedded System Technology,SRM University, Chennai, India
[2]Dept. of ECE, SRM University, Chennai, India
✉: [1]ahin_pau@srmuniv.edu.in,[2]aarthy.s@ktr.srmuniv.ac.in

Paper ID: EC-07

Today large number of driver assistance systems is available for vehicles. Drivers who do not take regular break while travelling long distance have a high risk of having drowsiness. Driver assistance, accident, road surface condition affect the speed of the vehicle. Over speeding in drastic conditions may result in driver losing control of the vehicle. So there is a need to determine and control the vehicle. In this system monitors the function and sends information to the user using a CAN interface. The CAN provides faster transfer of data and also provides efficient transportation. The data is used to control the maximum speed of the vehicle by controlling it's acceleration to a maximum. If the speed crosses the desired value, then the ADAS system switches the vehicle to OFF. This will enhance an efficient system even without a driver. We can also use the CAN bus to connect various components such as light switches, lamps and window drives into an individual system, which can be adjusted to our current request at any time.

Design of Enhanced Baugh-Wooley Multiplier Using Modified High Speed Adder

S. Gnana Soundari[1*], H. Gopala Krishnan[2]

[1]Assistant Professor/ECE, Sri Venkateswara College of Engineering & Technology,Chittoor,AndhraPradesh.
[2]Assistant Professor/ECE, Sri Balaji Chockalingam Engineering College, Arni, Tamil Nadu.
[1*]Corresponding author Email:soundarivs@gmail.com, krishna.electro@gmail.com

Paper ID: EC-10

Digital Multipliers form an integral part of MAC units of the microcontrollers and digital signal processors. The Baugh Wooley(BW) multiplier has been utilized more generally in the MAC units for fast processing larger operand sizes. However, in the traditional BW multiplier the ripple carry adder has been employed for computation. This has been replaced by many fast adders such as Carry Save Adder, Carry Select Adder, Carry Look Ahead Adder & Kogge Stone Adder in the preceding researches. In this paper, the speed of the BW multiplier is significantly enhanced by utilizing a modified adder in place of ripple carry adder by merging Carry Select and Kogge Stone Adders. This Enhanced BW (EBW) multiplier approach is much faster than the other multiplier designs. The post synthesis results for characteristic parameters such as propagation delay, area and power consumption are compared. The comparison shows that the MBW multiplier is faster than the conventional multiplier and the architecture takes less area, power and delay.

Smart Curtain Using Internet Of Things

Shubhanshu Gupta[1], S. Kolangiammal[2]

[1,2]Department of Electronics and Cummunication Engineering, Faculty Engineering and Technology,SRM University, Kattankulathur, Kancheepuram District, Tamil Nadu, India-603203
✉: [1]guptashubhanshu96@gmail.com,[2]kolangiammal.s@ktr.srmuniv.ac.in

Paper ID: EC-11

The paper focuses on the inabilities of physically challenged people those who are not able to get up from their bed to close or open the curtain or other appliances and they need some third person always to help them. We decided to make a system with the help of which they can close the curtain automatically without getting down from the bed or without the help of third person. The work uses the Internet of Things (IoT) technology, which is fast emerging. This technology is aimed at providing ease to control things connected by internet, for example, we can control the fans and lights in our house by being anywhere in the world. In the proposed model we are using a microcontroller interfaced to ESP8266 Wi-Fi module to make the internet connectivity successful. Blynk app is used to control the microcontroller.

GHN- A Novel Technique to Eradicate the Broadcast Storms in VANET

Velmurugan V[1], Martin Leo Manickam J[2]
[1]ECE dept, Agni College of Technology, Chennai,TamilNadu,India.9790905833,
velmuruganchalam@gmail.com
[2]ECE dept,St.Joseph's College of Engineering , Chennai,TamilNadu,India. 9445209197,
✉: [2]josephmartin_74@yahoo.co.in

Paper EC-12

Vehicular Ad Hoc Networks are the networks of the vehicles,which are connected with the high dynamic topology which changing environment. In this VANET topology, broadcastingof the message is the simplest way for communication. This simplest way of communication will be used for transmission of emergency messages from vehicles to vehicles. But the method of message transmission leads to the unwanted data flooding which causesstorm problems in broadcast;which affects the overall reliability and performance of the VANET networks. To eradicate this problem we propose the new algorithm called GHN works on the selective distance allocation methodology for data transmission. The outcome of the system proves to be more efficient interms of data throughput packet delivery ratio and it has been simulated using NS2.

Adhoc On Demand Distance Vector-Uppsala University Routing Protocol Based Energy Efficient Adaptive Forwarding Scheme For Manet

D. Kavi Bharathi[1], E.Dinesh[2]
[1] M.E Communication Systems, Student, Mailam Engineering College, Tamil Nadu, India
[2] M.E Electric Drives and Embedded Control, Student,Anna University Regional Centre, Coimbatore.
✉:[1]kavibharathiece44@gmail.com,[2]dineshega@gmail.com

Paper ID: EC-13

Flooding is the simplest way of broadcasting, in which each node in the network retransmits an incoming message once. Simple flooding technique in MANET causes the broadcast storm problem. In the proposed method, AODV-UU protocol is used instead of AODV protocol. This protocol provide the efficient way of packet transmission so unnecessary retransmission is avoided and size of the packet is reduced. In addition to the previous works, the proposed protocol divides the network into different cluster based on their transmission-power levels. One node can choose a gateway node. The gateway node can efficiently forwarding the RREQ packet to the destination node. The redundant retransmission is avoided and also time is saving for forwarding the packet to its destination. Therefore the proposed Protocol shows the efficient throughput compared to AODV protocol.

Surveillance Of Underground Mines With Iot Based System

V. Sailakshmi[1], S. Nivash[2]
[1]M Tech Embedded System Technology, SRM University, Chennai 603203
[2]Assistant Professor, ECE Department, SRM University, Chennai 603203
✉: [1]sai261192@gmail.com, [2]nivashs09@gmail.com

Paper ID: EC-14

The scientific objective of this paper is to parent out a complicated platform for personnel supervision and renovation duties. Underground mining surveillance plays a critical role in the safety and security of the mine workers and other valuable equipment. As of now, sensors and analog cameras are used as environmental condition monitoring solutions and uses ground control personnel to monitor and record the underground work site safety. In order to sense, control and remotely access the complicated situations in the process of mining, the Internet of Things has been applied. IOT brings out the reliability in managing the underground mining safety. The main objective of this paper focuses on an internet connected mine safety monitoring system that streams live camera images and other vital information about the underground environment and make it available on the web. This system uses an Ethernet connection and acts as a web server over the internet. Everything used in the system is fully digital including the camera sensor that would use IP based MJPEG video streaming to monitor the environment. This system also contains accidental help request through voice announcement, night vision mode, password protection and local monitoring without internet. Ground control person needs to have a connected device such as a Smartphone or tablet or a PC with an internet browser to monitor the video and other data for effectively monitoring the mining area.

Automated fare collection system for passengers in vehicles using barcode ticket and an RFID reader

Gunapriya.S[1], Prabavathi.P[2],
Electronics & Communication Engg, Mailam Engineering College, Mailam
✉:[1]gunapriyaecemec@gmail.com, [2]prabavathipalani139@gmail.com

Paper ID: EC-16

In this paper includes an automated fare collectionSystem from passengers who are all in the onboard of the bus. It avoids the conductor and ticket checker manual works completely. For each passenger bus tickets will be provided in the bus situations. The bus ticket consists of a barcode that will be scanned by passengers in the RFID reader, which will be provided in the bus stations. The bus ticket consists of a barcode that will be scanned by passengers in the RFID reader, which will present in each of the bus seats. An alarm sound produces in each station to alert the passengers all these information from starting point to end of the bus stop, about passengers On-board/ off-board will be displayed by LCD which will be present in front of driver. This is the proposed system which is going to implement in an embedded field.

Faster Encryption And Decryption Scheme For Visual Cryptography Using Error Diffusion And Segmentation

Mr. V. Saranraj [1], Mrs. B. Ramathilagam [2]
[1] M.E Communication Systems, Student,[2] Department of ECE, Assistant Professor
Mailam Engineering College,Tamil Nadu,India.
✉:[1]ecesaran.94@gmail.com,[2]bramathilagam716@gmail.com

Paper ID: EC-17

A faster and easier color visual cryptography encryption method is introduced which produces meaningful color shares. Color shares are produced via half toning. Visual Cryptography uses the idea of hiding secrets within images .Before the encryption process, the secret image which is to be encrypted on to the shares is divided equally into four segments. These four segments are all equal in size and each segmented image is called a message image. Error diffusion is a simple and efficient algorithm for image halftone generation. The partitioned message images are to be interpolated to match with the size of half toned share images. These images are encoded into multiple shares and later decoded without any computation. The decrypted images are to be decimated to obtain the original message images. The four message images retrieved so are concatenated to obtain the secret image.

Discovery Protocol Based Device To Device Communication

S.Jagathkarupriya. [1], Mrs J.Jothi, [2]
[1] M.E Communication Systems, Student, [2] Department of ECE, Assistant Professor
Mailam Engineering College, Tamil Nadu, India.
✉:[1]priyasekarkalai@gmail.com,[2]josanthamoorthy@gmail.com

Paper ID: EC-19

D2D communication in cellular networks is direct communication between two mobile users without traversing the Base Station (BS) or core network. In the proposed method the discovery protocol is used for covering a large discovery distance. To recognize the proximity based services such as mobile social networks and mobile marketing using D2Dcommunications, every one of the device should first discover in close proximity devices, which cover mobile applications by using a discovery protocol. The proposed discovery protocol makes use of a dumpy discovery code that contains dense information of mobile applications in a device. A discovery code is generated by using either a hash function or a Bloom filter. When a device receives a discovery code broadcast by one more device, the device can approximately find out the mobile applications in the other device. The proposed protocol is capable of hastily discovering massive number of devices while consuming a relatively small amount of radio resources.

Facial Actions Based AAC Device Using Morse Code

Anila .M[1]., Radhika. P[2]
[1,2]Embedded systems, SRM University, Chennai, India.
Dept. of ECE, SRM University, Chennai, India.
✉:[1]mvanila@gmail.com,[2]radhika.p@ktr.srmuniv.ac.in

Paper ID: EC-20

Communication can be classified into two types, verbal and non verbal. Non-verbal communication is a mode that is very helpful for people with poor communication and motor abilities to convey messages to the outside world. Different technologies are being developed to improve the opportunity for people with verbal challenges to communicate to others. Facial actions play a vital role in the non verbal means of communication. They act as a powerful and natural tool in the non verbal communication process. Augmentative and alternative communication (AAC) devices are helpful for non speaking individuals; they use other form of communication such as non- descriptive noises or physical gestures. The AAC devices convert the received gestures into information or messages that can be understood by the outside world. There are several disorders due to which a person can be paralyzed and will affect his or her motor skills. In most of these cases, the logic or the intelligence of the person may not be harmed. But the ability to communicate to the outside world will be difficult to accomplish. Facial feature analysis and recognition has always been an area of interest. In this paper, facial features like eye blink and lip detection are explored. AAC device that makes of use of these two facial features is proposed. Both the feature detection mechanisms will be working parallel. If any of them fails, the other would be still functioning. It is under the assumption that both the systems will not fail simultaneously. The eye blink detection is accomplished with the help of an IR sensor. The sensor will monitor the eye blinks. Each eye blink pattern is allotted with a particular Morse code. Lip contour extraction is performed by using an algorithm that makes uses of hybrid technique of lip contour detection.

Sharing Of Tactical Information Between Ugv's Using Vanet In Military BattleField

Dhivya Dharshini V[1], Geetha R[2], Gokulasuganthi.L[3]
Department of Electronics and Communication Engineering
Mailam engineering college Mailam,Villupuram.
Email: [1]dhivyadharshini2@gmail.com, [2]learn.geetha@gmail.com

Paper ID: EC-21

Unmanned ground vehicle are playing vital role in military services. The aim of this paper is to provide tactical information for management system of unmanned ground vehicle (UGV), using VANET (Vehicular ADHOC Network). VANET is a perfect option for point to point communication between the vehicles in battle field to share information with each other. In the proposed system, an system information control unit will be attached with UGV. The point to point communication between the mobile vehicle in the war field uses WI-FI module, to share an information. The tactical information by UGV sends to a personal computer that will be operated by soldiers and they passes the commands to the UGV. When failure occurs for an UGV due to enemy attack, that tactical information will be shared with neighboring UGV among the VANET. The damaged UGV will be replaced immediately with the help of tactical information.

Performance Evaluation of Distributed Embedded Control Systems for the Architecture of the Electronic Systems of Automotives: Literature survey

Sangathoti Sreenivasulu [1], Polaiah Bojja [2], Prof. M.N. Giriprasad [3]
[1]Research Scholar, JNTUA, Anantapuramu.
[2]Professor (ECE), K L University, Vaddeswaram, Guntur.
[3]Professor, ECE, JNTUA, Anantapuramu.
✉:sangathoti@gmail.com, paulraj.bojja@gmail.com,mahendragiri1960@gmail.com

PAPER ID:EC-22

The main component of automotive architecture is electronic control units ECU. The ECUs which are using in the automotives are to provide features like monitor, control and comfort. These ECUs distributed throughout the body of the vehicle to control the vehicle. The growth of electronics in automotives has created new engineering and research opportunities; this is the original point of the literature. This research paper is a survey paper which is related to automotive specific electronic systems architecture. The main objective of the paper is to describe the basics related to automotive electronics and to describe about various architectural considerations related to performance evaluation. The survey takes a look at topics related to automotive specific embedded systems, hardware and software architectures and network architectures. The survey extended to subject matters of above three architectures like topology, scheduling mechanisms supported to heterogeneous systems and various in-vehicle communication protocols. Finally the identified problem, scope of research and methodology suitable is described in this paper.

Cooperative Spectrum Sharing In Cognitive RadioNetworks With Upper Confidence Bounds

Ms. N.Sanjeevini[1] ,Mrs.S.Maheswari[2]
[1]Student, Master of Communication Systems Engineering, Mailam Engineering College
[2]Assistant Professor, Master of Communication Systems Engineering, Mailam Engineering College
✉: [1]jeevinarayanan28@gmail.com, [2]mahikeerthu84@gmail.com

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According to Federal Communication Commission (FCC), more than 70% of the available spectrum is not utilized optimally. Cognitive radio is a better technique to fulfill the utilization of radio frequency spectrum. We consider the problem of cooperative spectrum sharing among a primary user and multiple secondary users, where the primary user selects a proper set of secondary users to serve as the cooperative relays for its transmission. Most previous works are focused on developing complex algorithms which may not be fast enough for real-time variations such as channel availability and/or assume perfect information about the network. Instead, we develop a learning mechanism for a PU to enable CSS in a strongly incomplete information scenario with low computational overhead. Our mechanism is based on a Distributed Algorithm, enhanced with the concept of Upper Confidence Bound (UCB). This algorithm can be extended to include more sophisticated features while maintaining its desirable properties such as low computational overhead and fast speed of convergence.

Optimal Performance Of Key Predistribution ProtocolIn Wireless Sensor Networks

Ms P.Rama [1] Mrs. K. Kavitha[2]
[1] M.E Communication Systems, Student
[2] Department of ECE, Assistant Professor,Mailam Engineering College,Tamil Nadu,India.
✉:[1]vpmram2011@gmail.com, [2]kavivetri78@gmail.com

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It develops an stability model for finding the optimal distribution strategy to maximizeperformance of key predistribution protocols in terms of cost, resilience, connectivity, and lifetime Using super networks theory, the optimal node deployment model is proposed. In order to find the equilibrium performance of our model, all optimal performance functions are changed into variational inequalities so that this optimization problem can be solved. The methodology that is proposed will be a comprising both central and distributed detection schemes. The mobile wireless network can have a large area for sensing. The area is split into clusters so it is a distributed system. Each sector has a central node were the nodes can send their id for checking. In the proposed research, to bring the trade-off between security strength and computation overhead by using NS 2 software. The simulation result show that the throughput and overhead of the proposed methodology.

Minimizing Communication Cost In Wireless Sensor Networks to Avoid Paper Retransmission

Ms. N. Dhivya [1], Ms U. Udhayamathi[2]
M.E Communication Systems,Mailam Engineering College, Tamil Nadu, India.
✉:[1]dhivyavpm4@gmail.com,[2]mathimathi2610@gmail.com

Paper ID: EC-26

Introducing n number of source nodes and 2^krelay nodes to reduce the number of packetretransmissions by identifying the shortest path to minimize the communication cost. We model the optimal relay nodes topology problem allowing for simultaneous optimization of the relay nodes locations and traffic through the network, so that the overall number of packet retransmissions is minimized. Exploiting convexity in a special case of the network communication cost function, introduce an optimal algorithm for the relay nodes. However, the algorithm is exponential on the number of relay nodes in the network. Propose a practical heuristic algorithm for relay nodes and compare relay node numerically to the optimal algorithm. It shows that relay nodes achieves the optimal or almost optimal solutions. To implement the relay nodes in the NS2 software. The relay nodes topologies generated by relay nodes to eliminate overhead communication cost almost entirely. There is no loss in data transmission by increasing the relay nodes.

Energy Efficiency Maximization in Wireless Network using Massive MIMO

R. Surender[1], P. Dananjayan[2]
Research Scholar, Department of ECE, Pondicherry Engineering College,Puducherry-605014
Professor, Department of ECE,PondicherryEngineering College, Puducherry-605014
✉:[1]pdananjayan@pec.edu, [2] surender.ragu@pec.edu

Paper ID: EC-27

Energy efficiency is a primary attribute for enhancing the data rate in the wireless network. Considering the limitation of spectrum, it can be achieved by Massive MIMO a promising system to enhance data rate by reducing the effect of fading. However, increase in number of users leads to increase of interference in the network. This can be mitigated by incorporating precoding schemes like maximal ratio combining (MRC) and zero forcing(ZF) in the network. The work in this paper is incorporated zero forcing for analysis of energy efficiency and it is compared with that of existing MRC work. The performance analysis is accomplished on consideration of base station, user equipment and deployment of base station. Simulation results proves that ZF outperforms MRC in terms of maximized energy efficiency.

Gesture Based Robotic Arm Control Using Hand Movements

Tarang Pagi[1], Mrs V. Padmajothi[2]
[1]P.G. student, SRM University, Kattankulathur
[2]Assistant Professor, SRM University, Kattankulathur
✉: [1]pagitarang@yahoo.in,[2]padmajothi.v@ktr.srmuniv.ac.in

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Robot imitation is a useful tool in humanoid robot research, it provides a natural way of teaching a complex humanoid robot to accomplish human-like behaviours. However, it is never an easy task to build such a system robustly due to the high degree of freedom (DOF) in human motion and difficulty in humanoid control.In this paper, we present a system built up by the Microsoft Kinect Sensor and the Robotic Arm Manipulator, which can mimic torso-body human motion in real time. We use the processed positions of human skeleton joints from Kinect sensor as commands directly to control the robot arms by tracking differentjoint-angles, mapping them in Cartesian plane for different Degrees of Freedom.

Wireless Remote Authentication under Lossless Fault Tolerant Protocol: Steganography for biometric image

Prachi Adavadkar[1],A. Vinnarasi[2]
[1,2]Dept.of ECE, SRM University, Chennai, India
✉: [1]prachiadavadkar_d@srmuniv.edu.in,[2]Vinnarasi.a@ktr.srmuniv.ac.in

Paper ID: EC-29

Remote authentication is required to exchange the digital multimedia information, especially when the data is communicated through wireless system. In recent trend biometric authentication is been used extensively. So it is necessary to secure the sensitive secret data. Information must be encrypted before transmission over medium. To perform the remote authentication receiver need encrypted data, along with either facial image or human voice etc. Nevertheless, there are various attacks which can be harmful for secret data, for example Torjon horse. This paper proposes a stout, highly secure authentication technique based on semantic segmentation, Triple key chaotic encryption and data hiding. Let's say if a user wants to be authenticated remotely, first image is segmented to extract head and body part through some segmentation technique. Secondly take A's finger print and encrypt it using Triple key chaotic encryption technique. Further more qualified significant wavelet tree (QSWT) is used to place in the encrypted signal in the most significant wavelet coefficient of image. Finally IDWT is applied to obtain stego image. The output image is further compressed before transmission over wireless medium using Spiht compression technique. This technique has good resistance against lossless transmission and compression, which is very common in case of wireless network. PSNR (Peak signal to noise ratio) measure, Correlation index and compression ratio indicates the performance of the proposed technique. The entire project work is implemented and tested in MATLAB 15b software environment.

Emergency Assist Device for Locating Double B In Air Plane System

Dr.C.Amali1,Abdul[1], Aravindan.K[2], Arjun.R,Goutham.A[3]
[1]Assistant Professor, UG Student, [2]Department of ECE, Department of ECE,
Valliammai Engineering College, Tamilnadu, India
✉:[1]amali.vec@gmail.com,[2]abdulkhader094@gmail.com,[3]johnaravind82@gmail.com,[4]arjunraman95@gmail.com,[5]gouthamanbu96@gmail.com

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The aim of this proposal is to collect flightdatafrom the black box when the flight crash happens. In everyairplane crash, there are so many unanswered questions about how and why the airplane crash has happened. The hidden answers are inside the black box and the teams can search at a considerable cost to find the black box.Our Designed proposal that will rectify the above problem, i.e. when the flight met with an accident or a crash, the communication starts between flightsto ground station through satellite. The exact location is marked with the help of latitude and longitude. Themarked location is transmitted to the ground stations which helpin finding the black box at exact location instead of searching in the vast area.Black box, Crash, Data, Flight, Satellite.

Enhance Throughput in Multi-Channel MAC Protocol for Cognitive Radio Networks

Ms.M.Shameemilarifeen[1], Mr.S. Ramesh[2]
[1] Student,Master ofCommunication Systems Engineering,
[2] Assistant Professor,Master of ECE, Mailam Engineering College
.✉: [1]arifeenmobin@gmail.com, [2]ramepdy@gmail.com

Paper ID: EC-31

Modern wireless technologies have the problem of improving the throughput and security of Multi-channel Medium Access Control (MMAC) protocols. We design a protocol called Full Duplex Multi-channel MAC(FD-MMAC) that exploits recent advances in full duplex (FD) communications to coordinate channel access in a distributed manner. Compared with prior MMAC designs, this protocol eliminates the use of dedicated in-band or out-of-band control channels for resolving contention, discovering the resident channel of destinations, and performing load balancing. We employ the randomized dynamic channel selection for load balancing among channels and the standard backoff mechanism for contention resolution on each available channel. FD-MMAC enables the operation of multi-channel exposed terminals. The elimination of the control channel improves spectral efficiency and mitigates denial-of-service attacks. FD-MMAC achieves significantly higher throughput. We theoretically analyze the throughput performance of FD-MMAC and verify our analysis via simulations.

Multi-service Handoff Mechanism withQoS Support in Mobile Cloud Computing Environment

R.Ranjitha[1], C.V Venkatasamy[2]
[1]Student Master Of Communication Systems Engineering
[2]Assistant Professor Master Of Electronics Communicationengineering,Mailam College Of Engineering
✉:[1]ranjitha18cool@gmail.com, [2]cvsamy2003@gmail.com

Paper ID: EC-32

Mobile devices are becoming the primary platforms for many users who always roam around and access the cloud computing applications.Mobile Cloud Computing (MCC) is the combination of cloud computing, mobile computing and wireless networks.Here we focus on the mobile cloud computing where the mobile device acts like a thin client connecting to the remote server through wireless network.We propose an improved multi-services handoff mechanism, which uses the list method of session initial protocol to make all active services execute handoff together.The mobile devices experience the problem when obtaining the multiple cloud services during the handoff process. The mobile users get storage facility by connecting with cloud through wireless network. We propose energy detection (ED) analytical model for handoff process that calculates the energy consumption for each handoff process in the cloud computing environment. Analytic model and simulation are developed to investigate the new mechanism. Our ED analytic model is developed to examine the consumed energy for different handoff processes in cloud computing. The model helps the mobile users to get prior information for the status of the mobile when executing the handoff process. The mobile device realizes the integrated handoff signaling procedure which saves much energy consumption.

