Editor-In-Chief Chair
Dr. Shiv Kumar
Ph.D. (CSE), M.Tech. (IT, Honors), B.Tech. (IT), Senior Member of IEEE
Professor, Department of Computer Science & Engineering, Lakshmi Narain College of Technology Excellence (LNCTE), Bhopal (M.P.), India

Associated Editor-In-Chief Chair
Dr. Dinesh Varshney
Professor, School of Physics, Devi Ahilya University, Indore (M.P.), India

Associated Editor-In-Chief Members
Dr. Hai Shanker Hota
Ph.D. (CSE), MCA, MSc (Mathematics)
Professor & Head, Department of CS, Bilaspur University, Bilaspur (C.G.), India

Dr. Gamal Abd El-Nasser Ahmed Mohamed Said
Ph.D.(CSE), MS(CSE), BSc(EE)
Department of Computer and Information Technology, Port Training Institute, Arab Academy for Science, Technology and Maritime Transport, Egypt

Dr. Mayank Singh
PDF (Purs), Ph.D(CSE), ME(Software Engineering), BE(CSE), SMACM, MIEEE, LMCSI, SMIACSIT
Department of Electrical, Electronic and Computer Engineering, School of Engineering, Howard College, University of KwaZulu-Natal, Durban, South Africa.

Scientific Editors
Prof. (Dr.) Hamid Saremi
Vice Chancellor of Islamic Azad University of Iran, Quchan Branch, Quchan-Iran

Dr. Moinuddin Sarker
Vice President of Research & Development, Head of Science Team, Natural State Research, Inc., 37 Brown House Road (2nd Floor) Stamford, USA.

Dr. Shanmugha Priya. Pon
Principal, Department of Commerce and Management, St. Joseph College of Management and Finance, Makambako, Tanzania, East Africa, Tanzania

Dr. Veronica Mc Gowan
Associate Professor, Department of Computer and Business Information Systems, Delaware Valley College, Doylestown, PA, Allman, China.

Dr. Fadiya Samson Oluwaseun
Assistant Professor, Girne American University, as a Lecturer & International Admission Officer (African Region) Girne, Northern Cyprus, Turkey.

Dr. Robert Brian Smith
International Development Assistance Consultant, Department of AEC Consultants Pty Ltd, AEC Consultants Pty Ltd, Macquarie Centre, North Ryde, New South Wales, Australia

Dr. Durgesh Mishra
Professor & Dean (R&D), Acropolis Institute of Technology, Indore (M.P.), India

Executive Editor Chair
Dr. Deepak Garg
Professor & Head, Department Of Computer Science And Engineering, Bennett University, Times Group, Greater Noida (UP), India

Executive Editor Members
Dr. Vahid Nourani
Professor, Faculty of Civil Engineering, University of Tabriz, Iran.

Dr. Saber Mohamed Abd-Allah
Associate Professor, Department of Biochemistry, Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China.

Dr. Xiaoguang Yue
Associate Professor, Department of Computer and Information, Southwest Forestry University, Kunming (Yunnan), China.
Dr. Labib Francis Gergis Rofaiel
Associate Professor, Department of Digital Communications and Electronics, Misr Academy for Engineering and Technology, Mansoura, Egypt.

Dr. Hugo A.F.A. Santos
ICES, Institute for Computational Engineering and Sciences, The University of Texas, Austin, USA.

Dr. Sunandan Bhunia
Associate Professor & Head, Department of Electronics & Communication Engineering, Haldia Institute of Technology, Haldia (Bengal), India.

Dr. Awatif Mohammed Ali Elsiddieg
Assistant Professor, Department of Mathematics, Faculty of Science and Humatarian Studies, Elnielain University, Khartoum Sudan, Saudi Arabia.

Technical Program Committee Chair
Dr. Mohd. Nazri Ismail
Associate Professor, Department of System and Networking, University of Kuala (UniKL), Kuala Lumpur, Malaysia.

Technical Program Committee Members
Dr. Haw Su Cheng
Faculty of Information Technology, Multimedia University (MMU), Jalan Multimedia (Cyberjaya), Malaysia.

Dr. Hasan. A. M Al Dabbas
Chairperson, Vice Dean Faculty of Engineering, Department of Mechanical Engineering, Philadelphia University, Amman, Jordan.

Dr. Gabil Adilov
Professor, Department of Mathematics, Akdeniz University, Konyaalti/Antalya, Turkey.

Dr. Ch.V. Raghavendran
Professor, Department of Computer Science & Engineering, Ideal College of Arts and Sciences Kakinada (Andhra Pradesh), India.

Dr. Thanhtrung Dang
Associate Professor & Vice-Dean, Department of Vehicle and Energy Engineering, HCMC University of Technology and Education, Hochiminh, Vietnam.

Dr. Wilson Udo Udofia
Associate Professor, Department of Technical Education, State College of Education, Afaha Nsit, Akwa Ibom, Nigeria.

Convener Chair
Mr. Jitendra Kumar Sen
Blue Eyes Intelligence Engineering & Sciences Publication Pvt. Ltd., Bhopal(M.P.), India

Editorial Chair
Dr. Sameh Ghanem Salem Zaghloul
Department of Radar, Military Technical College, Cairo Governorate, Egypt.

Editorial Members
Dr. J. Gladson Maria Britto
Professor, Department of Computer Science & Engineering, Malla Reddy College of Engineering, Secunderabad (Telangana), India.

Dr. Sunil Tekale
Professor, Dean Academics, Department of Computer Science & Engineering, Malla Reddy College of Engineering, Secunderabad (Telangana), India.

Dr. K. Priya
Professor & Head, Department of Commerce, Vivekanandha College of Arts & Sciences for Women (Autonomous, Elayampalayam, Namakkal (Tamil Nadu), India.

Dr. Pushpender Sarao
Professor, Department of Computer Science & Engineering, Hyderabad Institute of Technology and Management, Hyderabad (Telangana), India.

Dr. Nitasha Soni
Assistant Professor, Department of Computer Science, Manav Rachna International Institute of Research and Studies, Faridabad (Haryana), India.
Cognitive Radio Network using LEACH Protocol for Maximization Energy Efficiency

Abstract: Over present day remote interchanges those range will be allocated with settled authorized clients Also on the different side the amount of remote gadgets may be expanding quickly that need prompt range crunch. Concerning illustration the range will be precious it need to a chance to be used effectively. The result with relieve this issue will be “Spectrum Sharing”. A standout amongst those imaginative methodologies to remember and right those range gaps display in the authorized range may be ‘Cognitive radio (CR)’. Range sensing or offering will be An build to those execution about know works performed by those cognitive radio (CR). Issues identified with single cr identification are succeed Eventually Tom's perusing agreeable identification utilizing group leader from close-by hubs Previously, cognitive radio. Low vitality