Rethinking Mobile Data Offloading To Combine Wifi And Small Cell In Unlicensed Spectrum

V.Valarmathi[1], B.Ramathilagam[2]
[1]Student, [2]Assistant Professor ,Master of Communication Systems Engineering,Mailam College of Engineering.
✉: [1]valarecemec@gmail.com, [2]bramathilagam716@gmail.com

Paper ID: EC-33

Traditional mobile data offloading transfers cellular users to Wi-Fi networks to relieve the cellular system from the pressure of the ever-increasing data traffic load. The spectrum utilization of the Wi-Fi network is bound to suffer from potential packet collisions due to its contention-based access protocol, especially when the number of competing Wi-Fi users grows large. To tackle this problem, proposing to transfer some Wi-Fi users to be served by the LTE system, in contrast to the traditional mobile data offloading which effectively offloads LTE traffic to the Wi-Fi network. We investigate three different user transfer schemes according to the availability of channel state information (CSI): the random transfer, the distance-based transfer, and the CSI-based transfer. In each scheme, the minimum required amount of unlicensed resources under a given transferred user number is analyzed. Furthermore, we utilize the Nash bargaining solution(NBS) to develop joint user transfer and unlicensed resource allocation strategy to fulfill the win-win situation for both networks, whose performance is demonstrated by numerical simulation.

Rf Energy Harvesting With Data Collection Approach Incorporating In Wsn

A. Srikrishnan [1], R. Pandidurai [2]
M.E Communication Systems, Students,Mailam Engineering College,Tamil Nadu,India.
✉:[1]srkrishnanmec@gmail.com,[2]ecepandidurai@gmail.com

Paper ID: EC-34

Renewable energy technology has become a promising solution to reduce energy concerns due to limited battery in wireless sensor networks. While this enables us to prolong the lifetime of a sensor network (perpectually), unstable environment energy source bring challenge in the design of sustainable sensor networks. In existing some renewable energy source like solar panels are used in which the implementation of solar panels is quite difficult. So we propose an adaptive energy harvesting management framework, Ginibre Point Process modeling, which exploits an application's tolerance to quality degradation to adjust application quality based on energy harvesting conditions. And also charging the sensor node with the Radio Frequency (RF) signal that used for communication purpose in wireless sensor network. With additional we are implementing the data collection scheme based on the SenCar based Approach with moving Cluster Heads.

SmartSurvellianceNetwork for Intruder Detection

Ramesh Yalamala[1], Hemalatha V[2]
[1]SRM University, M.Tech (Embedded Systems Technology),Chennai, India
[2]SRM University, Assistant Professor, Department of ECE,Chennai, India
✉: [1]yalamalaramesh_y@srmuniv.edu.in,[2]hemalatha.v@ktr.srmuniv.ac.in

Paper ID: EC-35

Smart surveillance network has acknowledged significant interest since it can provide various intellectual services to combat various issues. An essential method for building such a smart network is interior object localization. One major application is a flooring-centric intruder identifying system, wherever our smart floor can be used to monitor the secured places of an environment in an efficient way. So, we are designing a smart floor by using Optical fiber cables which are placed under the glass type fiber floor, is used to track the human movement. Whenever the force is applied on Fiber cable, due to the deformation that is happened in the cable denotes that the intruder has crossed the surveillance area. The location will be tracked and it will be update in the IOT. The floor is suitable for all private and public environments. Applications like secure places in banks, offices, military applications, server room etc.

Design and Implementation of Wireless Mesh Network Using NS2 for Monitoring

Abhilash Pallapati[1], Sivakumar.E[2]
[1]M.Tech (Embedded System Technology), SRM University, Chennai, India.
[2]Assistant Professor, Department of ECE, SRM University, Chennai, India.
✉: [1]abhilashpallapati_a@srmuniv.edu.in

Paper ID: EC-36

With the ascent of new advances in technology and ease in working environment, the employment of mobile wireless computing is developing quickly. Conventional networks depend on few wired access points to interface users. However, in a wireless mesh network, the system is extended over a large number of wireless mesh nodes that “talk” to one another to share the system connection over a substantial territory. In these situations, one needs to utilize routing methods to such an extent that the out of range nodes may converse with other nodes via intermediate nodes. Path routing and protocol selection are the primary strategies to design any wireless network. The proposed WMNP protocol is evaluated and compared with AODV. The average delay, throughput and packet delivery ratio (PDR) of proposed WMNP protocol and AODV are 89.62%, 46.4%, and 27.53% respectively in a 50 node simulation experiment. The results indicate that the WMNP protocol is a better solution for static conditions and is further valuable in networks with gigantic frequency and intermittent traffic.

Real-Time Embedded Application for Disaster Resilience Using Wireless Networks

Moulika Buragadda[1],Joshua Jafferson.A[2]
[1]SRM University, M.Tech (Embedded Systems Technology), Chennai, India
[2]SRM University, Assistant Professor, Department of ECE, Chennai, India
✉: [1]saivenkata_h@srmuniv.edu.in,[2]joshua.j@ktr.srmuniv.edu.in

Paper ID: EC-37

This paper deals with the disaster management through wireless networks. World is an event ground for the calamities day by day. These occurrences of mass destruction regardless of either normal disasters or artificial catastrophes causes gigantic loss of money, property and lives as a consequence of non-planning on the part ofthe government and the management agencies. Thereforenecessary stepsarerequired towards thesethings by predetermining the causesof thedisasters and by providingquickrescue measures once the calamity occurs. A wireless ad-hoc sensor network playsa vitalrole in wirelessdatatransmission. Wireless networks use the innovations which may bring about an alarm for the quick operations to begin, at whatever point these calamities happen. In this paper technological solutions for managing calamityvictimization throughwireless networks via disaster detection and alerting system, search and rescue operations can be reviewed.

Spectrum Data Compression For Cognitive Radio Network

Ms. K.Bhuvaneswari[1] Mrs.S.Subhashini[2]
[1]Student,[2]Assistant Professor,Master of Communication Systems Engineering
Mailam College of Engineering
✉: [1]bhuvaneswaru10@gmail.com, [2]subhashini.sundramurthy@gmail.com

Paper ID:EC-39

Incognitive radio systems, interactive perception spectrum data between cognitive users can effectively improve the overallperformance of the user's perception of communication. However, a large number of spectrum data accumulation will increasing theconsumption of resources during interaction In, lack of effective spectrum data compression algorithm cognition become a bottleneckrestricting the collaboration. This paper presents a wideband spectrum data compression algorithm based on the energy detection andsliding window, removing redundant information of noise, compressing the detail of signal with different weights, reservinguseful information, improving the compression ratio and reducing compression loss. In addition, the algorithm retains the spectrum details of the signal by the DWT transform in the case of a high compression ratio, and those details are propitious to spectrum analysis. Especially under low occupancy ratio circumstances, experimental results show that the compression performance of this algorithm increase several times compare to DCT and JPEG2000.

Optimization of Video Transcoding Algorithm for Mobile Crowdsensing

Vignesh S[1], Bhavani A[2]
ECE, SRM University, Chennai, India
✉:[1]vignesh_kumar01@srmuniv.edu.in,[2]bhavani.a@ktr.srmuniv.ac.in

Paper ID:EC-43

Crowdsensing refers to capturing the data from the individuals through various means. As the growth of smartphones and wearable technologies are on the high, they are useful for obtaining data through their sensors. Common sensors used in smartphones such as GPS, accelerometer, camera, etc are helpful to know the individual's location, their speed, and their surrounding environment. In wearable technologies pedometer and many health related activities such as heart rate measurements, sleep monitoring, etc are known. These data captured through the sensors, when shared with other individuals will be helpful in one-way or another. Crowdsensing applies to various fields like healthcare, etc. and it is also used in certain emergency conditions. When sensing the data from mobile devices, images and videos of the individuals carry more information than the sensors like GPSetc. The major challenge in video collection is that it takes a large amount of memory and processing power consumption as the size of these files grew large. In such cases, it will be very much difficult to transmit the data collected into the cloud. The objective of this paper is to reduce the size of video and at the same time retain the quality to an extent by optimizing an existing transcoding algorithm and the transcoded video is then uploaded to the cloud as well as to a web server so that the captured videos are accessible to all users.

Design of Robotic system to Rescue a Child Under Constrained Environment

Lawrence Danieal R[1], Vinolee R[2], Ruhan Bevi A[3]
Dept. of ECE, SRM University, Chennai, India
✉:[1]lawrence_m@srmuniv.edu.in, [2]vinolee.r@ktr.srmuniv.ac.in, [3]ruhan.b@ktr.srmuniv.ac.in

Paper ID: EC-44

An implementing robotic system for life-saving measures is one of the important applications, one such implementation needs to be applied for the recovery of child from a constrained environment more specifically borewell. Accidents associated with borewell is incredibly abundant on the rise, removal of casing pipes once a borewell changing into defunct and abandoning the borehole structure while not filling which is one in all the most reasons for children slithering into them. Possibilities of convalescent the child once fell into the borewell are terribly slim. The rescue process to recover a child involves digging a hole parallel to that of the borewell where the child fell, this usually fails because rescuers takes several hours to reach the child for providing first-aid which results in complication of life. To assist in such rescue operations we tend to propose a robotic system capable of moving underneath the borewell supported with user commands equipped with a robotic arm, high power LED, high-resolution camera, and sensors like ultrasonic, temperature and gas sensor. The device system is interfaced with the Atmega 328 controller. Two cameras were placed at different angles so that the entire borewell was captured which are controlled through raspberry pi SOC. Robotic arm is designed uniquely where it operates with 4-point gripping system in which each pair is controlled separately in order to increase the precision of the grip, additionally a fail-safe safety system was designed which provides additional safety in rescue operation. Robotic arm is operated by the rescue team through a specially designed control system software.

Advance Features And Mobility Management Of Mobile Wimax

Akhil Augustine[1], George Georgethomas[2]
[1]Masters Student, Department of Embedded and Intelligent Systems, Halmstad University, Sweden
[2]Masters Student, Department of Embedded and Intelligent Systems, Halmstad University, Sweden
✉:[1]akhaug15@student.hh.se, [2]gtom9999@gmail.com

Paper ID: EC-46

Mobile WiMAX comes with an advantage of full mobility support and higher capacity compared to the Fixed WiMAX (802.16d 2004). This leads to a tremendous change in the field of Wireless Communications. There are many handover mechanisms in mobile WiMAX which reduces the handover latency for specifying that, including an advance layer 3 handoff schemes for mobile WiMAX based Wireless mesh Network. Hence in this handover scheme, the handover latency should be very low which reduces the chance of packet losses when compared to the conventional layer 3 handover scheme. The main aim of this paper is to give an overall view about Mobile WiMAX and its applications and also to explain one of the handover schemes for Mobile WiMAX.

Target Tracking In Wireless Sensor Network

S. Suganraj [1],C. Jenitha [2]
[1] M.E Communication Systems, Student
[2] Department of ECE, Assistant Professor, Mailam Engineering College,Tamil Nadu,India.
✉:[1]jssugansekar@gmail.com, [2]jenichander2013@gmail.com

Paper ID: EC-47

Target Tracking is an important problem in sensor networks, where it dictates how accurate a targets position can be measured. In response to the recent surge of interest in mobile sensor applications, this project studies the target tracking problem in a mobile sensor network (MSN), where it is believed that mobility can be exploited to improve the tracking resolution. This problem becomes particularly challenging given the mobility of both sensors and targets, in which the trajectories of sensors and targets need to be captured. Derive the inherent relationship between the tracking resolution and a set of crucial system parameters including sensor density, sensing range, sensor and target mobility. Investigate the correlations and sensitivity from a set of system parameters and we derive the minimum number of mobile sensors that are required to maintain the resolution for target tracking in an MSN. The simulation results demonstrate that the tracking performance can be improved by an order of magnitude with the same number of sensors when compared with that of the static sensor environment.

Energy Efficient Automation And Intruder Alert System Using Machine Vision And IOT

Gouthaam A[1], Tamil vendhan.S[2],Gayathri V.C[3]
[1]Department of ECE, Assistant Professor,
✉: gouthaam.ari@gmail.com[1], tamilvendhan.ece@act.edu.in[2], gayu95neethu@gmail.com[3]

Paper ID: EC-49

An energy efficient automation and intruder alert system using machine vision and IOT (Internet of Things) is developed and explored in this paper. Raspberry pi is the heart of this project and it is fueled by OpenCV (Open source computer vision) and IOT. The alert system and automation are activated based on the face recognition. The presence of people is identified using the OpenCV. The system is activated when the user left the house or office such that to turn ON surveillance at a specific time of the day. When the system detects an intruder by face recognition, it captures the image and it will be sent to Google Drop Box with the help od IOT. The human detection and face recognition is carried out by Background Subtraction and Vector Support Machine and thereafter, when the user enters the room automation will be taking place and only the required devices will be turned ON. This will reduce the unnecessary wastage of power.

Equalization Of The Current In A Three-Phase Electrical Power System

Akhil Augustine[1], Manuel Johnson [2], Thomas Joseph [3]
[1]Masters Student,Department of Embedded and Intelligent Systems,Halmstad University,Sweden
✉:[1]akhaug15@student.hh.se, [2]manueljohnson@live.com

Paper ID: EC-50

Single phase loads connected to three phase systems creates unbalance in the system. This paper aims at the development of certain techniques that could divide the power drawn by a single phase load to the three phases of a three phase system according to the current amount at which each phase is loaded. For accurate controls and power division, we use a DC link connected with converters at both the ends. The power flow is controlled by implementing controlled rectification in each phase. PWM inverters are used to produce perfect sine waves from this DC rectified output, and thus creating a controlled single phase supply from the three phases. The firing pulses for the thyristors are provided by a PIC microcontroller.

Smart IoT Based Energy Monitoring and Controlling Household Appliances

D.Sobya[1], Arvind Kumar[2], Vicky Kumar[3]
[1]Assistant Professor, [2, 3] Student, Department of Electronic and Communication Engineering,
Christ Institute of Technology Pondicherry, India.
✉ : [1]sobyadevaraj@gmail.com , [2]Vk6999896@gmail.com , [3]Kumar080494@gmail.com

Paper ID: EC-53

The objective of this paper is to describe about the implementation of an intelligent energy monitoring and controlling system using internet of things. Our proposed system design can be installed at home to solve and management problems which occur in wastage of electricity maintenance and shortens at the mean time to repair. We have designed a smart home energy monitoring system based on internet of things for monitoring and controlling the usage of power. This system had incorporated energy monitoring for household appliances through internet using host, network global positioning radio service, embedded system gateway and other components. The result of our demonstration shows that, the system can monitor and control the power of household appliances. Thus, the energy monitoring functions are realized in real-time. This article also describes the realization of system hardware and software in detail with the combined system of embedded technique and global system for mobile communication.

Salt & Pepper Noise Removal from Highly Corrupted Images through Novel Decision Based Trimmed AsymmetricMedian Filter

Vinnarasi[1],Naresh R[2],Mohammed Munaff M[3],Sherlin Seth[4]
[1]Corresponding Author, Assistant Professor, [2,3,4]Undergraduate Student
Dept. of Electronics & Communication Engg, SRM University, Tamilnadu, India Email:
✉:vinnarasi.a@ktr.srmuniv.ac.in

Paper ID: EC-54

In the age of modern communications, transmission of visual information in the form of digital images has become a key technique of communication. Unfortunately, the communicated image is often found to be degraded with noise. It is often required to process the received image before using it for numerous applications. In order to de noise the image, the image data is manipulated to produce a visually superior quality image. An algorithm is formatted for the purpose of image representation, Salt and Pepper noise detection and to restore the actual image by filtering and eliminating the noise. A Novel Decision based Trimmed Asymmetric Median Filter is proposed for this effect. For images corrupted with salt and pepper noise, the above proposed methodology is understood to be the most effective and the efficient one. Extensive simulations and comparisons are done with competent schemes. The projected method is/was detected to be effective in suppressing impulsive noise at various noise ratios when compared with other similar approaches discussed in the literature.

Rf Based Mems Collision Avoidance SystemUsing Controller Area Network

[1] R.Arul Raj,[2] J.Pranesh, K.Sabarinathan
[1,2]Department Of Electronics And Communication Engineering
✉:[1]arulrajr95@gmail.com,[2]jpranesh96@gmail.com

Paper ID: EC-55

In modern world leads to growth of different technologies for the purpose of avoiding collision between the vehicles in highway .Driver and passenger safety is one of the prime concerns in modern day vehicle. The work proposes an intelligent embedded system that assists the driver in avoiding various end collision. It is a mechanism that monitors the side of the vehicle ends and also braking intensity of vehicle and depending upon its intensity alerts with light indication. The device on the following vehicle is immediately alerts for the reaction of front vehicle. In order to overcome that situation the project has been develop in a simple manner using the devices like PIC controller, MEMS sensor, Ultrasonic sensor, CAN protocol. MEMS sensor works to analyze the pedal pressure of front car it will pass an information through the RF transmitter and received in back vehicle with the help of RF receiver.

Energy Efficiency Maximization in Wireless Network using Massive MIMOR.

Surender[1],P. Dananjayan[2]
[1]Research Scholar, Department of ECE, [2]Professor, Department of ECE
✉: [1]surender.ragu@pec.edu, [2]pdananjayan@pec.edu

Paper ID: EC-56

Energy efficiency is a primary attribute for enhancing the data rate in the wireless network. Considering the limitation of spectrum, it can be achieved by Massive MIMO a promising system to enhance data rate by reducing the effect of fading. However, increase in number of users leads to increase of interference in the network. This can be mitigated by incorporating precoding schemes like maximal ratio combining (MRC) and zero forcing(ZF) in the network. The work in this paper is incorporated zero forcing for analysis of energy efficiency and it is compared with that of existing MRC work. The performance analysis is accomplished on consideration of base station, user equipment and deployment of base station. Simulation results proves that ZF outperforms MRC in terms of maximized energy efficiency.

Design of Multi-Channel Data Acquisition and Process Control Module

Subashini V[1], Eswaran P[2], Lawrence Danieal R[3]
ECE, SRM University, Chennai, India
✉:[1]subashini_ven@srmuniv.edu.in,[2]eswaran.p@ktr.srmuniv.ac.in, [3]lawrence_m@srmuniv.edu.in

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This paper proposes the design of an 8-channel real-time data acquisition and process control module for various industrial and commercial process control application. This system uses the single master controller and 8 slave controller. The master and slave controller are connected through I2C protocol. The function of the master controller is to interface PC and slave controller, for transferring data from slave controller to PC and data storage. The slave controllers form a standalone module, which can be a reconfigurable program to cater the application requirement of the user based on individual process requirement. Usually, a single channel data acquisition module is used for an individual channel. The proposed system is developed using ATMEGA 328 controller and an open source software. The developed system was simulated in Proteus IDE, and the 8 channel data acquisition module was developed and tested for various data rate condition. The developed system meets desired performance and shows reliable functionality.

Performance Analysys In Impact Of Trust Based Security Association And Mobility In Manet

K.Sivagurunathan[1], B.Vishnukumar[2]
[1]Assistant Professor, [2] B.Tech,
Department of Electronic and Communication Engineering,Christ Institute of Technology
Pondicherry, India
✉:[1]msg2sivaguru@gmail.com,[2]vishnukumarsjs@gmail.com

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Trust models in the literature of MANET'S commonly postulate that packets have different security requisites. Afore a node forwards a packet, if the receiver trust level does not meet the packet's requisite level, then the recipient must perform certain security modality procedures, such as re-authentication. We present in this paper an analysis of the epidemic broadcast delay in such context. The network mobility and trust models presented in this paper are quite generic and sanction us to obtain the delay component induced only by the security modalities along a path. Numerical results obtained by simulations withal corroborate the precision of the analysis. In particular, we can observe from both simulations and analysis results that, for immensely colossal and sparsely connected networks, the delay caused by security modalities is diminutively minuscule compared to the total delay of a packet. This additionally betokens that parameters like network density and nodes velocity rather than any trust model parameter, have more impact on the overall delay.

Implementation of Morphological Operations to Recognise Hand Gestures under Complex Backgrounds

Dhanalakshmi.Samiappan[1*], J.Jayesh[2], Ashwin R.M Subbiah[3] and K.R.Suraj Krishna[4]
[2,3,4]Department of Electronics and Communication Engineering, SRM University, Chennai, India
[1] Assistant Professor, Department of Electronics and Communication Engineering, SRM University, Chennai,India
*Corresponding author's Email: dhanalakshmi.s@ktr.srmuniv.ac.in

Paper ID: EC-63

This paper proposes a method to recognise hand gestures under different backgrounds by identifying and counting the number of fingers shown by a user using MATLAB programming tool. The method uses the HSV colour space algorithm to perform skin segmentation and obtain a perfect binary image of the hand gesture by experimenting under different frameworks. Morphological operations are incorporated which perform image segmentation to remove the parts of a gesture other than the fingers after which the finger count is calculated.

The Parametric Deformable Model for image Detection of Brain tumors

S. Sreedhar Babu[1], Polaiah Bojja[2], Raavi Medhaswi[3], Valicherla Vaishnavi[4]
[*1234]Department of Electronics and Communication Engineering, K L University, Greenfields, Vaddeswaram, Guntur – 522502, Andhra Pradesh, India
* Corresponding author's Email: seva.sreedhar@kluniversity.in

Paper ID: EC-66

In this paper, we introduce a completely programmed brain tumor segmentation technique in light of the parametric deformable model. However this strategy for location opposes the exact assurance of stage and size of tumor. This strategy permits the division of tumor tissue with exactness and reproducibility similar to manual division. Likewise, it additionally diminishes the ideal opportunity for investigation. Towards the finish of procedure the tumor is distinguished from the MRI picture and image correct shape and position additionally decided. The phase of the tumor is shown in light of the measure of zone figured based on medical applications and also it will be used to doctors while diagnosis. The results are carried using MATLAB software.

Coexistence and fair access on the shared channel for LTE-U and Wi-Fi

Varakumari .S[1], A V Prabu [2], Gopiram.K[3], S.Venkatesan [4]

[1],Phd (ECE) Research Scholar JNTUK , Kakinada and Assistant Professor, Dept. Of ECE, K L University, Vaddeswaram, A.P., India

[2]Phd (ECE) Research Scholar JNTUK , Kakinada and Assoc.Professor, Dept. Of ECSE, K L University, Vaddeswaram, A.P., India.

[3]Assistant Professor, Dept. Of ECE ,K L University, Vaddeswaram, A.P., India,

[4] Assistant Professor, Dept. Of EEE, Sreesastha Institute of Engineering & Technology, A.P., India.

✉: [1]varakumari@kluniversity.in

Paper ID: EC-73

LAA is the 3rd Generation Partnership Project's (3GPP) effort to regulate operation of LTE in the Wi-Fi bands. It utilizes a protocol known as listen-before-to-talk (LBT), obligatory in some European nations, to coincide with other Wi-Fi devices in a similar band. LTE (Long Term Evolution) innovation confronts rapid information administrations and a developing number of cell phones furnished with Wi-Fi get to capacity. To meet this challenge, the third Generation Partnership Project (3GPP) started a concentrate thing (SI) inspecting LTE advances of conjunction in a similar band without a 5 GHz permit. Since Wi-Fi and LTE are composed originally to work in totally unique, unlicensed and authorized groups, it is hard to accomplish this concurrence for these two contrary get to innovations. Hence, 3GPP presents the Listen before Talk (LBT) component to guarantee the possibility of the conjunction of both get to advances in that band. This IS comprises of LBT based Assisted Access License (LAA) including hardware in view of load-based gear (LBE) and Frame Based Equipment (FBE) that can be designed to contend with the Wi-Fi based contact instrument to a reasonable access on the shared channel. In this paper, calculate the performance of two newly proposed 3GPP medium access control (MAC) and Wi-Fi-based mechanisms under hybrid scenario with disparate parameter configurations. The evaluation is carried out through simulations and the considered performance parameters are fairness index (FI) and access opportunities obtained after multi-competitions on the shared channel.

Advanced Carrier Aggregation in Long Term Evolution for Functionality

Varakumari .S[1], R.Sekar[2], C.Cynthia[3], Dr. G. SateeshKumar[4], A.V.Prabu [5]

[1]Phd (ECE) Research Scholar JNTUK , Kakinada and Assistant Professor, [2,3,]Dept. Of ECE, K L University, Vaddeswaram, A.P., India,India,[4]Professor. Dept. Of ECE, AITAM, Tekkali, A.P,[5]Phd (ECE) Research Scholar JNTUK

✉: [1]varakumari@kluniversity.in.

Paper ID: EC:74

Mobile broadband memberships and the information track have developed increasingly as of late with the arrangement of 4G advances and the massive utilization of cell phones. In this sense, Long Term Evolution Advanced (LTE-A) has been presented as the following step in wireless communication in which higher information rates are situated and bundle exchanged services are completely kept up. A definitive objective of 4G and the up and coming 5G innovation is to expand the Quality of Experience (QoE) clients. In this context, various difficulties are opening up to address the expanded data transfer capacity requests in both uplink and downlink. To this end, LTE-A has proposed the utilization of Carrier Aggregation (CA) that permits the synchronous transmission of information in two separate sections of range, constituting an smart agreement that encourages the utilization of the divided range and permits to expand the width of Transmission band Carrier aggregation (CA) is one of the key elements of LTE-Advanced. Through CA, users access an aggregate data transfer capacity of up to 100 MHz keeping in mind the end goal to meet IMT-Advanced necessities. The transmission capacity of the framework might be adjoining, or made out of a few parts of noncontiguous transfer speed, which are included. Carrier aggregation (CA) builds the data transfer capacity allotment to the UE. Subsequently, it will support a higher information rate contrasted with non-CA components. In this paper presents an outline of the upheld CA scenarios and also a overview of CA usefulness for LTE-Advanced with extraordinary accentuation on the essential idea of OFDM.

Advanced Healthcare Monitoring System Using CC3200 Microcontroller

Godavarthi Rajesh[1]* M.K. Srilekha[2]

[1]M.Tech (Embedded System Technology), SRM University, Chennai, India.

[2]Assistant Professor, Department of ECE,SRM University, Chennai, India.

✉:* rajeshsrmuniversity@gmail.com

Paper ID: EC-75

Telemedicine plays a vital role in hospitals for the rapid decision-making and treatment through the high-speed medical data send the transfer to the physicians. The medical data send to physicians over mobile and server for consulting and remote medical examinations. This paper elaborates the experience; a practice adopted and places of interest in several strategy facets to be considered for creation telemedicine in patient observing method more operative. In this way, the patient ‘s vibrant signs like EMG, Blood Pressure, Glucose Level, Bilirubin Count are caught and the values arrive into the database. Then it will update into the web server and it will send to the doctor’s mobile in the form of ANDROID applications.it also enables the doctors to instantly send back their feedback to the nurse station.

The Analysis of Data Representation Techniques for Early Prediction of Breast Cancer

RaziaShaik [1], Polaiah Bojja[2], Niharika Manne[3], Manoj Kumar Vandavasi[3], MohanaKeerthiNunna[3]

[1]Assistant Professor,CSE Department K L University, Vaddeswaram, Guntur, Andhra Pradesh, India.
[2]Professor,ECE Department K L University, Vaddeswaram, Guntur, Andhra Pradesh, India.
[3]B-Tech Scholars,CSE Department K L University, Vaddeswaram, Guntur, Andhra Pradesh, India.
✉: razia28sk@gmail.com[1], paulraj.bojja@gmail.com[2] ,manneniharika@gmail.com[3]

Paper ID: EC-77

Data preprocessing plays a vital role in data mining which transforms raw data into a machine-understandable format. Data preprocessing involves data collection, cleaning of data and various forms of representing the data. Here we explore the effect of different data representations in the field of the predictive data mining models by considering breast cancer dataset. By undertaking expectations, one specific predictive model may give the best outcome for the data set, however, gives poor outcomes for another data set, all these depends upon the data representation we selected for our data to convert it into binary. This paperwork concentrates on Artificial neural system (ANN) predictive information mining models, which are usually utilized for prediction. A medical data set with Boolean targets are considered and utilized to predict the effect of different data representation on data Mining model. In this paper, we consider seven data representation techniques are utilized ; They are As_Is, thermometer representation, MinMax normalization technique, sigmoidal normalization technique, flag representation, simple binary representation and standard deviation normalization.

Text to Speech Conversion Module

Hussain Rangoonwala[1], Vishal Kaushik[2], P Mohith[3]and DhanalakshmiSamiappan[4]

[1,2,3]Department of Electronics and Communication Engineering, SRM University, Chennai,
[4]Corresponding author and Assistant Professor, Department of Electronics and Communication Engineering, SRM University, Chennai, India.
[4]Corresponding author's ✉:dhanalakshmi.s@ktr.srmuniv.ac.in

PAPER ID:EC-80

This paper proposes a method at developing a complete system in which Text can be converted to Speech, Text file can be converted to Speech, Text in various Languages can be converted to Speech, Image can be converted to Text and Image can be converted to Speech using MATLAB as a programming tool. The various methods used are Preprocessing, Unicode Conversion, Segmentation, Concatenation, Prosody and Smoothing, to be then combined in an application for easy access and usability. The Motivation behind developing this system is to combine various modules using modular approach in order to get a simple yet effective way for differentially abled people to interact with others and thereby making the society better.

Energy Efficient Multipath routing for MANET based on Hybrid ACO-FDRPSO

J Rangaraj[1]*, M. Anitha[2]

[1]Assistant Professor, Department of Electronics and Communication, Annamalai University, India

[2]Associate Professor, Department of Electrical Engineering, Annamalai University, India.

* Corresponding author's Email: jsrd_jsrd@yahoo.co.in

Paper ID: EC-82

Autonomous devices that are interconnected in an on demand fashion that communicate in wireless medium with the available energy constitute Mobile Adhoc Networks (MANET). Communication in these networks is restricted to lifetime of the nodes that inturn dependent upon the node's battery power. Therefore optimization is necessary to prolong node lifetime and communication period. This work proposes a hybrid Ant Colony Optimization (ACO) combined with Fitness Distance Ratio Particle Swarm Optimization (FDR PSO) to optimize energy. ACO finds the energy efficient path in the network based on higher residual energy and FDR PSO minimizes energy consumption of the network, to enhance node lifetime which ensures energy efficient routing. Duty cycle algorithm collaborated with ACO swaps the nodes between active and sleep state depending upon their utilization. This prevents a node being active all time though it has no communication at that instant of time. The proposed hybrid technique (ACO-FDR PSO) is tested over a 100 node network scenario. The impact of varying number of nodes and their speed on the performance metrics such as throughput, packet delivery ratio, drop and residual energy have been analyzed using NS-2 simulator.

Achieving Minimum Peak side lobe through pulse compression Coding technique on Synthetic Aperture Radar

Jeni

Paper ID: EC-83

In the Electronic Warfare (EW) field, the interception of Radarsignals and retardation of Radar performance are of primary consequences. In this generation, a modern radar called Synthetic Aperture Radar (SAR) which is used to create two- or 3-dimensional images of objects and synthetically increases the antenna size or aperture to increase the azimuth resolution of the mapped area.To achieve a minimum peak side lobe and minimum main beam width, in this paper the radar waveform generator are developedusing various pulse compression coding techniques which aims to achieve both better range resolution and high target detection capability. This radar waveform isimplemented in the Matlab software tool.

Ontology based Classification of Computer Science Domain To Support Personalization.

Zameer Gulzar[1] , Dr. A. Anny Leema[2], Gerard Deepak[3]
[1,2]Department of Computer Applications, B.S. Abdur Rahman Crescent University.
[3]University Visvesvarya College of Engineering,Bangalore University.
✉[1]zamir045@gmail.com,[2]annyleema@bsauniv.ac.in

Paper ID: CS-06

Having a plan for higher education is important, and it can be frustrating for students if they do not have proper tools that will help them in planning and organize their work. The study is based on the Seven Step Methodology that was used to Structure our proposed Ontology development process. The aim of this study is to understand the development of a knowledge model for better understanding of a domain and the courses it includes using protégé tool. Almost 200 Different Subjects from the School of Computer Sciences at BSA University was chosen as an example for the development of Ontology. Before Categorization of the Concepts for a particular domain, a thorough study was conducted by using University Syllabus, Books, and Some Experts also. Different Ontologies for many domains exist but their educational context in not clear as far as quality and stability is concerned, and for numerous domains and subjects do not exist all. Therefore, Ontology building can prove helpful in providing the content in an efficient and effective manner to improve the interest of a learner. The Ontology aims to help scholars and researchers to plan their course work by providing some graphical representation of the domain courses, and how these courses are related together within a particular domain or with other domains. With the help of Ontology, we can focus mainly on the concepts in a domain and their relationship rather than Information alone. The reusability saves the time for domain experts and they can make use of already built ontology. The main goal is to build Ontology to help in personalization by providing the content in an efficient and effective manner to improve the performance and interest of a learner. Various aspects concepts, class hierarchy, object properties, data properties, Creating Instances, query retrieval process and graphical visualization have been demonstrated.

Named Data Networking-EMPERICAL SURVEY

Jinesh.P[1],Lakshmipriya.K[2],AnurudhKumar[3], Suresh Joseph. K[4]

[1,2,3,4]Department of Computer Science and Engineering,Pondicherry University.

✉ : jineshaliasjp@gmail.com,[2]melpkannan@gmail.com,[3]anurudh23@gmail.com,[4]ksjoseph@gmail.com

Paper ID: CS-07

Over a couple of decades ago, ARPANET was invented that acted as a launching pad for the internet. With the incorporation of packet switching and TCP/IP protocol stack, the current internet became much more leveraged by the implementation of Real-time Transport Protocol (RTP) which facilitates real-time transmission of data. The traditional internet architecture was developed as a packet data network where the entities take participate in communication, videlicet users and data sources communicate over a pre-established connection or channel with the help of IP addresses. It suffers the limitations of location based architecture. Later as researchers became much more aware of the cons of current internet architecture, a new internet architecture emanated that results in the invention of Information Centric Network (ICN). ICN efficiently deals with information dissemination rather than the awareness of location, inherently states that Named Data takes over IP address based networking. It is evident that named content deserves paramount significances than the location. As a result of these facts, the primitive internet architecture started evolving to cope up with the current challenges to a real-time environment. One such recent implementation of ICN is NDN. It can obliterate many of the cons of current internet architecture which stems from its location governing model.

MBC-ODCA Algorithm to select an Optimal Datacenter for Resource Allocation in Mobile Cloud Computing

Kannan.P[1], Durairaj.M[2]

[1]Research Scholar, [2]Assistant Professor, School of Computer Sci., Engg., & Applications

Bharathidasan University, Trichy-620023, India

✉: [1]kannancsbdu@gmail.com.

Paper ID: CS-09

Mobile users access cloud computing resources with the support of network providers and datacenter providers. Mobile Cloud Computing entirely depends on bandwidth, network coverage area, location of datacenter, offloading scheme and user mobility. Mobile cloud computing environment faces a hard challenge to find an optimal datacenter for resource allocation to a mobile user. In this paper, a novel algorithm called MBC-ODCA (Mobility Based Cloudlet-Optimal Datacenter Allocation) algorithm is proposed. This algorithm finds an optimal datacenter based on daily human mobility pattern for mobile user in a mobile cloud. The MBC-ODCA algorithm concentrates on response time and throughput measurement among Cloud User, Mobile Cloud User, Optimal Datacenter and Cloudlet. The experimental results show that the proposed algorithm find the optimal datacenter in minimum time compared with other existing techniques.

Enhanced Public Integrity Auditing On Cloud Data Using Sha Algorithm

R. Sumathy[1],P. Kanchanadevi[2]
[1,2]Pondicherry Engineering College, Puducherry, India,
✉: [1]sumathy0177@gmail.com,[2]kanchanaperumal@pec.edu

Paper ID: CS-10

Cloud storage growth promotes the secure remote data auditing as a blistering topic. It deals with the problem of security and efficiency of public data integrity auditing during dynamic data sharing. The existing scheme provides the proficient public integrity auditing with secure group user communication based on group signature, Asymmetric Group Key Agreement (ASGKA) and vector commitment. But still this scheme is not consistent for secure group user revocation and also for dynamic cipher text database. In collusion attack cloud is able to learn the contents of shared data colluding with untrusted or revoked user. This paper proposes Secure Hash Algorithm-2 (SHA-2) with dynamic user management that supports dynamic cipher text and efficient user revocation. Secure Hash Algorithm-2 concerns about the intended group communication in that any member can leave or join the group at any time. It also has a set of cryptographic hash functions that prevents collusion. Additionally this work wrapped up with the properties, such as confidentiality, efficiency, countability and traceability of public data integrity auditing.

Composition Of Qos Web Service Using Fruit Fly Optimization Algorithm

U.Madhivadhani[1], Dr.M.Sugumaran[2]
[1]Student, Department of Computer Sci. Eng., PEC, Puducherry
[2]Professor, Department of Computer Sci. Eng., PEC, Puducherry.
✉: [1]madhianju@gmail.com, [2]sugu@pec.edu

Paper ID: CS-13

Web Service (WS) applications are self-epitomizing and platform- independent applications that can be provoked over the web. Requested services need to be composed as single service that optimize given user preferences which is often referred to as the automated Web service composition problem. The major problem involves each with its own attendant issues which automatically construct the control flow of the composition and appropriately resolve the data heterogeneity between applications participating in the composition. As the issue becomes how to select appropriate web services such that the QoS of the resulting composite service is maximized and complexity is reduced. This paper gives a synopsis of recent research efforts of Web service composition and employment of composing optimized QoS service using Fruit fly Optimization Algorithm (FOA).

Efficient Triadic Closure Prediction for Social Networks

Dr.V.Akila[1], Dr.V.Govindasamy[2],T.Sindhuja[3]
[1,2,3]Pondicherry Engineering College, Pillaichavadi.
✉:[1]akila@pec.edu,[2]vgopu@pec.edu,[3]sindhujadhakshanamoorthy@pec.edu

Paper ID: CS-14

Social networks are omnipresent in today's world. Subgroup formation is a vital task of social network analysis. When we understand the group formation then it is easy to understand the structure of the network. Triadic analysis is the part of subgroup analysis. A group of three nodes with its relations/ties called triad. Triadic closure prediction helps to discern knowledge about the formation of groups. In this context Triadic Closure prediction assists in predicting the closure of open triads.. This purports the requirement of efficient methods for Triadic Closure Prediction. In the proposed system formal concept analysis is used to predict the triadic closure efficiently. Formal Concept Analysis is utilized to perform Weight Vector which in turn is used to prune the dataset. Later on a decision tree algorithm is utilized in predicting triadic closure.

A Consumption History and QoS based Web Service Ranking Technique

R. Sarala[1]P. Manisha[2]Mukku Vineesha[3] G. Indumathy[4]
[1]Assistant Professor/CSE, Pondicherry Engineering College
[2,3,4]Student Member/CSE, Pondicherry Engineering College
✉: [1]sarala@pec.edu, [2]td21@pec.edu,[3]td23@pec.edu,[4]indumathy@pec.edu

Paper Id: CS-15

The number of web services that are available on the internet increases day by day, but the end users get struck in identifying the web services that meet their requirements. Web services are generally ranked and listed by finding how much is a web service functionally similar to the one the user is searching for. But over the time, this methodology failed to satisfy the users due to the large number of web services that became available. Later, approaches like collaborative filtering and ranking based on QoS which were compensatory in nature were adopted. But the results could be made more accurate if consumption history is considered and QoS preferences and QoS constraints were explored at large which is considered in this work. The proposed system ranks the web services by considering the functional relevance, user behavior, QoS and service usage factor. The results from the proposed system were found to be better than the existing ranking systems in satisfying the users.

Smart Searching Technique with the Combination of Semantic, Syntactic and Ranking Algorithm

E.Kodhai[1*], B.Deepika[2], M.Dhivya[2], C.Anandha Valli[2]

[1]Department of CSE,SriManakulaVinayagar Engineering College, Puducherry, India.

[2]Department of CSE,SriManakulaVinayagar Engineering College, Puducherry, India.

* Corresponding author's Email: kodhaiej@gmail.com

Paper ID: CS- 16

Measuring the semantics between words is an important features in various tasks on the web such as relation extraction, community mining, document clustering, and automatic metadata extraction. Despite the usefulness of semantics measures in these applications, accurately measuring semantics between two words (or entities) remains a challenging task. Proposal is about an empirical method to estimate semantics using word counts and text snippets retrieved from a web search engine for two words. Specifically, we define various word co-occurrence measures using word counts and integrate those with lexical patterns extracted from text snippets. To identify the numerous semantic relations that exist between two given words, the proposal is about a novel pattern extraction algorithm and a pattern clustering algorithm. The optimal combination of word counts-based co-occurrence measures and lexical pattern clusters is learned using support vector machines. The proposed method has various baselines and previously proposed web-based semantics measures query benchmark data sets showing a high correlation. Moreover, the proposed method significantly improves the accuracy in a community mining task.

Literature Review for Detecting Selfish Node

Kodhai.E[1*],Jayavani.R[2], Kirutthiga.P[2],Neerjadevi konda[2]

[1]Department of CSE,SriManakulaVinayagar Engineering College, Puducherry, India.

[2]Department of CSE,SriManakulaVinayagar Engineering College, Puducherry, India.

* Corresponding author's Email: kodhaiej@gmail.com

Paper ID: CS- 17

In mobile ad hoc networks (MANETs), All nodes are participated in packet forwarding in order to cooperate with each node. Suppose, if the nodes are not forwarding the packets to its neighbour nodes it is said be selfish node. To detect this selfish nodes many techniques has been followed. The use of watch dog is a well-known mechanism to detect selfish nodes. In this approach if a node locally detects an intrusion with strong evidence, it can initiate a response. However, if a node detects an anomaly with weak evidence, it can initiate a "cooperative global intrusion detection procedure" that if a false positive is generated it can spread this wrong information very quickly on the network, isolating nodes that are not selfish.

Smart Disease Prediction using Effective Vector Machine Algorithm

E.Kodhai[1*],K.Vagulamaliga[2],S.Mirudhula[2],S.R.Pavithra[2],K.Rama[2]

[1]Department of CSE,Sri Manakula Vinayagar Engineering College, Puducherry, India.

[2]Department of CSE,Sri Manakula Vinayagar Engineering College, Puducherry, India.

* Corresponding author's Email: kodhaiej@gmail.com

Paper ID: CS- 18

Data mining is theprocess of extracting hidden prognosticinformation from large databases and is a powerful new technology with great potential. Mining is a useful knowledge from corpus of data has become a paramount application in many fields. There are many data mining algorithms which performs operations like clustering, classification work on the data and provide effective information for a. As these datum are available through different channels into public domain, privacy for the owners of the data is significant. In the literature number of algorithms have been proposed. Most of the existing classification methods tend to perform poorly on dataset which is extremely imbalanced. However there are mainly two issues namely performance issues and data source issues. Hence, an alternative method of modelling the objects is required .Thus in this paper an efficient algorithm is proposed to overcome the above issues. The healthcare industry contains large information, which is tedious to process by manual methods. Medical datasets are often not balanced in their class labels. Therefore in this paper we propose an algorithm for healthcare system to accurately predict the result from the large amount of data.

An efficient VM is based on Design and Implementation for Developing Coding in IoT

S.Banupriya[1] , Dr.J.Madhusudhanan[2] , N.Danapaquiame[3], V. Vijaykumar[4], R. Saravanan[5]
Department of CSE, Sri ManakulaVinayagar Engineering College[1,2,3,4]
Dept of CSE, KL University, Andhra Pradesh, India[5]
✉: banusundar62@gmail.com[1],contactmadhu@gmail.com[2],n.danapaquiame@gmail.com[3],
vijaykumarv@smvec.ac.in[4],svsaravana@kluniversity.in[5]

Paper ID: CS- 20

IoT is associating gadgets over the web, giving them a chance to converse with us, applications, and each other. Late years have seen the improvement of figuring conditions for IoT (Internet of Things) services, which trade a lot of data utilizing different heterogeneous gadgets that are constantly associated with networks. Since the data communication and services occur on a variety of devices, which to only include traditional computing environments and mobile devices such as smart phones, but also family machines, installed gadgets, and sensor hubs, the security necessities are turning out to be progressively vital as of right now. As of now, on account of portable applications, security has developed as a new issue, as the dissemination and use of mobile applications have been rapidly expanding. This product, including IoT administrations and versatile applications, is consistently presented to pernicious assaults by programmers since it trades information in the open Internet condition. The security short comings of this product are the immediate reason for programming breaks bringing about genuine monetary misfortune. As of late, the mindfulness that creating secure programming is naturally the best approach to take out the increased. Therefore, methodology in view of the utilization of secure coding rules and checking devices is pulling in consideration regarding avoiding programming ruptures in the coding stage to eliminate the above vulnerabilities. This paper proposes a compiler and a virtual machine with secure programming ideas for creating secure and put stock in commendable administrations for IoT situations. By utilizing a compiler and virtual machine, we approach the issue in two phases: an avoidance arrange, in which the protected compiler expels the security shortcomings from the source code amid the application improvement stage, and a checking stage, in which the safe virtual machine screens strange conduct, for example, cradle flood assaults or entrusted input information dealing with while applications are running.

Blocking Abusive and Analysis of Tweets in Twitter Social Network Using NLP in Real-Time

Rahin Batcha.R[1], PremKumar.K[2], Danapaquiame.N[3],Arumugam.J[4],Saravanan.R[5]
[1,2,3,4]Dept of CSE,Sri Manakula Vinayagar Engineering College,Puducherry, India.
[5]Department of CSE, KL University,Andhra Pradesh, India
✉ :[1]batcha35@gmail.com,[2]hodcse@smvec.ac.in,[3]n.danapaquiame@gmail.com,
[4]arumugam_ja@yahoo.co.in,[5]svsaravana@kluniversity.in

Paper ID:CS-23

In day-to-day life, everyone need to share their thoughts, opinion, feelings and information etc., between their friends, relatives and society in fast and rapid speed of data exchange range rate for every seconds. But we cannot measure the originality of the message and message is having any false, positive or negative, castigating words or vulgar words what they share. In existing social network, Twitter Account the linguistic communication process is employed to move with the Human words and machine language to spot and to rate the comments shows whether or not the announce comment is positive or negative/neutral. During this paper, the work is predicated on sentimental analysis for rating and blocks the castigating words used by the twitter followers from their Bag of Words. Finally, Dashboard visualizing tools is employed to represent the restricted words from the announce comments of twitter followers**.**

Secure Data Process In Distributed Cloud Computing

Sharmila.P[1],Dr.Danapaquiame.N[2],R. Subhapriya[3],A. Janakiram[4],J. Amudhavel[5]
[1,2,3,4]Department of CSE, Sri Manakula Vinayagar Engg.College,
[5]Department of CSE, KL University, Andhra Pradesh, India
✉ : [1]Sharmiksd93@gmail.com, [2]n.danapaquiame@gmail.com,[3]subhaji.sach@gmail.com,
[4]janakiram.a1993@gmail.com, amudhavel@kluniversity.in

Paper ID:CS-25

Cloud is display for empowering administrations, clients requirement, convenient and on-request N/W access to a common pool of configurable processing assets. Cloud is for the most part transfer and download the information. Transferring information's with separate to the information transmissions. The different instruments and gathered at an exceptional scale. Such huge volume of information produced is alluded to as large information, which now are altering all parts of our life going from endeavour's to people, from science groups to governments, as they show incredible possibilities to enhance effectiveness of ventures and the personal satisfaction. To get nontrivial designs and get important data from enormous information, an essential issue is the way to legitimately put the gathered information by various clients to circulated mists. Proficiently dissect the gathered information to spare client costs in information stockpiling and preparing, especially the cost reserve funds of clients who share information. Thu sly, it needs the nearby joint efforts among the clients, by sharing and using the enormous information in appropriated mists because of the multifaceted nature and volume of huge information.

Frequent itemset using abundant data on hadoop clusters in big data

V.Balaji[1],N.Danapaquiame[2], R.Gayathri[3], E. Kodhai[4],G. Sambasivam[5]
[1,2,3,4]Department of CSE, Sri Manakula Vinayagar Engineering College,Pondicherry, India.
[5]Department of CSE, KL University, Andhra Pradesh.
✉: [1]vbbalajir@gmail.com, [2]n.danapaquiame@gmail.com, [3]gayu0717@gmail.com
[4]kodhaiej@gmail.com, [5]gsambu@kluniversity.in

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Big data mining faces lots of challenges within the huge information generation. The rule mining is an important place of studies within the field of information mining. Association rule mining set of rules isn't always sufficient to procedure massive data sets. Apriori algorithm has limitations just like the excessive I/O load and coffee overall performance. The FP-growth set of rules additionally has certain obstacles like less inner memory. Mining the frequent item set in the dynamic eventualities is a difficult mission. To overcome these issues a parallelized method the usage of the map reduce framework has been used. The mining set of rules has been applied the usage of the Hadoop clusters.

A Novel Clustering Algorithm For Big Data: K-Means -Fuzzy C Means

A.Manikandan[1], Danapaquiame.N[2] ,R. Priya[3], R. Rajadurai[4],J. Amudhavel[5]
[1,2,3,4]Department of CSE, Sri Manakula Vinayagar Engineering College,Pondicherry, India
[5]Department of CSE, KL University, Andhra Pradesh, India.
✉ : [1]maniraghu22@gmail.com,[2] n.danapaquiame@gmail.com, [3]preethukrishnan23@gmail.com,
[4]rajadurai@smvec.ac.in, [5]amudhavel@kluniversity.in

Paper ID:CS-28

Data mining is the infusion of data from a large network. It plays an important role in identifying the objects covered data patterns and gives a guessing information which applies for business. The function performed in data mining is classification class description, prediction, association, and clustering. More number of research works were carried out related to clustering in data mining in the past, but which has still issued. In this paper, KF algorithm has been proposed for data mining and clustering techniques. Clustering analysis is used to find clusters impacted in the data and KF is the combination of k-means and Fuzzy C means. The proposed KF algorithm gives more valuable performance than the existing in terms of measuring purity, entropy, recall and precision metrics.

A Journey From Virtual Infrastructure To Green Cloud Computing

P.Delfine[1], Nancy,B[2],Akoramurthy[3], Arthi.J[4],M. Devi[5]
[1,2,3,4,5]Dept. of CSE,IFET College of Engineering.
✉ : [1]delfinenancy@gmail.com, [3]akortheanchor@gmailcom

Paper ID : CS-30

In a cloud value chain, the major goal is to share the resources and services among the cloud partners, cloud vendors and the cloud service consumers which have to be enhanced. Recently the IT industry is growing rapidly to imbibe the concept of "Green". Apart from considering the cost perspective, it is concerned about making our earth a better to live by reducing waste and non-toxic materials. The power efficiency can be maintained by utilizing technologies like virtualization. Virtualization of data center components which make use of techniques like virtual provisioning, deduplication, virtual machine migration etc., has enriched the load balancing and recovery of servers on data centers. This paper presents an overview of the enabling technologies like virtualization and green computing that paved thewayfor the emergence "Green cloud computing".

OntoEPDS: Enhanced and Personalized Differential Semantic Algorithm incorporating Ontology driven Query Enrichment

Gerard Deepak[1],Zameer Gulzar[2]
[1]University Visvesvaraya College of Engineering,.
Department of Computer Application, Bangalore, India
[2]B S AbdurRahman Crescent University, Vandalur, Chennai.
✉ : [1]gerry.deepu@gmail.com

Paper ID: CS-33

The World Wide Web is flooded with information owing to the large number of Internet and Web users. The retrieval of relevant information from the Web is a huge challenge. It is highly cumbersome for the existing web search algorithms to retrieve web pages that are not only relevant to the query but also to the user. The existing Web page recommendation algorithms must be made semantic by adopting several semantic web techniques such that the recommendation is compliant to the standards of the Semantic Web. In this paper, the Differential Semantic Algorithm for web page recommendation is improved by encompassing techniques such as Ontology focused query enrichment and URL classification using Naïve Bayes classifier. A strategic Adaptive Pointwise Mutual Information methodology with varied heterogeneous thresholds is applied between newer entities in the proposed OntoEPDS algorithm. Personalization is induced by strategically applying Adaptive Pointwise Mutual Information to the URLs in the relevant URL list and the URLs in the user profile. OntoEPDS yields an overall accuracy of 0.92 which is the best in class accuracy that is achieved by such systems.

An Efficient Privacy-Preserving Search System Over Encrypted Cloud Data

R.Kandhan[1], R.Ananthan[2], P.Tamilselvan[3],Mr.D.Sathyamurthy[4]
[1,2,3]UG Scholar, B.E. Computer Science and Engineering.
[4]Assistant Professor, Dept. of CSE.MRK Institute of Technology, Kattumannarkoil.
✉: kandhanramalingam0@gmail.com,ananthanr01@gmail.com,tamilselvan.ts3@gmail.com

Paper ID: CS-35

As cloud computing becomes prevalent, more and more sensitive information are being centralized into the cloud. For the protection of data privacy, sensitive data usually have to be encrypted before outsourcing, which makes effective data utilization a very challenging task. Existing techniques are focusing on multi-keyword exact match or single keyword fuzzy search. Wang's scheme was only effective for a one letter mistake in keyword but was not effective for other common spelling mistake. We propose an efficient multi-keyword ranked search scheme based on wang et al's scheme. We develop a new method of keyword transformation based on the uni-gram, which will simultaneously improve the accuracy rate and ability to handle spelling mistakes.

Implement The Banking Security Based Key Exchage Protocal And Keystroke Authentication

R.Kulothungan[1],M.Manikandan[2],K.Murugananthan[3],P.Praveen[4],Mr.R.Vijayabhrathi[5]
[1,2,3,4]UG Scholar ,B.E. Computer Science and Engineering.
[5]Assistant Professor, Dept. of CSE. MRK Institute of Technology, Kattumannarkoli.
✉: vijayccn@gmail.com, kulothcharan007@gmail.com, mani95msk@gmail.com, murugak07@gmail.com, praveen1.cse@gmail.com

Paper ID CS: 36

An anonymous two factor AKE scheme improve the security of banking services. The Elliptic Curve Cryptography [ECC] based session key allocated the user device for the banking process. User login phase change the keystroke value and the second verification key dynamically on the server. This allows a user and a server to authenticate each other and generate session key for the subsequent communications

Energy Efficient Resource Management Schemes inCognitive Radio Sensor Networks: A Survey

[1]Thompson Stephan, [2]K. Suresh Joseph
Department of Computer Science, School of Engineering and Technology,
Pondicherry University,
✉:[1]thompsoncse@gmail.com, [2]ksjoseph.csc@gmail.com

Paper ID: CS-41

The ISM band is turning out to be heavily utilized owing to vast crowding of WirelessSensor Nodes (WSNs) in a specific geographical location and has lead to the insufficiency ofspectrum resources. A well-defined solution for solving the issue of channel overload isCognitive Radio (CR). Existing WSN applications can make use of such spectrum accesstechniques that works dynamically to enhance the overall performance of the system. However,hardware and energy constraints of sensor nodes impose difficulties for the achievement ofpossible benefits of fusing CR intelligence in WSNs. Enhancing the lifetime of the sensor nodescould be accomplished by designing an energy efficient CRSN that efficiently manages theresidual energy. This paper surveys the different existing techniques to reduce the consumptionof the limited energy of sensor nodes in CRSN environment and discuss the energy efficientschemes in three broad classes of resource allocation in CRSN. We discuss in detail, the meritsand demerits of the existing schemes, possible application areas and providing an insight into the future research directions for building energy conservation protocols for more sophisticatedCRSN.

A Novel Approach For Sybil Detection In Online Social Network

J.Jayabharathy,R.Subramaniyan Venkatraman,S.Ezhilan
Department of Computer Scienceand Engineering Pondicherry Engineering College
✉:bharathyraja@pec.edu,subuth52@pec.edu,ezhilan.td38@pec.edu

Paper ID: CS-45

In the present generation, the social life of most of the citizenry has become affiliated with the online social nets. These sites have made a drastic change in the way we pursue our social life. With their rapid growth, the problems like fake profiles (Sybil) has grown to a greater extent. The fake profile has developed to a greater extent because of accepting an unknown request or sending a request to an unidentified individual. The number of fake profiles has increased rapidly and research survey of different researchers shows that 20% to 40% of the user profiles are fake. As the users on these Online Social Network grows, fake profiles have rapidly increased. In order to detect and minimize the number of fake profiles on Facebook very few techniques do exist. The main aim of this research work is to detect the Sybil's. In order to solve this issue we propose a novel approach to detect the Sybil based on user behaviour and usage behaviour. Our paper uses a classification technique like Support Vector Machine and Naïve Bayes algorithm. The outcome of this work is to classify the profiles into fake or genuine or unknown.

Taxonomy of Co-location pattern mining techniques

S.Sharmiladevi[1], S.Siva Sathya [2], R.Sakthipriya [3] ,Naveen Kumar [4]
[1,2,3,4]Department of Computer Science and Engineering, Pondicherry University & Puducherry
✉:[1]sharmiladevi94@gmail.com,[2]ssivasathya@gmail.com,[3]r.shakthi94@gmail.com,
[4]nav.bharti@gmail.com

Paper ID: CS-47

Spatial database is a database that is enhanced to store and access data that defines a geographic space. Spatial data mining has become an evolving topic in research due to the emerging need. Co-location pattern mining is a fascinating issue in spatial data mining which finds the subsets of elements whose occurrences are often found together in close geographic proximity [1]. There are various types of algorithms to find the co-location patterns in spatial database. This paper presents a hierarchical taxonomy of available algorithms based on a survey made on the various co-location methods and algorithms available.

Spatial Data Mining Using Clustering Techniques

B.TarakaSravani[1] ,S.Srineha[2], G. Tejaswini[3] ,K.Karan Raj[4] , M.V.B.T.Santhi[5]
[1,2,3,4,5] Department of Computer Science and Engineering, K L University, Green Fields, Vaddeswaram, Guntur, Andhra Pradesh, India.
✉ : [1]sravanibt123@gmail.com

Paper ID: CS-48

There is a wide variety of clustering techniques accessible in our present day which are utilized solely with the end goal of spatial data mining. Some of them incorporate K-means, Clarans, DBscan and many more. Likewise, there is distributed dynamic clustering algorithm which performs clustering at local sites and by utilizing the local clusters acquired at these sites it performs aggregation. Local clusters are obtained at every local site and these are transferred to global site for aggregation. The aggregation phase incorporates merging of local clusters acquired from local sites and joining them to form global clusters. The aggregation phase is exceptionally perplexing using the existing algorithms. The aggregation phase is done after parallel phase in which a contour algorithm is run to discover the boundaries of the local clusters obtained. The local clusters are piled to frame global clusters. Be that as it may, the aggregation phase is exceptionally complex. In this paper the algorithm is altered to disentangle the aggregation and furthermore compared with traditional clustering algorithms.

Impact on Various Selection Operators in Elastic Elitism Genetic Algorithm for Solving Energy Consumption Scheduling in Smart Home

Ranjini. A[1], Zoraida.B.S.E [2]

[1]Research Scholar, [2]Assistant Professor, School of Computer Science, Engineering & Applications, Bharathidasan University, India

✉:[1]ranjini.anbu@gmail.com

Paper ID: CS-50

With the recent technological innovations, the electrical industry has encountered many changes and thereby the earlier electrical grid has evolved into more powerful and intellectual electrical grid known as 'Smart Grid'. However, due to the highly dynamic electricity demand and generation, it is very complicated to assure the reliability of Smart Grid. Hence, the energy management in Smart Grid has emerged as an important research problem in recent years. In this paper, the energy consumption scheduling problem of smart home has been addressed and the Elastic Elitism Genetic Algorithm is proposed for solving the problem. From the results, it is evident that the proposed algorithm outperforms the existing Simple Genetic Algorithm. Further, the effectiveness of various selection operators while applying the Elastic Elitism Genetic Algorithm is also analyzed. And the results proved that Stochastic Universal Sampling Selection provides better results than the Roulette Wheel Selection and Binary Tournament Selection operators.

Telemedicine Technology using internet communication

Saravanan.S[1], Dr.Sudhakar.P[2]
[1,2]Annamalai University , Annamalai nagar, Tamil nadu,India.
[1]s.saravanan13021973@gmail.com

Paper ID: CS-51

Information and communications Technology (ICT) is an umbrella term that includes Telemedicine communication devices for Health care application and services to patient usng television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various Tele medical services such as Tele-consultation, Telediagnosis, Teltreatment, TeleEducation, TeleTraining, Telemonitoring, TeleRadiology,Tele-psychiatry, Tele-pathology, Tele-surgery, Teledermatology, Telecardiology, Teleradiology, and Tele-home monitoring and Telemedicine applications[1-4,6]. Telemedicine provide clinical health care from distance use of Telecommunication and information Technology [2,5]. In early year telegraph used for telemedicine, then Telemedicine developed along the way of dial phone, block and white television, computer, mobile. The first generation established by cellular network for Telemedicine only used voice communication from patient of Doctor to specialist doctor and voice communication was poor quality. The second Generation established internet connection used transmission of Text message and Picture images and video stream of Bio signals like ECG, EMG, Pulse signal, Respiration from patient to Doctor but the speed is not enough for video conferencing, X-Rays image, CT scan image Transmission from one location to another location. 2G internet speed creates delay transmission in Telemedicine systems and unable to handle complex data such as Videos [7]. The Third Generation established internet connection supports bio-signal transmission and image, audio and video transmission. The 3G internet connection more expensive 3G Phones need high bandwidth requirement. Then the fourth Generation established internet connection supports bio signal, images and video conferencing. 4G and 5G Technology providing high bandwidth internet speed support interactive Multimedia , voice, streaming video, Newspapers, watch T.V programs with the clarity as to that of an HD Quality, Faster medical data transmission that of the previous generations. The Number of internet user increase every day and creates delays in Telemedicine system. This paper explains how to increase internet speed in Telemedicine system.

Sentiment Analysis On Micro-blogs

[1]S. Prasath Sivasubramanian [2]N. Suganya
[1]Assistant Professor of Computer Science , [2]PG Student of Computer Science
Kanchi Mamunivar Centre for Post Graduate Studies (Autonomous), Lawspet, Puducherry
✉:[1]mail2prasath@gmail.com,[2]sugan16695@gmail.com

Paper ID: CS-52

Online Micro-blogging used for finding opinions about certain entity in very short messages. Millions of users share their opinions about different content. Some of the micro-blog names are twitter, facebook, etc,. twitter is one of the most widely used micro-blogging site where people share their opinions in the form of tweets. Twitter is rich source for sentiment analysis. Sentiment analysis is a process of analyzing polarity of those opinions and categorize them into positive, negative and neutral. Here, SVM and lexicon based approaches are used to find the sentiment polarity of the given text.

Intrusion Detection System in Cloud Computing Using Mapreduce

V. Vijayalakshmi[1], V. Vinoth[2], V. Bhuvaneshwari[3]
Senior Assistant Professor, PG Student, PG Student
Department of CSE, Christ College of Engineering and Technology, Puducherry-605010
✉:vivenan09@gmail.com, vvinoth777be@gmail.com, Bhuvi.esswar90@gmail.com

Paper ID: CS-54

Cloud computing involves delivering hosted services over the internet. These services are broadly divided into three categories: infrastructure-as-a-service, platform-as-aserviceand software-as-a-service. Cloud computing security issues are important issue for users to access the cloud resources. Intrusion detection system is a type of security management system for computers and networks. Mapreduce has become increasingly popular as a powerful parallel data processing model. To deploy mapreduce as a data processing service over open system such as cloud computing we must provide necessary security mechanisms. This system uses an approach called hirschberg algorithm, divide and conquer approach for measuring the identity between two sequences in order to reduce time and space complexity. The proposed system is able to stop the sql injection attacks and provide rights to get access the cloud resources.

A Review Of Comparative Opinion Classification In Social Media

P.Salini[1], V.Indhuja[2]
[1]Professor, Department of Computer Sci. Eng., PEC, Puducherry
[2]Student, Department of Computer Sci. Eng., PEC, Puducherry
✉:[1]salini@pec.edu, [2]indhu2530@gmail.com

Paper ID: CS-58

Opinion Mining delineates as a group of information retrieval techniques to efficiently pledge with a sentiment expressed in a document. In this paper mainly focus on classifying the twitter reviews based on user's opinion. Sentiment analysis is used to analyze the attitude of each user's opinion on the various texts, in which experiments were conducted on a Twitter data set to classify the user review based on a classification technique. In this method, we have analyzed the classification of content, link and emoticon classifiers and their performance of content classifier achieve lower accuracy due to an informal writing style and in a link-based classifier is tougher to select a large set of data. So we proposed to compare the results of those classification techniques. The consummation may also help the business companies to adopt our approach in real world systems to gather forthcoming customers in order to achieve higher accuracy for decision making.

Route Maintenance Using Tabu Search And Priority Scheduling In Wireless Mesh Networks

Mrs.G.REVATHY[1],Dr.K.SELVAKUMAR[2]

[1]Research Scholar, [2] Associate Professor, AnnamalaiUniversity,India

✉: [1]revathyjayabaskar@gmail.com

Paper ID:CS-66

Wireless mesh networks(WMN) have been anticipated to be the decisiveelucidation for future generation wireless networking applications because of its advantage of multi radio and multichannel which makes it act uponhealthier than wireless LANs. In this paper we categorize the exact path using tabu search optimization hence we can steer clear of delay. After minimizing the delay we propose modifiedQCCA (MQCAA) algorithm for priority scheduling to schedule data flows under QoS constraints which has different priority levels

Modelling an Predictive Analytics Methodology for Forecasting Rice Variety and Quality on Yield on Farm and Farming Attributes Using Bigdata

Senthil Vadivu . S[1], Dr. Prasanna Devi .S[2], Vinu Kiran .S[3], Manivannan .S[4]

[1]Research Scholar, MS University, Tirunelveli, India

[2]Head, Computer Science & Department, Apollo Engineering College, Chennai, India

[3]Data Analyst, Business Intelligence-Center of Excellence, HTC Global, Chennai, India

[4]Deputy Dean, Dr.MGR Educational & Research Institute University, Chennai, India

✉:[1]senthumukund@gmail.com[2]prasannasiva11@gmail.com[3]vinukiran999@gmail.com

[4]manivannan@gmail.com

Paper ID: CS-69

In this paper, we have analyzed the attributes of farm land and farming methods and applied predictive analytics methodology over huge data set to forecast the outcome of the commodity. We have took "Rice" as a case study since we had done some geological survey work on Rice fields in and around Kanchipuram, India. The purpose of this study is to collect information on the current and foreseen land use practices with particular emphasis on the role of cropping/farming systems to predict the outcome of the crop quality (Rice).

Fidoop-Dp: Data Partitioning In Frequent Itemset Mining On Hadoop Clusters

[1]P.Shunmugapriya,[2]R.Maragatham
Dean of school of computing,
PG Scholar, Department of CSE, Christ Institute of Technology, Puducherry
✉:[1]pshunmugapriya@gmail.com, [2]roja.maragatham@gmail.com

Paper ID: CS-79

Traditional parallel algorithms for mining frequent itemsets aim to balance load by equally partitioning data among a group of computing nodes. We start this study by discovering a serious performance problem of the existing parallel Frequent Itemset Mining algorithms. Given a large dataset, data partitioning strategies in the existing solutions suffer high communication and mining overhead induced by redundant transactions transmitted among computing nodes. We address this problem by developing a data partitioning approach called FiDoop-DP using the MapReduce programming model. The overarching goal of FiDoop-DP is to boost the performance of parallel Frequent Itemset Mining on Hadoop clusters. At the heart of FiDoop-DP is the Voronoi diagram-based data partitioning technique, which exploits correlations among transactions. Incorporating the similarity metric and the Locality-Sensitive Hashing technique, FiDoop-DP places highly similar transactions into a data partition to improve locality without creating an excessive number of redundant transactions. We implement FiDoop-DP on a 24-node Hadoop cluster, driven by a wide range of datasets created by IBM Quest Market-Basket Synthetic Data Generator. Experimental results reveal that FiDoop-DP is conducive to reducing network and computing loads by the virtue of eliminating redundant transactions on Hadoop nodes. FiDoop-DP significantly improves the performance of the existing parallel frequent-pattern scheme by up to 31% with an average of 18%.

Palm based Geometry for person identification and verification

Kanmani.S[1], Vijayalakshmy.C.N[2], Kanimozhi.G[3], Balasubathra.L[4], Malathy.K[5]
[1]Professor, [2,3,4,5]Student, Information Technology,Pondicherry Engineering College.
✉:[1]kanmani@pec.edu,[2]vijayalakshmycn@pec.edu,[3]kanimozhig@pec.edu,[4]balasubhathral@pec.edu
[5] malathyk@pec.edu

Paper ID: IT-01

In this biometric system, palm print, palm phalanges print which is existing and palm geometry is the new contribution in our work. In palm print and palm phalanges, the input image was taken and it is processed for verification. In Palm geometry, from the input image the features like palm height and width is taken. So that the storage space is reduced by taking data related information. Here, computational time is also reduced. The input images are taken with high resolution camera device. At last, we use random forest to validate the matching stage. The results proved the validity of our proposed modality.

A Survey on Issues in Cloud Data Security

Dr.P.Maragathavalli[1], K.Suganthi[2], D.Pavithra[3], S.Rajathi[4] , R.Sabitha[5]
[1]Assistant Professor/IT, Pondicherry Engineering College
[2]Student Member/IT, Pondicherry Engineering College
✉ : [1]marapriya@pec.edu,[2]suganthik@pec.edu,[3]pavithrad@pec.edu,[4]rajathis@pec.edu,
[5]sabithar@pec.edu

Paper ID: IT-02

Cloud consists of large number of servers. Tremendous amount of information is stored in cloud. There are several issues associated with cloud computing such as storage, scalability and security challenges like confidentiality, integrity and privacy. Ensuring security to the cloud data is an important issue. Considering the security and privacy within the cloud there are certain threats to the user's sensitive on cloud storage.While moving towards the concept of on-demand service, resource pooling, shifting everything on the distributive environment, security is the major obstacle for this new dreamed vision of computing capability.This paper analyzes various security issues in cloud such as confidentiality, integrity, availability and authorization.

Predictive Analytics for Traffic Flow Forecasting Using Enhanced K-Nearest Neighbours Algorithm

Dr.Santhi Baskaran[1], S.LakshmiVaishnavi[2], K.Manisha Selva[3], K.Keerthana[4], K.Revathi[5]
[1]Professor/IT, Pondicherry Engineering College
[2,3,4,5]Student Member/IT, Pondicherry Engineering College
✉:
[1]santhibaskaran@pec.edu,[2]lakshmivaishnavi@pec.edu,[3]manishaselvak@pec.edu,[4]keerthanak@pec.edu[5]revathikumar@pec.edu.

Paper ID: IT-04

Traffic flow forecasting plays an important role in route guidance and traffic management. Traffic flow prediction is an important precondition to lessen traffic congestion in large-scale urban areas. k-Nearest Neighbour (KNN) is one of the most important methods in traffic flow forecasting, but some disadvantages prevent the widespread application. For traffic flow prediction, the proposed work is concentrated on reducing the time complexity as well as improving the accuracy of prediction. By using the clustering mechanism, the time complexity of the algorithm is reduced. By twofold clustering, the data to be analysed by the algorithm is segregated and hence the accuracy is improved. For improving the accuracy of prediction we use a multivariate approach. We also provide a route guidance with traffic flow, which adds novelty to the concept. To implement the concept, we use publicly available London traffic flow dataset. The concept can be further investigated by considering real-time traffic flow data.

Image Encryption Using Dna Cryptography And Cellular Automata

Dr.S.Saraswathi[1],Ch.Rushmitha[2],S.Dhivya@Thirupurasundari[3],S.Nandhini Devi[4],P.Revathi[5]
[1] Professor,Department of Information Technology,Pondicherry Engineering College,
[2,3,4,5] Student,Department of Information Technology,Pondicherry Engineering College,
Kalapet, Puducherry.
✉: [1]s wathi@pec.edu,[2]ch.rushmitha@gmail.com,[3]dhivyagaya3@gmail.com,
[4]snandhinidevi20@gmail.com,[5]revathiparthiban@gmail.com.

Paper ID: IT-09

An image encryption scheme based on DNA cryptography and Cellular Automaton is presented. DNA Cryptography is a new technique in which DNA is used as an Information carrier. Cellular Automata in which patterns generally stabilize into homogeneity, in which patterns evolve into mostly stable or oscillating structures. In Cellular Automata, patterns evolve in a seemingly chaotic fashion, in which patterns become extremely complex and may last for a long time, with stable local structures. . These qualities are most impressive in these technology which help us to provide a highly secured security system for the users. There are limitations in most of the encryption techniques based on the cellular automata. To overcome this problem, we propose a DNA cryptography algorithm with cellular automata to make the system work in a more secured manner. First, a partially encrypted image is obtained by encrypting the pixels with DNA sequence such as adenine, guanine, cytosine, and thymine. At this stage the image is prone to attack. So to make the system more secure second level encryption is done. This is done by using the rules of Cellular Automata to get the more secure encrypted image.

A Survey on Frequent Itemset Mining

Nithya.M[1], Kanmani.S[2]
[1]M.Tech, Student, Information Technology,[2]Professor, Information Technology
[1,2]Pondicherry Engineering College,Puducherry, India.

PAPER ID:IT-11

Frequent itemset mining is the technique used mostly in field of data mining like finance, health care system. We are focusing on methodologies for extracting the useful knowledge from given data by using frequent itemset mining. Most important use of FIM is customer segmentation in marketing, shopping cart analyzes management relationship, web usage mining, and player tracking and so on. The time required for generating frequent itemsets plays an important role. Some algorithms like Apriori, Eclat, FP-Growth are designed, considering only the time factor. Our study includes depth analysis of algorithms and discusses some problems of generating frequent itemsets from the algorithm. We have explored the unifying feature among the internal working of various mining algorithms. The comparative study of algorithms includes aspects like different support values, size of transactions and different datasets.

A Comparitive Study Of Dynamic Vehicle Routing Problem

[1]Indhumadhi.K, [2]Kanmani.S
[1]M.tech, Student, Information Technology
[2]Professor, Information Technology
[1,2]Pondicherry Engineering College,Puducherry, India
✉:[1]indhucaran@gmail.com, [2]kanmani@pec.edu

Paper ID: IT-12

The optimization problem plays a major role in real world. Generally optimization problem are more useful for real world application and they are mostly applied to Dynamic environment. Vehicle Routing Problem is a complex combinatorial optimization problem and it is difficult to find an optimal solution consisting of a set of routes for vehicle whose total cost is minimum. The evolutionary algorithm and swarm intelligence play a vital role to solve optimization problem. The researcher usually focused on static environment but most of application deal with dynamic environment and they can be solved by using nature inspired meta heuristics algorithm. The evolutionary algorithm is a population based algorithm which is used to effectively solve optimization problem such as Vehicle Routing Problem and Dynamic Vehicle Routing Problem(DVRP). The main focus of paper is to provide study of Dynamic Vehicle Routing Problem.

A Survey On Occluded Image Based Captcha For Online Authentication

[1]M. Tamizh, [2]Dr. M. Ezhilarasan
[1]M. Tech, Student, [2]Professor, Information Technology
[1,2]Pondicherry Engineering College,
✉:[1]tamizhmurugan23@gmail.com

Paper ID: IT-13

CAPTCHA is a security mechanism that distinguishes human from malicious computer. Text based Captcha ask the user to identify distorted text. It brings complexity for the user to recognize the text. In order to overcome such difficulty Image based Captcha is developed. Image based Captcha has another type of Captcha such as Confident Captcha that asks the users to click on all images that gives a specific type of symbols such as cats or birds. Such kind of image based Captcha faces difficulty, since it could be easily identified by the unauthenticated user. The proposed system focus on providing authentication by using Occluded Image based Captcha. Occlusion is applied on images. Occlusion used is affine transformation. Affine transformation is used for providing complexity to user. Transformations such as Rotation, Translation, Scaling and Shearing will be applied to the images. Rotation is used for rotating the image to certain angle. Translation will translate the shape of an image. Shearing slants the shape of an image. Scaling will changes the size of an image. The user has to select the image during enrollment and the details will be stored into database. During login the user has to select the shuffled image that is selected in the enrollment. The selected image will be compared with database. If it matches, the user is authenticated. If the match is not detected, the user will not be authenticated. To bring complexity in authentication OTP is generated and sent to registered ID.

Survey On Lossless Compression And Encryption Methods For Multi Biometric Traits

Ezhilarasan.M
[1]M.Tech Student, Information Technology,Pondicherry Engineering College,
✉: [1]Priyamayaraman93@gmail.com

Paper ID: IT-14

This paper concentrates on comparative studying of existing lossless compression methods for biometric traits.The main contribution of this work is to provide a new approach which exploits the structura1 properties of fingerprint images to achieve higher lossless compressionratios and good qua1ity images. A natural result of this approach is that the original structural properties such asthe number arid relative locations of ridge endings and bifurcations are well preserved i.e., they are not affected byre construction quality. They can be easily extracted from Compressed data without reconstruction. Ten fingerprints and two iris images are been captured fromtheirrespective devices. Fingerprints are been preprocessed and then subjected to feature extraction process. In feature extraction process unwanted parts are removed. This process involvesgray scale conversion, Resize, Histogram Equalization, canny edge detection. Compression is done to the outputobtained from feature extraction module. Encryption is done to provide higher level security as data are used forauthentication purpose.

An Architectural Framework for Scheduling and executing large scientific workflows in cloud environment

[1]S. Balamurugan, [2]S. Saraswathi
[1]Assistant Professor, Department of Information Technology,
Perunthalaivar Kamarajar Insitute of Engineering and Technology(PKIET), Karaikal, India.
[2]Professor, Department of Information Technology,
Pondicherry Engineering College(PEC), Puducherry, India.
✉ :[1]balaprof@gmail.com,[2]swathi@gmail.com

Paper ID IT-15

Execution of scientific workflows in a Cloud environment is an evolving paradigm for modeling and formalize scientific applications to speed up the scientific discovering [1] process. These days' cloud computing is getting more popular in the field of data science with which applications which involve large amount of scientific data in the pattern of scientific workflows are scheduled and executed in cloud resources. Scientists are working on large datas and trying various methods to deal with analyzing the large volume of datas. The popular examples for scientific applications are cybershake, montage, Epigenomics etc. Scheduling the execution of such scientific workflows is a major issue in the area of data science because it involves various essential supporting tasks such as management of data and task dependencies, task scheduling and execution, provenance tracking etc., to scientific applications. So, it is very important to design a scientific workflow management system for the cloud environment to overwhelm the large set of scientific data and the complexity involved in analyzing the scientific data. In this paper we proposed a referral architecture for managing the execution of scientific workflows into cloud platform which can be used as a reference model for developing application which schedules the workflow on the cloud.

A Bigdata Analytic Approach For Finding Instructor's Performance Based On Students Outcome

Dr.M.S. Anbarasi[1], M.Mohana[2], S.JansyRani[3], V.DivyaPriya[4] , M.Aysha[5]
[1]Assistant Professor,[2]Student Member /IT, Pondicherry Engineering College
✉ :[1]anbarasims@pec.edu,[2]mohanam@pec.edu,[3]mejansysaran@gmail.com,
[4]divyapriyav@pec.edu,[5]aysham@pec.edu.

Paper ID: IT-16

In education institutions, analyzing the student dataset is performed using the data mining techniques. Based on the academic marks of the student, predicting the tutor performance will be helpful for the institutions to develop their education system. The existing methodologies are mainly performed using the decision tree algorithm which takes more time. In this paper, predicting the mentor performance using K-means algorithm with the MapReduce programming model in an efficient way. The experimental setup is carried out in Hadoop framework with MapReduce programming model. The result analysis is evaluated for accuracy, precision, recall, specificity by comparing with the existing classification schemes. Our proposed technique improvises the prediction accuracy and reduces the time.

Hands-Free Smartphone For Physically Challenged

P.Nilavarasan[1], B.Sathishkumar[2]
Department of Information Technology,
Pondicherry Engineering College, Puducherry, India
✉:nilavarasan77@gmail.com[1],sathishbala345@gmail.com[2]

Paper ID:IT-17

Disability is one of the major problems of the contemporary world. There are new technical means, methods of work and education for people with disabilities, making it possible to use a smart phone. The aim of this work is to allow people with disabilities to use android phones by simple eye gestures and speech input. The system combines techniques from image processing, computer vision and pattern recognition to detect gestures in the video recorded using the built in front-facing camera and also speech recognition and processing techniques. The existing gesture recognition system runs entirely on an Android based mobilephone without the need for any additional equipment. The system was implemented using the OpenCV computer vision library. Input to the system is a raw video stream from the device's front-facing camera. Because accurate point of- gaze estimation is not required for gesture recognition, these images are scaled down to reduce processing time and thus increase system performance.

Health Status of the Human Monitored through Wearable Device

R. Suresh[1], B. Aravintharaj[2], R. Rajaprakash[3], S.Parthiban[4]
[1]Associate Professor, [234]UG Students
Department of Information Technology, Sri Manakula Vinayagar Engineering College, Puducherry
✉:sureshramanujam78@gmail.com,aravindraj644@gmail.com,rajaraak4@gmail.com,
parthivijay95@gmail.com

Paper ID: IT-19

Health is not valued till sickness comes, this is the factor by which we humans have developed technology to sustain our self from any unknown ailments. Machinery plays a vital role in aiding us maintaining our health. Technology has developed drastically where small wearable devices are captivating enough to monitor our health. Thus, IOT and healthcare is about to become more human friendlier in the near future. When health becomes a fear factor at some crucial moment calling for rescue is the question to be answered. Our work deals with summarization of how wearable device helpful in monitoring human activities and also gives report about various challenges in existing solution.

Detection Of Cyber Attack Using Multi-Agents With Computational Intelligence

V. Govindasamy[1], J.Anitha[2], R.Kiruthika[2], P. Marc Dasiry[2],M.Pruthvi[2]
[1]Assistant Professor/IT, Pondicherry Engineering College
[2]Student Member/IT, Pondicherry Engineering College
✉:[1]gopu@pec.edu[2]anithaj@pec.edu[3]kiruthikar@gmail.com[4]marcdasiryp@pec.edu,
[5]pruthvi.pec24@gmail.com

Paper ID: IT-20

Cyber infrastructures are highly vulnerable to intrusions and other threats. The speed of the processes and the amount of data to be used in defending the cyber space cannot be handled by humans without considerable automation. It is obvious that defense against intelligent cyber weapons can be achieved by intelligent software. However, it is difficult to develop software with conventional fixed algorithms for effectively defending against the evolving attacks in networks. Hence, there is a need for more sophisticated cyber defense systems that need to be flexible, adaptable and able to detect a wide variety of threats and make intelligent real-time decisions. This situation can be handled by applying methods of Artificial Intelligence (AI) that provide flexibility and learning capability to software. The proposed work in this paper provides an efficient model with AI by combining intelligent cyber sensor agents which will detect, evaluate and respond to cyber-attacks in a timely manner and allow the groups of agents to make decisions.

Attack Awareness and Detection in Optical Networks using Zone based Hierarchial Link State Routing and Linear Network Coding

Dr.P.Boobalan[1], S.Salmon Raj[2], Rohit Peri[3], P.Praveen Kumar[4]
[1] Associate Professor/IT, Pondicherry Engineering College
[2,3,4]Student Member/IT, Pondicherry Engineering College
✉: [1]boobalanp@pec.edu,[2]salmonraj1713@gmail.com,[3]rohitperi1995@gmail.com,
[4]ppravenn08@gmail.com.

Paper ID: IT-21

The use of optical networks has become increasingly important in supporting the rapidly growing and evolving global network traffic intensity in a cost-efficient manner. Due to which maintenance of security in optical network becomes a major priority. Due to the high data rates in optical networks which cause the physical-layer attacks. This attack can lead to financial losses to the clients or cause network-wide service disruption, possibly leading to huge data and revenue losses for network operators. Attacks which aim towards disruption of service generally involve insertion of malicious signals or power jamming which can propagate along configured connections causing serious damage. Conventional network survivability approach definitely has led to the detection of malicious node but not helped in it's removal .In this paper we have taken the characteristics of attack groups into consideration and make modifications to the dedicated path protection scheme by incorporating the concept of Zone Based Hierarchical Link State(ZHLS) routing with digital signature where zone network topology was established which help in detection of malicious node along the discovered path remove it and reconstructs the path. Further there was no occurrence of network traffic. To further strengthen the impact of reliability in optical transmission the concept of Linear Network Coding(LNC) was incorporated.

Multilayaered Security Framework For Cloud Data Based On Privacy

V.Geetha[1], D.Indhumathi[2]
[1]Associate Professor, Pondicherry Engineering College, Puducherry-605014, India
[2]PG student, Pondicherry Engineering College, Puducherry-605014, India
✉:[1]vgeetha@pec.edu, [2]mathi01993@gmail.com

PAPER ID:IT-22

Cloud computing is one of the prominent technology and it is a rapid growth with minimum investment over the internet. Providing the data in cloud both consumer level and provider level follow the common encryption method but there are techniques to access the encryption data .Tackle the problem of security, data security is one of the major issues in cloud. The continuous increase of computational power has produced an overwhelming flow of data framework is a conceptual structure mainly focuses on serve as support. So multi-layered data security is provided. Several framework and layers are implemented based on the type of data. Our paper mainly target on data security in cloud by multi-layered approach which results in reduce in computation time, speed of processing be increased, Efficiency be increased .Types of framework are: private cloud framework, public cloud framework, hybrid cloud framework. Cloud environment has large of data to transfer and storage. Security issues in cloud are data breaches, hijacking of accounts, insiders threat, malware injection, abuse of cloud service, insecure API's,deniel of service attacks, insufficient due to diligence, shared vulnerabilities ,data loss.

Secure Data Transmission With Multiple Key Management In Cloud Environment

Dr. Santhi Baskaran[1], A. Isaiarasi[2]

[1]Professor[2]PG Student, Information Technology

[1],[2] Pondicherry Engineering College,

✉: [1]santhibaskaran@pec.edu[2]isaiarasi04@gmail.com

Paper ID: IT-23

In cloud computing Off-Site data storage is an application that relieves the customers from focusing on data storage in computing organization. In cloud, outsourcing data to multiple party organizations control leads to serious security concerns. Data leakage can ascend due to attacks caused by unauthorized users. However, security is a huge concern for cloud users. In existing work File Assured Deletion (FADE) technique was used for file removal from cloud storage when user requested for deletion. Therefore, it fell short on serious security concerns of keys and authentication of linking parties. To overcome the problem of man in the middle attack between Key Manager and client, we propose an algorithm to enhance Data Security for Cloud Environment with Semi-Trusted Third Party. This data security system that provides key management, access control and file confident deletion. This delivers security for cloud data storage through a proper key management system with multiple key managers using Shamir's key sharing technique. Also the policy file encryption is done using Elgamal algorithm for secure data transmission.

Customized Travel Recommendation System using Big Data Analytics

Dr.Santhi Baskaran[1], L.Bhuvaneswari[2]

[1] Professor/IT & Pondicherry Engineering College

[2]Student member/IT & Pondicherry Engineering College

✉: [1]santhibaskaran@pec.edu,[2]bhuvvijos93@gmail.com

Paper ID: IT-24

Traveling is a most important part of people lives. Travel based recommendation and journey scheduling are challenging tasks because of various interest favorites and trip limitations such as restriction of time, source and destination points for traveler's. The travel recommendation are used to extract a large amount of information from the social media. The existing work of travel recommendation has focused on personalized recommendation. Unlike most existing travel recommendation , our perspective is not only personalized to traveler interest but also gives the hotel recommendation for the visitors. The top K query algorithm is suggested for the hotels recommendation, also provides an optimized path in an efficient way. Hence, this method addresses the customized travel recommendation problem based on travel user and similar city forecasting. The top ranked routes are optimized and gives an efficient route to the travelers. Our work provides an efficient route prediction compared with the existing system

A Survey On Recent Techniques In Medical Image Processing

V.Geetha[1],K.Sindhuja[2]
[1]Associate Professor, Pondicherry Engineering College, Puducherry-605014, India
[2]PG student, Pondicherry Engineering College, Puducherry-605014, India
✉:[1]vgeetha@pec.edu[2]sindhu.gowth@gmail.com

Paper ID: IT-25

Medicalimage processing requires high accuracy and real-time response. Several image processing techniques are available in the literature for processing medical images. Medical image processing is a complex task and involves a number of phases. In each phase, several solutions are provided to improve the performance or response time. This paper provides a survey of various image processing techniques adopted at each phase and provides a comparative study.

EAMCA & EMD Integrated formulating PCA-RMD Detecting DDos attacks in Big Data

M.Sangeetha[1], Dr.G.Vadivu[2]
[1]Assistant Professor, [2]Professor and Head,Department of Information TechnologySRM University, Kattankulathur-603203

Paper ID: IT-30

The advent of rapid development and wide application of cloud computing, the applications of Big data on clouds necessitates the process of handling massive amount of data sets that are distributed among the diversely located data center Clouds. Meanwhile, number of recent innovations on big data processing techniques have emerged for handling data in federated cloud applications. In spite of recent developments, it introduces several new issues and challenges as the complexity and growth of big data on cloud traffic dramatically increased. Thus the need for an efficient and reliable detection scheme that possess the capability of discriminating legitimate cloud traffic from illegitimate cloud traffic becomes indispensable. A Principal Component Analysis integrated with Reduction in Multi-variate Data (PCA-RMD) that focusses on the classification of malicious traffic from legitimate traffic flows in Big data. In PCA-RMD, initially the dimension of feature characteristics of the big data traffic information is phenomenally reduced. Then the reduced principal components are investigated through correlation. The correction analysis of the traffic is discriminated based on EAMCA (Enhanced and Adaptive and Multivariate Correlation Analysis) and Enhanced Mahalanobis distance (EMD). The performance investigation of the experimental results confirm that PCA-RMD is potential in achieving higher precision rate and it is also found capable of facilitating True Negative rate of 100% in for detection. It is also inferred that the CPU time and Memory consumption of PCA-RMD is superior to EAMCA and AMCA.

H6 Inverter For Solar Power Generation With Automatic Tracking System

Anisha.E.J[1], E.Parkavi [2], S.Aarthi[3] , P.Komalavalli [4]
[1,2,3,4]UG Scholar , Electrical and Electronics Department ,K.Ramakrishnan college of technology,Trichy.
✉:[1]anisha.e.j@gmail.com,[2]kavieasme95@gmail.com,[3]spideraarthi15@gmail.com,
[4]kavikomli@gmail.com

PAPER ID:EE-03

Solar power is one of the most powerful renewable energy. Renewable energy is rapidly gaining importance an alternative energy resource since fossil fuel are depleting and their prices are fluctuating. The unique feature of the proposed method is the use of H6 type inverters instead of PWM inverters which eliminates the common mode voltage error thus reducing the transient oscillations, noise, etc.The microcontroller(PIC16F887A) is provided with tracking panel with automatic control, stepper motor and driver circuit.The microcontroller is used to control the solar panel. Opto isolation circuit is used to protect microcontroller and control circuit from power circuit. Isolated gate driver circuit and signal conditioning circuit are used for amplification and other purpose.

A Survey Overview of Internet of Things: Applications and Security

V. Parthasaradi[1], P. Kailasapathi [2]
[1] Research Scholar, [2]Professor & Head
[1]Department of Electrical and Electronic Engineering, Annamalai University
[2]Department of Electronics and Communication Engineering, Annamalai University
✉:[1]Saradi.66@gmail.com, [2]Kailasapathy1958@gmail.com

Paper ID: EE -04

Internet of Thing (IOT) appears to be the emerging wafer edge for enabling easy way of connectivity to automate manual routines and reduce human interference. The paper introduces the technology with a security perspective and throws light on the key challenges associated with its outreach. It engages a review of the related issues and opens up the research paths that can form the future work in assuaging the IOT encounters to the utility world. The fact that it shares information on the Internet makes it vulnerable to attacks and data thefts and augurs measures to ensure its safe compliance. The ubiquitous nature of the framework urges to differentiate between malicious or malfunctioning data and explore fresh application to its usage in wearable devices, home and industry appliances.

A New Resonant Push Pull Converter Topology for Renewable Sources using Bidirectional Switch

Dr.I.D.Soubache[1], S.Sivakumar[2], R.GopiKirshna[3]
[1,2,3]Department of EEE, Rajivgandhi College of Engg. Tech., Puducherry, India
✉: [1]idsoubache@gmail.com,[2]sivaroja@gmail.com, [3]gopi_pee@gmail.com

Paper ID: EE-11

In this paper, push-pull converter is discussed. A push-pull converter is suitable for low voltage photovoltaic applications, because the step up ratio of high frequency transformer is high. The proposed push-pull converter also decreases the switching loss using soft switching of the primary switching. The voltage doublers added reduces the turn's ratio of the transformer. The proposed converter that converts a value of direct current to another value of direct current that can produce 280V output voltage from 24V input voltage. The MATLAB simulation implementation also used MOSFETs as a switching device due to its high power rating and high switch speed. This paper discusses about a new type of resonant converter that provides voltage regulation through Pulse width Modulation (PWM) control by adding a secondary side bi-directional ac switch to the resonant converter for wide range of input voltage which is supreme for Photovoltaic applications.

A New Soft Switching Series AC Link Inverter with Reduced Topology

S.Sivakumar[1],Dr.I.D.Soubache[2],R.GopiKirshna[3]
[1,2,3]Department of EEE, Rajivgandhi College of Engg. Tech., Puducherry, India
✉:[1]sivaroja@gmail.com[2]idsoubache@gmail.com, [3]gopi_pee@gmail.com

Paper ID: EE-12

This paper proposes a soft switching series ac link inverter with reduced topology. The link is formed by a series ac inductor/capacitor (LC) pair having low reactive ratings. The input and output of this converter can be either dc, ac, single-phase, or multiphase. Therefore, they can appear as dc–dc, dc–ac, ac–dc, and ac–ac configurations. In all of these configurations, the ac capacitor is the main energy-storage element, and the inductor is merely added to facilitate the zero current turnoff of the switches and their soft turn-on even by reducing the switches from 20 to 18 by using MOSFET. Due to the zero-current turnoff of the switches in the proposed converter, the use of SCRs with natural commutation is possible as well. Since the current and voltage of the link are both alternating, no bulky dc-electrolytic capacitors are required in this converter. This paper mainly focuses on bidirectional dc to three-phase ac conversion. This single-stage inverter can step up or step down the voltage in a wide range. If galvanic isolation is required a single-phase high-frequency transformer can be added to the link. In the proposed inverter, the power can flow in both directions, and therefore, it is an excellent candidate for battery-utility interface and electric vehicle applications. In this paper, the principles of the operation of the proposed inverter, along with its design and analysis, are studied with reduced switches topology. Moreover, the performance of the proposed configuration is evaluated in this paper. Simulation results are also shown by using MATLAB

A Parallel Snubber Capacitor based High Step up Isolated Bidirectional Full Bridge DC to DC Converter

R.GopiKirshna[1]S.Sivakumar[2],Dr.I.D.Soubache[3],
[1,2,3]Department of EEE, Rajivgandhi College of Engg. Tech., Puducherry, India
✉: [1]gopi_pee@gmail.com, [2]sivaroja@gmail.com, [3]idsoubache@gmail.com

Paper ID: EE-13

This paper presents a DC-DC converter with parallel snubber capacitors across the primary side switches. It achieves near high output voltage on the load side with improved reduction of voltage stresses on switches. This converter reduces voltage spikes across the primary side of the transformer for boost operation. Based on the conventional dc-dc converter, an active fly-back snubber, passive snubbers and also parallel snubber capacitors are added on the primary side which reduces the voltage spikes and improves the voltage on load side. The simulation results shows that the proposed converter can achieve near high output voltage with reduced voltage spikes on the primary side of the transformer.

Fabrication And Optimization Of Mono Cylinder Hydraulic Shock Absorber

V.Vignesh1, S.Diwahar2, K.Gopinath3, D.Dhamodharan4, S.Ganesh kumar5,
1,2,3,4 UG Scholar, Department of Mechanical Engineering, Manakula Vinayagar Institute of Technology, Kalitheerthalkuppam, Puducherry-605 107, India
5 Assistant Professor, Department of Mechanical Engineering, Manakula Vinayagar Institute of Technology, Kalitheerthalkuppam, Puducherry-605 107, India
✉:ganeshkumarmech@mvit.edu.in

Paper ID: MECH -04

Shock absorbers are important part of vehicle's suspension system, which is fabricated to reduce sudden impact. Shock absorber work on the principle of fluid displacement on both the compression and expansion cycle. The main aim of this project is to fabricate a shock absorber and optimizing the parameters of mono cylinder hydraulic shock absorber by using response surface methodology and also by Taguchi's method. shock absorber is modeled using SOLID WORKS here the role nitrogen gas and other air component in the shock absorber which can be rectified by fixing the port at bottom and top of the reservoir .The fabrication is done as per the modeling and the testing analysis is carried out by natural and forced damping.So, that it can be implemented in automobiles and since the manufacturing cost is low .From the optimization analysis, it has been found that most dominating parameter is speed of the vehicle.

Using Supervised and Machine Learning Techniques for Improving the Accuracy of Opinion Mining on Tweets

Kameswara Rao M[1], Sriharsha Meka[2], Tarun Narra[3], Harikrishna Bezawada[4]
[1,2,3,4]Department of Electronics and Computer Engineering, Koneru Lakshmaiah University, Guntur,

✉: [2]harsha.sri670@gmail.com

Paper ID: ECM-02

In Opinion mining has won significance in current years. People express their critiques over social networking web sites like twitter, Face book. The opinions are relatively unstructured and are both high quality or terrible, or neutral in some instances. This work analyses the opinions of the humans expressed via twitter in the form of tweets on demonetization in India. The tweets are pre-processed using feature extraction. Machine learning techniques and classifiers like support vector machine and Naïve Bayes are used in classifying the unstructured tweets as positive, negative and neutral means of comparing each phrase inside the tweet.

Microcontroller Based Scoliosis Prevention Equipment Using Flex Sensor

V.Dooslin Mercy Bai[1],Arshya Surendran[2]
Biomedical Engineering, R.G.C.E.TPondicherry,India
✉: [1]bme_hod@gecetpdy.ac.in,[2]arshyassurendran@gmail.com

Paper ID:BM-01

Our device is being designed to help people who are suffering with scoliosis by preventing their spinal deformity from further destruction using flex sensor. This Device will alert the user whenever the curvature of the bend of spinal cord has reached the threshold value of spinal curve angle on comparing with predetermined value. Continuous use of device will ultimately train the user to maintain good posture for their entire life.

A Study On Construction Cost Management Using Bim

Ravindran.N[1], Fagurudeen Mohamed.M[2]

[1]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.

[2]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.

✉ : [1]ravi.indran11@gmail.com,[2]fakuirfan1975@gmail.com

Paper ID: CIVIL-03

The growth and development of IT (Information Technology) in construction leads to steep incline in advanced construction management. Building Information Modeling (BIM) is a technology and an intelligent model based process to manage construction projects. The traditional methods of manual quantity takeoff and cost calculations, where the designers use 2-D diagrams are the cause for 60-70% of errors that occur in construction management. Using BIM in construction management minimizes such errors. In this paper, BIM and its role in construction cost management are studied by having Revit Architecture software as a tool. This is followed by a study on the current scenario of BIM in construction industry all over the world.

An Indicator About Construction Safety – A Study

NasrinFathima.J[1], Kamalnataraj.D[2]

[1]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.

[2]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.

✉ : [1] jann.fathima@gmail.com,[2]kamalnatarajsgi@gmail.com

Paper ID: CIVIL-04

Safety is the major issue in the construction industry. The accidents happening in the construction sites are the superior cause for the loss of the precious lives of the humans in the construction sector. The rate of accidents taking place in the construction field is climbing higher day by day. Hence it is mandatory to prevent such accidents to avoid further fatality of humans. In this paper, the survey is taken about construction accidents occurring all over the world. Then the causes of the construction accidents are analysed and finally, the preventives measures for the accidents are discussed.

Identification Of Presence Ofsafety Codes In On-Site Construction Project

V.Vinothkumar[1], Dr. S. Kamal[2],D.Kamalantaraj[3]

[1]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.
[2]Department of Civil &SrucluralEngineering, AnnamalaiUniversity,Annamalinagar, Tamilnadu, India.
[3]Department of Civil Engineering, Surya Group of Institutions, Vikiravandi-605652, Tamilnadu, India.

Paper ID: CIVIL-05

Construction industry is considered one of the most hazardous industries throughout the world due to its unique nature. Accidents and injuries can bring great losses to individuals, organization and society. Safety is most necessity part in construction industry. Proper maintenance of safety regulation cannot eradicate hazardous fully but it can be reduced.However, unawareness of safety is one of the major problems for accidents. Therefore, this paper is aim to identify the engineers knowledge towards safety code practice in India and implementation of safety codes in on- site construction projects. In spite of that, the critical factors are extracted through an extensive review of literatures and safety code of practice and books. Most of the literatures were concluded that the major accidents held due to scaffolds, ladders and excavation. Hence, this paper is focused on those areas to identify the lack of knowledge in engineers' and faults in implementation on site. The structured questionnaire were developed and distributed, retrieved form engineers from various construction firms.The results shows engineers' have knowledge on Scaffolding (83%) rather than Ladder (72%) and Excavation (58%).Finally the study gives the recommendation and suggestion to the firms, how to improve the knowledge on safety for their engineers'. Hence, this identification of factors can contribute to creating awareness or which may leads to the awareness about safety in future.

A Study On Factor Influencing Quality In Construction

Chitra.E[1] ,Banuchandar.J[2] ,Kamal Nataraj.D[3]

P.Gstudent[1], Assistant professor[2] , Assistant professor[3] ,Department ofCivil Engineering,
Surya Group Of Institutions, Vikiravandi-605652, Tamil Nadu, India.
✉:[1]Chithu_er18@yahoo.com,[2]banuchandarsgi@gmail.com,[3] kamalnatarajsgi@gmail.com

Paper ID: CIVIL-06

Construction projects play a vital role in the development of our nation. Quality is one of the important features in all projects. Success parameter in construction greatly depends on the quality performance. In construction projects lack of quality results in delays, cost overrun and unsafe structure. This research mainly focuses on identifying and scrutinizing the factors that affects quality in construction. From literature review the main factors that affect quality of construction is identify. A questionnaire survey is to be carried out in various companies and rank them by Relative Importance Index. Using that data the major factors that affecting the quality have to be identified. Then conduct T-test using SPSS package to analyze the data to find out the significant difference between the ranking of contracting and consulting companies towards the importance of quality factors. Finally from the results suitable suggestions was given to the companies for improving their product quality.

Improving Safety Performance In Construction Industry

Mahalakshmi.B[1], Kamal Nataraj.D[2]
P.G student[1], Assistant professor[2],Assistant professor[3] ,Department of Civil Engineering,
Surya Group Of Institutions, Vikiravandi-605652, Tamil Nadu, India.
✉:[1]jayamahalakshmi811@gmail.com, [2]kamalnatarajsgi@gmail.com

Paper ID: CIVIL-09

The construction industry is considered as one of the most hazardous industrial sector wherein the construction workers are more prone to accidents. Despite recent efforts to improve site safety, construction still accounts for a disproportionate number of occupational related fatalities. In both developed and developing countries, the construction industry is considered to be one of the most significant industries in terms of its impact on health and safety of the working population. Construction industry is both economically and socially important. However, the construction industry is also recognized to be the most hazardous. The objectives of this research are to investigate the safety performance in the construction sites and identify the factors affecting safety on construction sites. The data were collected from the contractors, consultant, and owners by using questionnaire to evaluate the safety performance in the construction sites. The questionnaires which were distributed to respondents and collect the data from the respondents and finally conclude the suggestion and recommendation, the suggestion is to improve the safety performance on the construction sites.

Factors Influencing And Affecting Productivity In Construction Companies

Kalaiarasi.D[1], Kamalnataraj.D[2]
P.G student[1], Assistant professor[2], Assistant professor[3], Department of Civil Engineering
Surya Group of Institution, Vikiravandi-605652, Tamil Nadu, India.
✉:[1]Kalaiarasi.me2017gmail.com,[2]kamalnatarajsgi@gmail.com

Paper ID: CIVIL-12

In spite of the development in construction industry; the productivity in this sector still considered as critical factor for most construction firms in developing and semi developing countries. In order to develop the productivity, several measures have been taken for some construction projects. This study highlights the topics of productivity monitoring and measurement in constructing sector. Performance measurements used to monitor the construction processes and activities. Building projects are taken as case study to show how these concepts can be used to analyze and develop the productivity of some options in this sector. Concreting process is taken as case study. The results pointed to the relative importance of this activity in terms of time and cost. A comparative model has been developed to determine the best method of construction, its cost and duration. This model can also be used as a predicting tool for selecting the method during the planning phase of project.

Studies On Cost Accounting And Cost Control In Construction Project Of The Site

Mr.Banu Chandar[1] , B.Devakrishnaji[2]
[1]Assistant professor, Department of civil engineering, Surya group of institutions, Vikravandi.
[2]Final year Student, Department of civil engineering, Surya group of institutions,Vikravandi.

Paper ID: CIVIL-13

Accounting plays a crucial role in the success of any business, but it is particularly vital in the construction industry, a complex field that typically requires the Coordination of multiple subcontractors and multiple jobs in any given year. This thesis undertook to study the accounting practices of a Builder.Cost control is an important issue in construction project management. It is widely practiced by contractors in India and needs to carry out throughout the life of a project. A brief interview with a contractor found out that the contractor lack the knowledge of cost control system and cost accounting system.Hence, a study is carried out to study the cost control and cost accounting method in a construction project, to identify the cost control and cost accounting method frequently used by contractor during the construction stage and to identify the problem faced by the contractor in controlling the costs on site. The study is carried out in the Bangalore.A total of 20 questionnaires were sent to the contractor and the data analyzed using the average index and frequency analysis. From the study, the main problem faced by the contractor are shortages of material, labour or mechanical plant, difficulty in collection of cost data, ever-changing environment of construction work, qualified expertise, duration of the project and additional costs to carry out the cost control system.

Exprimental Investication On Modular Bricks Using Coconut Shells

Jeyapriya.J[1], Kamalnataraj.D[2]
[1,2]Department of Civil &structural Engineering, Annamalai University, Annamalainagar 608002, Tamilnadu, India.
✉ : [1]priyajp1211@gmail.com,[2]kamalnatarajsgi@gmail.com

Paper ID: CIVIL-17

Every construction industry totally relies on cement, sand and aggregates for the production of concrete. Nowadays, most of the researchers are doing the research on the material which can reduce the cost of construction as well as increase the strength. Some of the waste materials are used in concrete according to their properties. For instance fly ash, rice husk, slag and sludge from the treatment of industrial and domestic waste water have been found suitable as partial replacement for cement in concrete. The coconut shell is a material which can be a substitute for aggregates.

Zone based Multi-Agent with Multi-hopRouting in MANET

Sultanuddin S.J[1], Dr. Mohammed Ali Hussain[2]
[#]Research Scholar, Dept. of Computer Science & Engineering, Sathyabama University, Chennai.
[*]Professor, Dept. of ECE, KL University, Guntur Dist.Andhra Pradesh.
✉:sayedjamalsultanuddin@gmail.com, dralihussain@kluniversity.in, 09790824193,07893704888

Paper ID: CS-105

Mobile Ad hoc Network (MANET) comprises of thousands of mobile nodes spread across the network. Thesenodes are highly mobile which possess some inherent characteristics like node reliability, resource heterogeneity, etc. In this paper, we proposed a Multi-Agent Based Multi-hop Routing (MAMR)protocolfor MANETs. Our proposed MAMR protocol comprises of multiple agents including static and dynamic mobile agents. The operation of our proposed scheme is as follows: (i) At first, the zone leaders are discovered; (ii) These zone leaders are connected with communication nodes, (iii) Back bones are built by employing communication and zone leaders to achieve multicast routing, (iv) Zone members of multicast are connected to the backbones, (v) In case if the nodes are highly mobile, backbone and zone managements are initiated. In MAMR protocol there are five kinds of agent nodes are used in which Path agent, Network control agent and Multicast control agent are static;Network launch agent and Multicast control agents are mobile. The performance of the proposed system is evaluated under several network conditions in which packet delivery ratio, delay andthroughput are measured. The proposed protocol is compared with Multicast Routing Protocol Based on Zone Routing (MZRP), On-Demand Multicast Routing Protocol (ODMRP). Through the obtained simulation results it is clearly shows that MAMR protocol performs better than MZRP and ODMRP. This also offers better flexibility and versatile multicast services.

Service Oriented Allocation to Manage Distributed Services in Cloud Storage Environment

Vineela Sankarasetty[1]*, Ratnanjali Masina[2] , Tejasri katragadda[3] ,Siva Kumar Pathuri [4]
[1,2,3,4]Department of CSE K.L.University,Green Fields ,Vaddeswaram,Guntur,Andhra Pradesh, India
* Corresponding author's ✉:veenila.s006@gmail.com

Paper ID: CS-142

In distributed computing, cloud suppliers boot attempt obscure purchasers two provisioning see registering staple, to be specific national woodland and on request arranges. In officer, soliciting cost from using processing essential material provisioned by reservation calendar is less. With the reservation request of the day, the customer boot abridges the gathering asset provisioning cost. To dedicate this stoppage, an Optimal Cloud Resource Provisioning (OCRP) algorithm is proposed to process distributed computing for data sharing with stochastic programming data representation. The OCRP algorithm can arrangement figuring fundamental material as discussed in relative data presentation in out-sourced data in distributed computing, e.g., four phases in a quarter educational modules and twelve phases in a periodic arrangement. By using OCRP, utilizing all the services with preferable multiplexing in services executing in real-time cloud computing. Our experimental results show virtual machine readings with preferable operations in distributed cloud outsourcing in real time application development.

Comparison of DSDV, AODV, DSR, QAODV using Throughput and wavelength for MANET

M. Sri Shiva Prasad Chowdary, K. Raj Gopal Reddy, P. Siva Nagendram, Dr. K. Raghava Rao

Department of Electronics and computer Engineering, KL University,Guntur

✉:shivaprasad.mallina@gmail.com.,rajgopalcsk847@gmail.com,sivapureti9316@gmail.com, sivapureti9316@gmail.com,raghavarao@kluniversity.in

Paper ID:CS- 162

In trace analyser nodes are communicating with each other using c++ files as front end and python as backend. Arrange re-enactment scripts in c++ are utilized to make the system situations and upon the fulfilment of the recreation, follow records that catch occasions happening in the system are created. Trace analyser will find communication of routing nodes in the simulation time, throughput, good put, nodes, wavelength and metrics. This paper examines the DSDV, DSR, AODV and QAODV communication of routing protocols in NS-3 simulator. DSDV is an active protocol depending upon a wavelength and throughput at each node by distance vector. DSR is a reactive or on demand and maintenance of active routes which nodes are transmitted by using wavelength and throughput and good put. DSR is same like AODV. QAODV which performs quality service of nodes it is extension of AODV protocol. ADOV is an on demand protocol which finds destination on demand and by using wavelength and throughput and packet ratio.

A QoS metric Approach for Web Service Pertinence for the Cloud

D.Chandramohan[1] and Jayraj Singh[2]

[1]Department of Computer Science and Engineering, Dayananda Sagar University, Bangalore, India.

[2]Department of Computer Science, Pondicherry University, Pondicherry, India.

✉:chandramohan-cse@dsu.edu.in, jayrajsinghagra@gmail.com

Paper ID: CS-177

Cloud computing is a very emerging technology today and playing an important role to provide the services through internet. Users are getting enormous benefits like highly access of available application resources, faster time to market, fast development, deployment, lower start-up, operations cost and much more. Cloud offers to utilize the benefits through web services. The degrading factors such as low QoS, security factors, trustless and less resource management in cloud leads to service suitability issue. These web services chosen by user should be very suitable in cloud. Efficiently QoS based finding of web services on the web is very challenging task in service-oriented computing. In this paper a QoS metric approach is proposed to identify the suitability of web services and ensuring the deployability in the cloud era. The suitability of web service is examined for its suitability cases (simple suitable, average suitable and best suitable) with respect to the quality of service (QoS) attribute. From the experimental setup, first the suitability score is calculated with the essential non-functional QoS attribute information is identified from the set of services. However, the verification process expressed using the state transition diagram. The proposed system is simulated using JFLAP-a java package tool and the result shows the service suitability for the cloud. In this context the efficiency of identifying service suitability for deploying in the cloud gets verified using automated theory without affecting the performance of the cloud service.

2M2C-R2ED: Multi-Metric Cooperative Clustering based Routing for Energy Efficient Data Dissemination in Green-VANETs

D. Chandramohan, M. Anitha and V. Hariharan
Department of Computer Science and Engineering, School of Engineering,
Dayananda Sagar University, Bangalore, India.
✉:{chandramohan, anitha, hariharan}-cse@dsu.edu.in

Paper ID:CS- 178

The population of the urban areas keeps increasing as the people move towards the cities in search of jobs and better life style. This leads to increase in number of vehicles on the road. But the transport network which is accessible to the citizens is less when compared to their demand. This situation results in more vehicles on the road. The result of which is one of the factors that aggravates the traffic congestion. Traffic congestion occurs when the available transport resources are less when compared to the number of vehicles that shares the resource. As the number of vehicles increases the resources become scarce and congestion is more. The demand for the resources is higher than the actual capacity of the roads and the streets. There are some circumstances which will aggravate the traffic congestion. The circumstances can be the road condition (pot holes, road repair), accidents and some natural calamities. There is a lot of research being done to predict the traffic and model it in order find a solution which will make the condition better. But still it is an open issue. The accuracy of the predictions done is less.

A Robust Bi-Directional Algorithm For People Count In Crowded Areas

Dr.P.Satyanarayana[1],P.Gopikrishna[2],K.Soukhya[3],M.Satvik[4],Y.CharanKumar[5]
Professor[1], Department of ECE, K L University, Guntur, India
U G Students[2,3,4,5],Department of ECE, K L University
✉:satece@kluniversity.in[1], gopikrishnapavuluri23@gmail.com[2], soukhya.kunda@gmail.com[3],
satvik.mente@gmail.com[4,5]

Paper ID:CS- 193

People counting system in crowded places has become a very useful practical application that can be accomplished in various ways which include many traditional methods using sensors. Examining the case of real time scenarios, the algorithm espoused should be steadfast and accurate. People counting algorithm presented in this paper, is centered on blob assessment, devoted to yield the count of the people through a path along with the direction of traversal. The system depicted is often ensconced at the entrance of a building so that the unmitigated frequency of visitors can be recorded. The core premise of this work is to extricate count of people inflow and outflow pertaining to a particular area. The tot-up achieved can be exploited for purpose of statistics in the circumstances of any calamity occurrence in that zone. Relying upon the count totaled, the population in that vicinity can be assimilated in order to take on relevant measures to rescue the people.

Handwritten Tamil OCR by Using the Structural Theory

M Antony Robert Raj* , S Abirami , R Baskaran
Department of Information Science and Technology, Anna University, Department of Information Science and Technology, Anna University, Department of Information Science and Technology, Anna University,
✉:antorobert@gmail.com , abirami_mr@yahoo.com , baaski@annauniv.edu

Paper ID:CS- 215

The inevitable recognition challenges such as rich character set, high-end variation and minor addition in shapes of Tamil handwritten characters are inspiring to get into a new research in Optical Character Recognition (OCR). This can be possible when enforcing algorithm in the extraction on the statistical and structural basis. Essentially, the structural procedure is implemented here to confront the challenges in a different type of patterns in offline Tamil handwritten characters, where, the structural representation directional pixel point feature is experimentally analyzed and chosen as a novel algorithm for providing a solution in this work, where the different combination of the character features are tested by highly adapted classifier Support Vector Machine (SVM). The final result shows that that feature extraction algorithm is fitted to face the challenges which present in Tamil handwritten character by default. The quality of this work has been improved if both procedures are employed in combined manner.

Implementation of MQTT Protocol on low resourced Embedded Network

P Gopi Krishna[1]* K Sreenivasa Ravi[2] V.S.S Sailendra Kumar[3] M.V.S.N Sai Kumar[4]
[*1]Research Scholar, Dept. of ECE, K L University, Guntur, A.P. India
[2]Professor, Dept. of ECM, K L university, Guntur, A.P. India
[3,4]U. G student, Dept. of ECM, K L university, Guntur, A.P. India
* Corresponding author's Email: gopikrishna.popuri@gmail.com

Paper ID: CS-217

This paper discusses regarding the implementation of MQTT protocol on low resourced embedded network elements such as sensor node and sensor network node gateway. Dealing with IoT (internet of things), data collection is the primary objective and this is done through wireless sensor node network and the gateways, these operate on low processing speed footprints and low bandwidth wireless communication channels, even the gateways which are used as servers ought to be cost effective. So, the protocol used above the tcpie application layer protocol should be the light weight protocol and should have less overhead to cut back the processing burden on the embedded systems. So, here MQTT protocol which relies on publish/subscribe paradigm comes handy. Here in this paper we are using Node MCU as sensor nodes and Raspberry pi 3 as gateway for sensor node network gateway and mosquitto as MQTT broker on Raspberry pi and MQTT dashboard app as client to monitor data.

Designing A Multipurpose Reconfigurable Wireless Node for Broadcasting and Unicasting in Real Time Applications

P Gopi Krishna[1]*,K Sreenivasa Ravi[2],JeyanthMandava[3],MekalaRohith Naidu[4], .V.Prabhu[5]

[1]Research Scholar, Dept. of ECE, K L University, Guntur, A.P., India.

[2]Professor, Dept. of ECM, K L university, Guntur, A.P., India.

[3]Test Engineer, Infosys Limited, Thiruvananthapuram, Kerala., India.

[4]P.G studnet, RMIT University,Melbourne, Victoria,Australia.

[5]Assoc. Professor, Dept. of ECM, K L university, Guntur, A.P., India

* Corresponding author's ✉:gopikrishna.popuri@gmail.com

Paper ID: CS-218

Reconfigurable computing could be a combination of no. of versatile high performance hardware packages, using computing materials. The paper aim in designing of a multipurpose reconfigurable device for broadcasting and unicasting for real time applications. The framework make utilization of ARM, Arduino, and wireless protocols Wi-Fi(IEEE802.11), Zig-Bee (IEEE 802.15.4), Bluetooth (802.15.1). This is the implementation of broadcasting and unicasting the data depending on the applications. The transmitter cannot identity the receiver's protocol. Based on the receiver the transmitter must be configured. The major portion of the processor is used to manage the reconfigurable hardware behaviour. This hardware can be used in another task after completing the present task as fast as it completes.

Design and Static Analysis of Go-kart

P.N.V.Bala Subramanyam[1], B.Vishnu Vardhan Reddy [2],T. Sai Prem Suhas[2], JB.RaviTeja[3]

[1, 2, 3](K L University, Andhra Pradesh, India)

✉:bala.mech1513@gmail.com

Paper ID: CS-220

The main aim of this paper is to design and selection of material for a go-kart based on availability, cost and mechanical properties. Our primary intention is to pick out the possible material based on the requisites of end user. Modelling of frame is carried out by using SOLID WORKS and the validation is obtained by using HYPER WORKS. Go kart is a simple 4 wheeled automobile, rear wheel driven with an IC engine that is subjected to axial and bending loads. So we performed impact analysis in front, rear and lateral directions. The flexural rigidity of the structure and the deformation of the chassis are observed. The results are compared between two different materials. This paper also includes the designing of a kart with better ergonomics for driver. In relevant to the rule book of Go-kart Design Challenge (GKDC), chassis is designed.

Strength Efficient Milt Sink Route Desire Technique For Wireless Sensor Community

Dr.R.Ram Mohan Rao Karanati [1]*, Bindu Sri Gadireddy [2] ,Prajwalitha Parimi [3], Supriya Malempati [4] ,Satya Krishna Teja Vegi [5]

1,2,3,4,5Electronics and communication Department, KL University, Guntur,India

* Corresponding author‟s Email: mohanrao5423@kluniversity.in

Paper ID: CS-221

In a wireless sensor community (wsn), sensor nodes have constrained electricity. So the battery power of the sensor nodes needs to be conserved. It is going to boom the lifespan of the wireless sensor network. A sensor node which detects the atypical occasion and sends the records to sink node through multi hopping. Sensor node within the sink node will devour greater battery strength. Because of those reasons sensor nodes fastly drains out battery electricity and decrease the lifespan of them. Repositioning of sink is an powerful technique for intensifying the WSN life time. Strength conscious a couple of sink repositioning (SAMSR) scheme is used properright here. SAMSR method has important parts such as energy aware transmission range adjustment and multiple sinks repositioning. Transmission range adjustment mechanism enhances the life span of the sensor nodes to sensor network. The sink repositioning method consists of two major parts. The Primary one is used to decide whether the Sink node met the repositioning situation or not. The second is used to decide the sink relocation path.

Hybrid Encryption Scheme: An Approach For Securing The Data Using Symmetric And Compression Algorithms

VenkataVara Prasad Padyala[1] Polimera Srinivas[2] , SomepalliYaswanth Gopi[3], Vasireddy Sai Teja[4]Polisetti Bharat[5]

[1,2,3,4,5]Department of CSE, KL University, Andhra Pradesh, IndiaCorresponding author's Email: polimerasrinu29@gmail.com

Paper ID:CS- 222

Internet is the place where people get lot of information about business, educational, applications, social media etc. Since the people all over the globe access the information, it may be thousands of terabytes of data and that data should be protected. In order to maintain this huge amount of data and get the information at the faster rate we need an encryption algorithms which compress the data and provides the security so we used the hybrid encryption algorithm which is the combination of multiple ciphers. The encryption algorithm consists of four rounds out of which two are symmetric algorithms one is the substitution cipher and other is the transposition cipher, third is the compression algorithm which is lossless data compression, fourth round contains the mathematical equation which provides the security for the data. So combining all these rounds gives us the Hybrid encryption algorithm

Educational Data Mining on Social Media

A.RamiReddy(RamireddyAmbati)[1]*,A.Niveditha(NivedithaAthukuri)2,K.MaryAnila(Mary AnilaKuriyala)[3], V.Lakshmi Priyanka(PriyankaVallabhudasu)[4]

[1,2,3,4] Department of Computer Science andEngineering, K L University Andhra Pradesh, India*

Corresponding author's Email:aramireddy@kluniversity.in

Paper ID: CS-223

People discussions, chats, pages on social media help to gain the knowledge in several aspects. Social media explodes the boundaries that are present in the real world and virtual world. Analysing such data is more challenging. In this paper, we are going to analysing Facebook data pages related to education and extracting that information. The pages which are related to Java, C++, and PHP are taken and processed. In those pages, we are going to extract the posts and comments. We are going to conduct pre-processing and sentiment Analysis on the data collected as CSV. During sentiment Analysis, we are going to fragment the data based on true sentiments and negative sentiments. By that specification deciding the page status whether the page is useful in learning or not.

Realizing Reconfigurable Services in Ubiquitous Environments using Reverse Proxy

K Kamala Kannan , Baskaran Ramachandran

Department of Computer Science and Engineering, Anna University,

✉:kamalthekingpin@gmail.com, baskaran.ramachandran@gmail.com

Paper ID: CS-228

Computing has become more pervasive in the recent decade with the advent of Internet of Things. Millions of devices are expected to become connected in the coming years. This gives rise to discussions and active research on the security, quality and robustness of these devices. The proposed model addresses the aforementioned issues by exposing the smart devices as reconfigurable services. The placement of a reverse proxy at the juncture of the internal and public network is vital in extending the service oriented paradigm to the connected world. Experiments have been conducted to verify the claim and therefore contribute to the body of research in widening the horizons for ubiquitous environments.

Real Time Obstacle Detection in Uncertain Environment for Non- holonomic Route Planning using Fuzzy Inferences

Suganya Viswanathan, Baskaran Ramachandran, Deivamani Mallayya
Department of Computer Science and Engineering, CEGC, Anna University

Paper ID: CS-229

Autonomous mobile robots employed in uncertain environments must have the ability to perceive the environment, analyze them and perform suitable actions. The robots have to be equipped with various sensors and sophisticated algorithms to understand the environment as the environment contain several static and dynamic objects. Also, Dynamic objects in the uncertain environments add complexity in route planning. The paper proposes a two-level fuzzy inference for detecting the dynamic obstacles in the path and assists navigation towards the target. Robots perceive the environment with visual / IR/ Ultrasound sensors and use the Sugeno fuzzy inference to detect the type of object. This paper has defined fuzzy rules as the knowledge base, which will be used by the inference engine to decipher the obstacles as when they encounter. Under uncertain environments, the robot uses the fuzzy inference engine and navigate as intended. A multi-target path planning algorithm is proposed to support the navigation by using known objects. Simulations are carried out in an indoor environment resulting in optimal results.

SensEdge: An Edge computing architecture for Smart traffic, environmental its application.

Vimalkumar Kumaresan*, Prasanth Chokkalingam, Sibi Chakkaravarthy, Keerthivasan K, Baskaran R
College of Engineering, Guindy, Department of CSE, Anna University,Chennai, India
✉:vimalkumar.kumaresan@cs.annauniv.edu, prasanth9018@gmail.com, sibianandhan@gmail.com, vasankeerthik@gmail.com, baaski@cs.annauniv.edu
*Corresponding Author

Paper ID: CS-230

Internet of Things is an emerging technology with great potential in making life simpler for mankind. The exponential growth of Internet of Things has led to the increased need for wireless sensor networks. Nevertheless, advancements of battery technologies are limited due to physical limitations. Consequently, IoT systems are primarily required to use the available battery resources, of the network, efficiently and coherently. Furthermore, the extent of bandwidth consumption of each IoT device has to be scrutinized in geographically distributed applications like smart city sensing. The proposed SensEdge system, proficiently selects sensors for data processing and transmission, because of which energy is efficiently used. The accuracy of the reconstructed data is ensured by selecting the sensors with a high degree of correlation between them. In addition, the proposed architecture performs the time-critical processing in the edge devices. Based on the experimental results, the bandwidth utilization and application response time of the baseline system is 16x and 2 to 3x greater than our proposed system. Hence, SensEdge outperforms significantly than the baseline approach.

Packet Receiving Rate Analysis in Various MANET Protocols Using NS-3

Dr. R. Ram Mohan Rao Karanati[1], Dr. Raghava Rao Komaragiri[2], Sivakishna Singari[3], Bhavya Sree Geda[4], Lakshmi Annapurna Bethina[5], Chiranjeevi Rao Yerubandi[6]
K L University, Vaddeswaram, Guntur, AP, India
✉: mohanrao5423@kluniversity.in, raghavarao@kluniversity.in, singari6480@gmail.com, bhavyasreevlrr@gmail.com, annapurnabethina011@gmail.com, chiranjeevirao666@gmail.com

Paper ID: CS-231

MANET comes under the wireless network in which each node can transfer data to another without using any base station. It has wide applications in communication of data. MANET is defined as self-configuring ad hoc network model of mobile nodes and each node knows about adjacent nodes and conveys information to those nodes. In network layer protocols routing helps in finding the best route between source and destination. Performance of MANET network is evaluated based on different Quality of service parameter like routing overhead, end to end average delay, packet delivery ratio and also the loss of packet under various network circumstances like speed of mobility. In MANET, there are many research issues as loss of packets problem owing to transmission fault, broken links, and no route to the destination. In this Project implementation of different routing protocol of MANET on Ns-3 simulator and analysis the performance of quality of services issues in terms of performance parameters like Packet receiving rate per Second.

Design and Technical Analysis of hybrid Renewable Energy System with HOMER software

G.Srinivasa Rao, Dr.K.Harinadha Reddy
Assistant Professor, Professor, Department of Electrical and Electronics Engineering K L University, Vaddeswaram, Guntur (Dt), Andhra Pradesh, India
✉:g.srinivas@kluniversity.in, kadapa.hari@gmail.com

Paper ID: CS-232

At present trend hybrid energy system plays key role in various power applications like electrifying homes, power supply to industry sectors and commercial systems. Hybrid Energy system is a combination of two or more different types of energy resources. Hybrid energy system is more reliable than single energy system. Hybrid energy system is technically classified as grid connected and off grid hybrid system. This paper deals with grid connected hybrid energy system with solar and wind resources. The proposed hybrid systems are cable of multi mode operation and high reliable. Maximum power point Tracking is also applied to solar and wind energy systems. The cost and Technical analysis of the designed system has done by HOMER software. The results of Simulation in HOMER software show that Solar cells and wind systems with average generation power of 154180 kWh/yr. and 481336 kWh/yr., consist proportion of 22 and 68 percent of the total generated energy respectively, which are dedicated to satisfy the loads.

A Low Cost Self Deployable Localised Weather Update and Monitoring System In Remote Areas Using Open Hardware

K. Sripath Roy[1*] KrishnaChaitanya Tumpudi[2] Mohan Krishna Eeninthala[3] Siva Poluri[4] [*1234]Department of Electronics and Communication Engineering, KL University, Andhra Pradesh, India * Corresponding author's Email: koganti_sripathroy@kluniversity.in

Paper ID: CS-233

Location based weather monitoring systems provide the basic temperature and humidity forecasted from specific areas using high end complex hardware placed over a vast area. The applications like climatic change observatory needs accurate and dynamic temporal data but the current working systems receive data from other forecasting stations that is highly unreliable to people living in remote rural areas. With the advent of IoT, we propose a local weather monitoring system with open hardware that continuously monitors the temperature, humidity and Co2 of any remote area ensuring high accurate data at a lower cost. The data is pooled from multiple systems simultaneously and will be stored in the central server preferably a Raspberry Pi. As understanding the data and bringing out the relations is also a prominent factor for research purposes, we use the logged data for analysis using data analytics and further plot them using visualization techniques for efficient variation in it.

Inspection Based Models for the Identification of Cells in Cellular Manufacturing

K.V. Durga Rajesh[*], Naga Sai Ram.Gopisetti, Gowtham Kumar.Venna, Srinivas.Muggalla, Raja.Prathi, P.V. Chalapathi

Department of Mechanical Engineering, K L University, Green Fields, Vaddeswaram, Andhra Pradesh, Department of Mechanical Engineering, AKRG College of Engineering and Technology, Nallajerla, Andhra Pradesh, India.

✉:kanchurajesh@kluniversity.in,sairam27@hotmail.com,venna.gowtham88@gmail.com, srinivas.vamsy@gmail.com, rajaprathi7119@gmail.com, pvenkatachalapathi@yahoo.co.in

[*]Corresponding Author

Paper ID: CS-238

The present study focused on the development of new model based on the natural constraints, which is inspired by the human cognition that could reason the differences in patterns and recognize them to solve the problems. Partial usage of network topology has applied to identify the cells and their index with over five differential sub methods have devised to work adjacent to the main module, which interlinked with each other to find the patterns. As ease of finding, the cell indexes without any actual mathematical process is virtue of this model. By coupling with other models have showed an advantage of the lowering the actual time of solving the problem. It has observed that when this model applied to over large sized machine component matrix, the time and solution search have lowered. On comparing with the benchmark problems, the solution time as the search traversal has greatly decreased retaining the same optimal solution.

Effect Of Pitch Number In Overall Heat Transfer Rate In Double Pipe Helical Heat Exchanger

T.Kanthimathi[1]Naga Sai Ram.Gopisetti[2*]Bharamara. P[3]Rishyank .Ch[2]
[1]Assistant Professor, Department of Mechanical Engineering, K L University, India
[2]Under Graduate, Department of Mechanical Engineering, K L University, India
[3]Associate Professor, Mechanical Engineering, JNTU Collage of Engineerign,India
* Corresponding author's Email: sairam27@hotmail.com

Paper ID: CS-244

The aim of the following research to study the tube in tube helical coil heat exchanger where with increase in the pitch will increase the overall heat transfer rate. Since that tube in tube, helical coil often taken small area and the height of the tube in tube helical coil heat exchanger can be configured by the relation index proposed in the following paper. The heat transfer rate in the heat exchanger depended on the heat transfer coefficient, surface area and temperature difference. Geometry of the heat transfer area and the turbulence factor plays a major role in the enhancement of the heat transfer rate, In this paper numerical analysis of a tube in tube helical coil heat exchanger is done using Ansys Fluent as a counter flow arrangement. The pitch of the helical tube is varied for the constant length of the coil and the overall heat transfer rate is calculated. Results have shown that as the pitch is reduced the heat transfer rate is increased.

Multi Level RegualarItemset Mining Using Vertical Format

PavanKumarNVS[1*]AshokKaranam[2]VijayaMadhaviInapakolla[3]HemaHasithaVayugundla[4][1,2,3,4]
Department of Computer Science and Engineering, K L University, Green Fields, Vaddeswaram, Guntur, Andhra Pradesh, India.
*Corresponding author's Email: nvspavankumar@kluniversity.in

Paper ID:CS- 248

Regular patterns are the most interesting and critical area of knowledge data mining. Regular patterns are more useful than the frequent patterns as they deal with occurrence behaviour rather than occurrence frequency. So far the algorithm proposed for regular pattern mining uses constant threshold which leads to loss of some information about regular itemset. As the length of the itemset (number of items in itemset) increases it is optimal to increase the threshold proportionally. Hence in this paper we propose an algorithm to mine regular patterns with multilevel threshold. In this we used vertical format of database as this makes pruning process easier to find regular itemset.

Energy Estimation with Appliance Monitoring and Control for a Smart Home using Internet of Things

K. Sripath Roy[1], M. Ashok Kumar[2], N. Gopi Nadh[3], M.V. Karthik[4], K.Vivek Reddy[5]

[1,2,3,4,5] Department of Electronics and Communication Engineering

K L University, Vaddeswaram, Guntur, AP, India 522502

✉:koganti_sripathroy@kluniversity.in, movva4088@gmail.com, ngopinadh.2013@gmail.com, karthik.malladi2310@gmail.com, vivekreddy123456@gmail.com

Paper ID: CS-255

The demand for energy is increasing day by day and the need to meet this demand along with the need to conserve it is also increasing. The necessity to fulfil the above demands is probing the scientists and researchers to invent systems that conserve the energy and regulate its usage as per the requirements on daily basis. Earlier, these conservation and optimization systems were implemented at industrial level. Now, they made their way into domestic level in the name of smart systems, Internet of Things etc., a home that implements such kind of system for energy conservation and optimization purpose is called a "Smart Home". These systems give the user an ability to monitor and control the home from a remote location which in turn paves the way for achieving the energy conservation. This paper presents a solution to monitor and control the home remotely through web interface. Which is affordable price and can be built by anyone.

Soft C Based Future Selection Model For Landslide Risk Analysis

Velmurugan J[1], M Venkatesan[2]

[1]School of Computing Science & Engineering,VIT University, Vellore, India

[2]School of Computing Science & Engineering,VIT University, Vellore, India

✉ : [1]velmurugan85@gmail.com, [2]venkisakthi77@gmail.com

Paper ID: CS-80

This A natural tragedy causes enormous loss in terms of people life and infrastructures. Landslide is one of the prime disasters in the hill regions such as Uttarakhand, Sikkim and Ooty in India. The extent of damages of landslide could be reduced or minimized by proposing novel landslide risk analysis model. Landslide is generated by various factors such as rainfall, soil, slope, land use and land covers, geology, etc. Soft Computation plays major role in landslide risk analysis. There are so many components are involved to identify the landslides. In these few, components may fully depend for the prediction of landslides. In this paper we are propose the Rough Set theory to identify the importance of the attributes to analyze the possibilities of various landslide risk level at Coonor taluk of Niligiri district. The proposed model is validated with real time data and performance is compared with other models..

Cognitive Radio Technology Using Multi Armed Bandit Access Scheme In Wsn

A.Sangeetha[1], C.Suganya[2]
Electronics And Communication Engineering, K.Ramakrishnan College Of Engineering, Samayapuram,Trichy
✉:[1]Sangeethaanbu14@Gmail.Com

Paper ID: CS-81

The wireless sensor network (WSN) is one of the key enablers for the Internet of Things (IoT),where WSNs will play an important role in future internet by several application scenarios, such as healthcare, agriculture, environment monitoring, and smart metering. However, today's radio spectrum is very crowded for the rapid increasing popularities of various wireless applications. Hence, WSN utilizing the advantages of cognitive radio technology, namely, cognitive radio-based WSN (CR-WSN), is a promising solution for spectrum scarcity problem of IoT applications. A major challenge in CR-WSN is utilizing spectrum more ef ciently. Therefore, a novel channel access scheme is proposed for the problem that how to access the multiple channels with the unknown environment information for cognitive users, so as to maximize system throughput. The problem is modeled as I.I.D. multi-armed bandit model with *M* cognitive users and *N* arms (*M*<*N*). In order to solve the competition and the fairness between cognitive users of WSNs, a fair channel-grouping scheme is proposed. The proposed scheme divides these channels into *M* groups according to the water- lling principle based on the learning algorithm UCB-K index, the numberof channels not less than one in each group and then allocate channel group for each cognitive user by using distributed learning algorithm fairly. Finally, the experimental results demonstrate that the proposed scheme cannot only effectively solve the problem of collision between the cognitive users, improve the utilization rate of the idle spectrum, and at the same time re ect the fairness of selecting channels between cognitive users.

Scholarly Articles For Researchers On Author Based And Non-Author Based Systems

Bomidi Mowlika[1],R.Santhiya[2],B.Monisha[3],P.Vidhyalakshmi[4],Arokiaraj Christian St.Hubert[5]
[1,2,3,4] Student, [5] Assistant Professor, Dept. of CSE, SGCET, Puducherrry.

Paper ID: CS-01

Scientific article recommender systems are playing an increasingly important role for researchers in retrieving scientific articles of interest in the coming era of big scholarly data. Most existing studies have designed unified methods for all target researchers and hence the same algorithms are run to generate recommendations for all researchers no matter which situations they are in. However, different researchers may have their own features and there might be corresponding methods for them resulting in better recommendations. In this paper, we propose author-based search patterns and non author search pattern for the improvement in accuracy of design.

A Novel Privacy Preserving Localization Scheme based on Lateration for Mobile User Concentrated Networks

Ezhumalai.P[1], Malarkodi.S[2], Jancy Rani.S[3]
[1]Ezhumalai.P, Assistant Professor, Department of CSE,
Christ Institute ofTechnology, Pondicherry University, Puducherry, India
[2]Malarkodi.S , Scholar, M.Tech, CSE,
Christ Institute of Technology, PondicherryUniversity, Puducherry, India
[3]Jancy Rani.S , Scholar, M.Phil, Mathematics, Theivanai Ammal College for Women,ThiruvalluvarUniversity,Villupuram, India.
✉: [1]ezhurecuit.12@gmail.com,[2]drdsaravanan2009@gmail.com,[3]jancyrani21maths@gmail.com

Paper ID: CS-55

Location tracking and preserving inwireless networks are tedious as the networkconsists of infrastructure less devices that changetheir position more frequently due to acquiredmobile patterns. In such networks, malicious users may prevail to snatch information by hiding theirlocation and other spoofing other user information. STAMP is designed for ad-hoc mobile usersgenerating location proofs for each other in adistributed setting. However, it can easilyaccommodate trusted mobile users and wirelessaccess points. STAMP ensures the integrity andnon-transferability of the location proofs andprotects users' privacy. But STAMP does notensure localization accuracy and time for switchinguser location. A new Lateration based Privacypreserving and Transmission Scheme (LPTS) isproposed for wireless networks to improvelocalization accuracy. Besides, trust group basedverification improves secure transmission over the network minimizing errors in communication.

Biometric Car Door Security System

V.Padmajothi[1], Harish.R[2], M.Vishwanath[3], Tharun Reddy.B[4]
[1,2,3]Student B. Tech ECE,[4]Assistant Professor (OG), SRM UNIVERSITY.
✉: [1]padmajothi.v@ktr.srmuniv.ac.in,[2]harish_raja@srmuniv.edu.in,
[3]matamvishwanath_yerri@srmuniv.edu.in,[4]tharun_reddy@srmuniv.edu.

Paper ID:EC-08

First and foremost thing required for mankind is a security system, playing a key role in many places like offices, institutions, libraries, laboratories, etc. in convenience to keep our data confidential so that no other unauthorized person could have an access to them. One level of ensuring authentication of a vehicle through a biometric sensor, the mainstream of the project is EMBEDDEDSYSTEM and BIOMETRIC. Unauthorized access is prohibited by designing a lock that stores the fingerprints of one or more authorized users as perrequirement. The fingerprint is sensed by sensor and is validated for authentication. If the fingerprintmatches, the door will be opened automatically, otherwise the buzzer connected to an audio amplifierwill be activated so that the people near surroundings will get an alert. The use of GSM MODULE helps theuser identify the activity through text message, notifying the user.

MEMS based Hand Gesture Wheel Chair Movement Control with Emergency Alert

D.Sobya[1], R.Varshni[2], P.Albinia[3]

[1]Assistant Professor, [2, 3] B.Tech, Department of Electronic and Communication Engineering,
Christ Institute of Technology,Pondicherry, India

✉: [1]sobyadevaraj@gmail.com,[2]varshubaby9693@gmail.com,[3]albiniaphilip1912@gmail.com

Paper ID:EC-52

The objective of this project is to develop a control on wheel chair which helps to the physically disabled persons using their hand movement or their hand gesture recognition through MEMS technology. In this article a fully committed wheel chair to the biomedical sector with its smart features is presented. This wheel chair is useful for disabled persons who are having various ailments which makes them disable or immovable. Persons with different symptom combination can get benefit out of it at different level. Some wheel chair users find difficult or impossible to operate manual or powered wheel chairs. This multi-control smart wheel chair incorporates smart features like obstacle detection, voice control, temperature monitoring and heart rate monitoring. In this research, it is not only monitoring the patient but also to send the emergency alert to the predefined destination. The smart wheel chair control unit consists of integration of AVR microcontroller SST89C52 with MEMS module, GSM module SIM900, ultrasonic and infrared sensors, temperature sensor LM35 and motor driving circuit for controlling motor's speed.

Performance Analysys In Impact Of Trust Based Security Association And Mobility In Manet

K.Sivagurunathan[1], B.Vishnukumar[2],D.Sobya[3]

[1]Assistant Professor,[2] B.Tech,,Department of Electronic and Communication Engineering,
Christ Institute of Technology,Pondicherry, India

✉:[1]msg2sivaguru@gmail.com,[2]vishnukumarsjs@gmail.com

Paper ID:EC-62

Trust models in the literature of MANET'S commonly postulate that packets have different security requisites. Afore a node forwards a packet, if the receiver trust level does not meet the packet's requisite level, then the recipient must perform certain security modality procedures, such as re-authentication. We present in this paper an analysis of the epidemic broadcast delay in such context. The network mobility and trust models presented in this paper are quite generic and sanction us to obtain the delay component induced only by the security modalities along a path. Numerical results obtained by simulations withal corroborate the precision of the analysis. In particular, we can observe from both simulations and analysis results that, for immensely colossal and sparsely connected networks, the delay caused by security modalities is diminutively minuscule compared to the total delay of a packet. This additionally betokens that parameters like network density and nodes velocity rather than any trust model parameter, have more impact on the overall delay.

Border Crossing Detector and Weather Parameter Alert System

A.Alli[1], B.Kawiya[2], K. Gowrishankar[3]
[1,2,3]Department of ECE, Rajiv Gandhi College of Engineering & Technology, Pondicherry, India.
✉:[1]gowri200@yahoo.com

Paper ID: EC-88

In general, the problem faced by the fishermen for the past ten years is difficulty in indentifying there nation border. During fishing, the fisherman may not aware of their nation border. The other problem faced by the fishermen is that during dark hours, the obstacles are not visible to the naked eye. There are no existing systems to alert the fisherman about any sudden weather changes. So, the border crossing detector will alert the fishermen when the fishermen trespass the border or when an obstacle is detected. During dark hours, the engine will be controlled automatically if they trespass the border. In most of the existing system GSM is used, and from the base station the alert is given to the fishermen who is in the middle of the sea for fishing, and Zigbee transmitter and receiver is used for all this process, so it will consume large amount of time and the alert will not be given to the fisherman instantly. So, in the proposed system the default value is inbuilt in the system, the engine will be controlled automatically when the fishermen trespasses the border, the alert can be given instantly, this will help the fishermen in all the aspects, and number palette system will be placed in the boat for the emergency and the safety of the fisherman.

Nearest Keyword Set Search In Multidimensional Dataset

Mrs.D.Maladhy[1],M.Risvaanabegum[2],G.Sivapriya[3],V.Suryadharshini[4]
[1] Assistant Professor, Department of Information Technolgy, RGCET
[2,3,4] Department of InformationTechnology RGCET
✉: [1]maladhymtech@gmail.com,[2]risvaanariz@gmail.com,[3]priyagunasekaram@gmail.com,
[4]suryadharshini15@gmail.com

Paper ID: IT-31

Measuring the semantic similarity between words is an important component in various tasks on the web such as relation extraction, community mining, document clustering, and automatic metadata extraction. Despite the usefulness of semantic similarity measures in these applications, accurately measuring semantic similarity between two words (or entities) remains a challenging task. We propose an empirical method to estimate semantic similarity using word counts and text snippets retrieved from a web search engine for two words. Specifically, we define various word co-occurrence measures using word counts and integrate those with lexical patterns extracted from text snippets. To identify the numerous semantic relations that exist between two given words, we propose a novel pattern extraction algorithm and a pattern clustering algorithm. The optimal combination of word counts-based co-occurrence measures and lexical pattern clusters is learned using support vector machines. The proposed method outperforms various baselines and previously proposed web-based semantic similarity measures query benchmark data sets showing a high correlation with human ratings. Moreover, the proposed method significantly improves the accuracy in a community mining task.

A Novel Tehcnic Privacy Preserving And Distributed And Parallel Access To Cloud Databases Using Fhe

P.Vikram[1], N. Mounika Sai Lakshmi[2], M.Tharun Teja[3]
[1]Department of Electronics and Computer Engineering, Koneru Lakshmaiah University, Guntur, India
✉: [2]saimounikalakshmi@gmail.com

Paper ID: ECM-01

Since data in cloud will be arranged anywhere, based on the demanding operations, secure the cloud it isimportant. That significant security protest with clouds may be that the holder of the information might not have control from claiming the place the information is orchestrated. This will be a direct result assuming that one needs to misuse the support for utilizing cloud registering. This detail imposes reasonable information organization choices: first plain information must make accessible main by trusted gatherings that don't fuse cloud providers, mediator, Also Internet; previously, whatever untrusted context, information must be encrypted. Delightful these objectives need distinctive levels for muddling contingent upon the sort of cloud aid. We recommend SecureDBaaS Concerning illustration the initial demonstration that permits cloud occupants will detract full inclination from claiming DBaaS qualities, for example, opportunity, and accuracy, also versatile scrabbled, without exposing umpteenth encrypted information of the cloud supplier. Those development outline might have been Inspired Toward goal: to permit multiple, separate, Also geographically appropriated customers to execute existing together operations with respect to encrypted data, including SQL statement that change the database structure with FHE

Auditing The Files In Cloud Computing

J.Veerendeswari[1],S.Rukshana[2], B.Nithyalakshmi[3]
V.Indumathy[4]
Assistant Professor, Department of Information echnology,
Rajiv Gandhi College of Engineering & Technology, Puducherry-605014,
✉:shafizukshana@gmail.com[2], nithyalakshmi2315@gmail.com[3], indumathyvelu96@gmail.com[4]

Paper ID: IT-32

It is important to provide secure keys to share the data for developing cloud computing applications. This paper proposes a public auditing with data security scheme using self-destruct Protocol. It is not feasible to implement a full life cycle privacy security to access a sensitive shared data on cloud servers. To overcome the security problem, a key-policy attribute-based encryption with time-specified attributes (KP-TSABE) is proposed. In the KP-TSABE scheme, every cipher text is labeled with a time interval while private key is associated with a time instant. The cipher text can only be decrypted if both the time instant is in the allowed time interval. The sensitive data will be securely self-destructed after a user-specified expiration time. Further web service is invoked while the file is uploaded for security by using random algorithm selection method. It provides a difficulty for hacker to hack the file.

Induction Motor Faults Diagnosis By Zero Sequence Current

P. Kripakaran[1], Dr. B. Rami Reddy[2]
[1]Research Scholar, Department of EEE, Pondicherry Engineering College, Puducherry, India.
[2]Professor, Department of EEE, Pondicherry Engineering College, Puducherry, India.
✉:[1]kripa_pt@yahoo.co.in, [2]ramireddy44@yahoo.co.in

Paper ID: EE-14

Detection of faults in electrical motors are very important for avoiding unpredicted failures of the machines. Early detection and diagnosis of faults that may occur are desirable to ensure that operational effectiveness. This paper addresses a new diagnostic mean for accurate, reliable and effective diagnosis of faults in three phase induction motor by means of zero-sequence stator current spectrum. A series of simulations using the models of three phase cage induction motor are performed under different fault conditions such as broken rotor bars, Eccentricity, Stator fault and Bearing fault. Designed models were implemented with the help of finite element method to provide data that makes it possible to diagnose presence of any type of faults, as well as to analyze obtained and calculated results. The results are illustrated in the form of graphs and tables that make visible illustration for effectiveness of the used diagnosis method.

An Experimental Study on the Effect of Polypropylene on Shear Parameters of Expansive Soil

Vijayaraghavan.C[1], Dhanakantharaj.J[2], Sundaramoorthy.N[3], Suriya.A[4]
[1] professor & Head, [2]Assistant Professor, [3,4]Under Graduate Students
Department of Civil Engineering, Christ Institute of Technology.
✉:[1]vijayaraghavanc@gmail.com,[2]jdhanakantharaj@gmail.com,[3]civilsundar8@gmil.com
[4]ssuriya244@gmail.com

Paper ID: CIVIL-18

Soils are complex mixtures of minerals, water, air, organic matter and living things. It forms at surface of land. It is the skin of earth. Soil is capable of supporting plant life and is vital to life on earth. Expansive soils are also called as swelling soils/ shrinking soils, which has tendency to swell and shrink with the variation in water content. Soil Stabilization is the modification of soils to enhance their physical and shear properties. Stabilization can improve the shear strength of soil and control the shrink-swell properties of a soil, thus increasing the load bearing capacity of a soil to support pavements and foundations. This study has been carried out to evaluate the effects of polypropylene fiber on the geotechnical properties of the locally available soil (expansive soil) from Kunimudakku, Puducherry. The tests which are to be conducted on the sample of soil deals with consistency limits, specific gravity, free swell index, compaction, shear strength and bearing capacity. These tests are to be conducted at both non-stabilized and stabilized states by adding 0%, 0.5%, 1.0%, 1.5%, 2.0%, 2.5% and 3.0% of polypropylene fiber.

An Analytical Study Of Buckling Restrained Braced Frames Under Lateral Loads Using Etabs

G. Bhargava Laxmi1, Y. Himath Kumar2, N. Lingeshwaran3, N. Srujana4
1M.tech student, Department of Civil Engineering, KL University, Guntur, India
[2],3,4Assistant professor, Department of Civil Engineering, KL University, Guntur, India
✉:himathkumar007@kluniversity.in,lingesh1609@kluniversity.in,n.srujana@gmail.com

Paper ID: CIVIL-19

Many buildings failed during past earthquake due to lack of lateral strength. Out of many methods, Buckling Restrained Braced (BRB) frame systems is used as the primary lateral force resisting elements in new and retrofit projects. In this study, design, analysis and comparison of the different bracelayouthas been carried out. The selection of BRB configuration has been adopted based on the suitable joint sway moments. A building model was considered to analyze the behaviorof a structure with and without BRB to compare the parameters like storey drift, storey forces, diaphragm drift, storey stiffness, using response spectrum method of analysis. The performance of building during lateral load increases with BRB.

Soft Computational Based Future Selection Model For Landslide Risk Analysis

Velmurugan J[1], M Venkatesan[2]
[1]School of Computing Science & Engineering,VIT University, Vellore, India
[2]School of Computing Science & Engineering,VIT University, Vellore, India
[1]velmurugan85@gmail.com, [2]venkisakthi77@gmail.com

Paper ID:CS-81

This A natural tragedy causes enormous loss in terms of people life and infrastructures. Landslide is one of the prime disasters in the hill regions such as Uttarakhand, Sikkim and Ooty in India. The extent of damages of landslide could be reduced or minimized by proposing novel landslide risk analysis model. Landslide is generated by various factors such as rainfall, soil, slope, land use and land covers, geology, etc. Soft Computation plays major role in landslide risk analysis. There are so many components are involved to identify the landslides. In these few, components may fully depend for the prediction of landslides. In this paper we are propose the Rough Set theory to identify the importance of the attributes to analyze the possibilities of various landslide risk level at Coonor taluk of Niligiri district. The proposed model is validated with real time data and performance is compared with other models.

Smart GPS Collar for Wild Elephant Herd Movement Control across Virtual Forest Fence using Sound Stimulus and Micro Vibrators

S.Nivash[1], G. SaiKrishna[2], M. Sachin[3], M.GopiKrishna[4]

Paper ID:EC-90

Population growth forces people to occupy forest fringe areas which are previously natural habitats and migration path of wild elephants. Humans try to prevent wild elephants from entering their area and agricultural lands by passing high voltage electricity in the fences across the forest edge. To avoid the human-elephant conflict and to prevent endangered species like wild elephants dying from accidents we propose an intelligent embedded solution using the latest technologies. The project aim is to design an autonomous system that shepherd the wild elephants preventing them from leaving the forest boundary. Wild elephants live as a herd and the leader of the herd is given a smart GPS equipped collar device that verifies the elephant location to the forest boundary. As the elephant herd approaches the virtual boundary, the device presents a sound and physical stimulus whose effect is to move away the leader elephant and thereby the entire herd.

Dynamic Reconfiguration using Cryptographic Primitives

Vinith K[1], Anilet Bala A[2], Ruhan Bevi A[3]
ECE, SRM University, Chennai, India
✉:[1]vinith_kannan94@srmuniv.edu.in ,[2]aniletbala.a@ktr.srmuniv.ac.in,[3]ruhan.b@ktr.srmuniv.ac.in

Paper ID:EC-91

As more number of gadgets are set to be connected to the internet in the near future, the need for security plays an important role. The high level of security is achieved using encryption of the devices which can be done by implementing cryptographic algorithms on Field Programmable Gate Array (FPGA) where more than one cryptographic algorithms can be implemented using a novel technique called partial reconfiguration. Partial reconfiguration is a technique where cells in the FPGA can be reconfigured, when reconfiguration is done at runtime then it is called dynamic reconfiguration. The main reason to choose this technique is that it reduces the number of cores to run an application which results in increase of performance, thereby beneficial to many applications such as data mining, IOT, SDN, etc. Encryption is one such application that can be massively benefited using partial reconfiguration. Providing high level encryption for many devices is challenging due to the requirement of high computation power and higher speed of processing by applying the method of partial reconfiguration in FPGAs, the encryption speed and performance will increase. In this paper two cryptographic algorithms were chosen based on the level of encryption and then implemented in the Xilinx ZC702 SOC, in which one cryptographic algorithm runs continuously and the other encryption algorithm can be dynamically configured at run-time. This proves to be effective where less time is taken for encrypting different devices, moreover less CPU is used.

Mems Energy Harvestor Using Capacitive Actuation

G.V.Ganesh[1]*,G.R.K Prasad[1]*, Y.Prathyusha[1],K.Pavan Teja[1],K.Sritej[1],S.Sree Harsha Reddy[1]
[1]Department of ECE, Koneru Lakshmaiah University, Guntur, India
* Corresponding author's Email: ganeshgorla_ece@kluniversity.in

Paper ID:EC-92

This paper Proposes a novel,accurate and a high sensitive capacitive based energy harvester is proposed. The capacitance varied in accordance to the amount of light energy that is able to fall on the surface of top layer of proposed structure. If the light intensity is varied, the displacement of the cantilever is varied which varies voltage in between the plates, that varies the overall capacitance of the proposed structure. The minimum and maximum values of capacitance are 15µf to 600 µf for applied voltage of 0.25µv to 3 µv. The structure is simulated in COMSOL Multi Physics FEM tool and capacitive Sensitivity is calculated with respect to voltage.The capacitive sensitivity is 0.2555

A Load Balance Aware XY Routing Methodology for NoC Architectures

Siddhartha S[1], Sai Prathyusha K[2], Venkateswara Rao M[3], Rama Krishna T V[4]
Department of ECE, KLUniversity,Vaddeswaram, Guntur, India, 522502
✉:[1]Siddu.sudineni@gmail.com, [2]Kopanati.saiprathyusha@gmail.com , [3]venkatvlsi@kluniversity.in,
[4]tottempudi@kluniversity.in

Paper ID:EC-93

The routing algorithm performs a critical function inside the overall performance of the community on chip. Dynamic routing is attractive in view of its considerable change in communication bandwidth and keen adjustment to flawed connections and congested traffic. XY-Routing in the mesh topology creates congestion at the central part of the network which increases the latency and leads to decreased performance. Congestion in a network generally increases at the central part of the network due to increased traffic on the same nodes periodically by the neighbor nodes. Furthermore, congestion due to the neighboring nodes will certainly diminish the performance of the system and will have an adverse effect on the nodes. Then we strive to minimize the local latency due to congestion using address distinct nearby place size, based on Divide and Conquer method for routing strain. It minimizes latency in each local vicinity with the aid of decreasing the routing pressure of each local node. In this paper we have implemented the popular mesh topology along with LBAR algorithm and the results are compared with conventional XY-Routing. It is observed that Load balancing and latency is improved in case of LBAR as compared to Normal XY and Total Network Congestion is reduced for LBAR as compared to traditional XY.

A hybrid feature selection based framework for early predictionof rural college students' academic failure in the introductory courses

R. Krithiga[1], Dr.E.Ilavarasan[2]
[1]Assistant Professor & Head,
Department of Computer Applications,Perunthalaivar Kamaraj Arts College,Puducherry
[2]Professor,
Department of Computer Science & Engineering,Pondicherry Engineering College,Puducherry
✉ : [1]kriithiga@gmail.com,[2]eilavarasan@pec.edu

Paper ID:CS-82

In the recent years, the application of data mining is ubiquitous.Many fields utilize data mining techniques for knowledge discovery and for making strategic decisions. The educational data mining has captured the attention of researchers all over the world due to its significance and need of the society. Predicting academic performance of students is one of the important problems in the educational data mining. Many researches using various data mining techniques and methods addressed this problem of performance prediction. In the literature, the students' performance is predicted only at the end of the programme, leaving out the sensitive introductory semester. Also, a detailed experiment on state-of-the-art feature selection and learning methods of this problem were inattentive. In this light, we propose a hybrid feature selection framework based on the evolutionary search strategy and filter methods to early predict the academic failure of rural college students in the introductory courses using ensemble classifiers as it combines multiple models together and produce accurate results.

Design and Performance Analysis of Uniform Meander Structured RF MEMS Capacitive Shunt Switch along with Perforations

[1]B Leela Koteswari,[2]R Akshay Kumar, [3]K Jeevani, 4T Bhanusai ,[5]Ashok Kumar Puli,[6]G.K.S.P.Raju, [7]Srinivasa Rao Karumuri
KL University,Green Fields-522502, Guntur, A.P

Paper ID:EC-94

This paper presents design and simulation of uniform structured RF MEMS capacitive shunt switch using FEM tool and HFSS software. The switches with different shaped meanders and perforations which result in less spring constant, less pull-in voltage, high isolation loss,high switching speed and low insertion loss have been designed. From the simulated results it is observed that the rectangular perforations gives the better results, when compared with square and cylindrical shaped perforations. Comparative study is done for zigzag, plus and three square shaped meander along with rectangular perforations on each structure. When the gap between the dielectric and the movable beam is 0.8µm, the up state capacitance for HfO2 is 4.06fF and for Si_3N_4 is 3.80fF. The downstate capacitance for HfO2, Si_3N_4 is 49fF, 26.9fF respectively. The capacitance ratio is 120.6. Poly-tetra-fluoro-ethylene (PTFE) material is given for the movable beam whose young's modulus is 0.4Gpa and the spring constant is calculated theoretically for each structure; by using this the pull in voltage and the settling time are calculated. Step switch with three square Meander has switching time 10.25µs, pull in voltage as 2.45V. By usingHFSS 3-D electromagnetic modelwe observed the return loss (S_{11}) is less than -60dB, the insertion loss is less than -0.07dB in the range of 1 to 40GHz frequency and switch isolation (S_{21}) is -61dB at 28 GHz frequency.

Design And Analysis Of Folded Leg Structured Rf Mems Capacitive Shunt Switch

B.Sai Ramya[1], M.Ramya2, G. V. Sri Sailatha3 , Bh. Venkata Sai Kishan4, K. Srinivasa Rao5*,P.Ashok kumar6,G.prakash raju7

Department of ECE, K L University,Green Fields, Vaddeswaram, Guntur-522502, Andhra Pradesh, India.

Paper ID:EC-95

This paper presents the design of folded leg based RF MEMS (micro-electro mechanical systems) switch which is suitable for K_a-band applications with return loss of -47dB, isolation of -38dB and insertion loss of -0.06 dB. Minimum permanent deformation can be achieved by designing the rotationally moveable MEMS bridge. The folded leg structure has been chosen since it has low spring constant through which we can pull off low actuation voltage. In addition to the actuation voltage, various parameters like insertion loss, return loss and isolation have been calculated. The timing analysis is done using MATLAB. The actuation voltage analysis is performed by using three different materials for beam such as aluminium, gold, copper .From the simulated results, the best results have been obtained when used gold material for beam, quartz for substrate, and HfO_2 for dielectric. It is observed that by using high K dielectric material can drastically improve the capacitance ratio of the switch. The actuation voltage is 3.1V for HfO_2 and 3.5V for Si_3N_4. Switching time analysis has been carried out in MATLAB and achieved 1µs switching time for gold as beam material with air gap of 1µm. The capacitive ratio for 1µm air gap between beam and dielectric with Si_3N_4 is 126.88 and HfO_2 is 208.48.

Performance Analysis of Crab Leg Based RF MEMS Switch for K-Ka Band Applications

S.Sai Pravallika, [1] N.Siddaiah, [1] G.V.Sai Prasanna, [1] R.Mounika, [1] T. Raja Gopal, [1]

[1] Department of ECE, KL University, Green Fields, Vaddeswaram-522502, Guntur Dist., A.P, India.

✉:nalluri.siddu@gmail.com, s.saipravallika96@gmail.com

Paper ID:EC-96

In this paper the design and modeling of capacitive shunt switch for k-ka band applications is presented. The proposed model for this design is the crab leg flexure. In order to reduce the squeeze film air damping, the perforated switch with reduced spring constant is designed. Analysis of designed switch has been carried out on the various parameters of the switch such as damping factor, switching time, quality factor and Eigen frequencies in order to design a reliable switch. The results indicate that the obtained pull in voltage is 3.1V for the dielectric gap of 1µm and spring constant of 2.95N/m^2. Switching time is observed as 1.2µs and 2.15µs for the gap of 1µm and 1.5µm respectively. The capacitance ratio i.e. C_{down}/C_{up} is 211.11 for HfO_2 and 100.741 for Si_3N_4. Resonant frequency is obtained as 14.45 KHz. Return loss is calculated as -44.85dB at a frequency of 1GHz and -25.68dB at a frequency of 27.5GHz and insertion loss is obtained as -0.0447db at 1GHz and -1.0379dB at 27.5GHz. The maximum peak isolation is observed as -59.5dB at 1GHz frequency and -71dB at 27.5GHz frequency.

Mobile Based Smart Home Automation system with Control via Internet Connectivity

Srinivas ravi K, Sai Kumar Mukka, Prapulla kumar M
Department of Electronics and Computer Engineering K L University, Vaddeswaram, Guntur, A.P, INDIA

Paper ID:ECM-04

Accessibility fast versatile systems like 3G and Long Term Evolution (LTE) combined with less expensive and accessible smart phones, industry has seen a tremendous development giving different administrations and applications at the fingertips of the citizens. Internet of things (iot) provides a platform that allows devices to connect, sensed and controlled remotely across a network infrastructure which are associated with Internet through an IP address. Today there are many applications are ranging from smart agriculture, smart home, smart education etc . This paper discuss about IOT and how it can be utilized for realizing smart home automation using a node MCU(Wi-Fi module)based on writing a program on Aurdino software with internet from that we can extract IP address by using that we can control the smart home automation system.

Design of Reliable Multiplier Using Bypassing Technique

G.V.Ganesh[1]*, D.Praveen Kumar[1],J.Sri Ram[1],A.Dileep Reddy[1], M.Pavan Teja[1]

[1]Department of Electronics and Communication Engineering, KL University, Guntur, India
*Corresponding author's Email: sriramjammula10@gmail.com

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Digital multipliers are the most vital arithmetic functional units. The overall presentation of these systems depends on the throughput of the multiplier. A multiplication, frequently requiring k cycles to complete, can be finished earlier if some of the leading important bytes are all zeros or ones. This paper proposes a simple scheme to exchange the two operands energetically to reduce more cycles for 32-bit by 32-bit multiplications. Tested by some sample data shows 60% decrease in delay product. Therefore, it is vital to design reliable high-performance multipliers. The multiplier is designed using Column Bypassing technique. The modified multiplier is further used in Aging Aware multiplier with Adaptive Hold Logic(AHL).

Multifactor Authentication to Enhance Security in Banking System

Shivam Kumar[1], Dr. Agilandeeswari L[2], Muralibabu K[3]
[1]MCA Student, School of Information Technology and Engineering, VIT University, Vellore
[2]Assoictae Professor, School of Information Technology and Engineering, VIT University Vellore.
[3]Vice Principal, Podhigai College of Engineering and Technology, Thirupattur.
✉:kshivam213@gmail.com, : agila.l@vit.ac.in mail2muarli05@yahoo.co.in

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In modern era, online technologies are growing so fast. Every companies use networking to replace their works in online, which in contrary the chances of stealing data also increases. To secure the data of most important industry which is backbone of any country like bank, defence where data is the main asset we need highly secure interface which protect system unauthorized access. Bank is the important industry of any country so the data of each customer need to be protected from intruders. Intruders can steal data of either any particular customer and steal all money of that customer, or they can steal the employee username and password and instead of that employee intruder access the system which is very formidable for bank. Mostly bank uses username and password to authenticate their employee to enter into system. But it is not significant as many incidents have shown that these authentications are easily broken by intruder. This paper proposes the multifactor authentication using face recognitions and biometrics to enhance security in banking systems.The experimental result on multiple databases shows the increased accuracy.

Mining Regular Crime Patterns in Spatio-Temporal Databases

G. Vijay Kumar[1], N Dilip Kumar[2], R Lakshmi Prasanna sai[3]
ECSE department,School of Computing,K L University,Guntur 522503, India
✉:[1]gvijay_73@kluniversity.in,[2]dileeprao3@gmail.com,[3]laxmiprasannasai@hotmail.com

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Crime pattern theory emphasize how crime appear from Spatio-temporal method. To getknowledge on crimes, it has to be studied in terms of space and time. Crime patterns and crime relatedactivities research those spatio (location) distribution of crimes, omitting the temporal (time) dimensions.Exactly separation of crimes by space and time, example hour of a specific day, day of a specific week,month of a specific year is suitable to theory proposed. Latest data enables spatio-temporal separationof data increasingly achievable; larger data files allow separation of larger data into time and space.Thus to identify the regularity of crimes with respect to time and space, we proposed a new algorithmcalled RFSTP algorithm to mine (regularly-frequent crime patterns in spatio-temporal database) using avertical data format which requires database scan of once. A crime pattern is said to be regular-frequent,whenever the occurrence behavior of a crime pattern is less than or equal to user given regularity andsupport greater than or equal to thresholds given by the user. Experimental results of RFSTP algorithm isefficient in both memory utilization and execution time.

Improving Fault Tolerances with in a Cloud Using Crossbar Networks

Dr.K.V.Daya Sagar[1]-Associate Professor, Jenny Martha[2], Asha[3]
Dept. of Electronics and Computer Science, K L University,K L University

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Cloud computing is New Internet Based processing which will permit the applications to be conveyed as administrations over the Internet. The clients can get to cloud administrations from anyplace whenever by utilizing the Wireless systems. In present days, Cloud registering is confronting numerous Network faults because of multifaceted nature of interconnection systems, huge number of clients, client's versatility, and a huge assortment of utilization administrations. In this paper, we are going to give diverse adjustment to network faults by making usage of Cross Bar Networks in which if a switch comes up short then the row and column to which it has a belong are removed and replaced by using new row and column. These experiments are conducted using CloudSim simulator.

Social Media Analytics Using Machine Learning

Kameswara Rao M[1], Himaja Shankari P[2], Chandini Devi G[3],
Department of Electronics and Computer Engineering
K L University, Vaddeswaram, Guntur, A.P, INDIA

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Facebook is a person to person communication site which is a social media platform available today and also a source that has changed the way individuals seek after social life and made it simple to interact with relatives, friends, companions and partners. The way of data on such long range informal communication sites can be straight forward ordered as unstructured and fluffy. In normal everyday exchanges, spellings, sentence and language structure are generally ignored. That may incite ambiguities in different areas, for instance, semantic, lexical, and syntactic, which portraits hard to investigate and separate information designs from those datasets. Thus, review goes for breaking down printed information from Facebook and endeavors to discover intriguing learning from such information and speak to it in various structures. Thousands of posts over Facebook were extricated and analyzed into the graphical format. Distinctive content mining systems were connected on the gathered information. Our paper work is an effort to explain the model of user discretion about a subject using R studio.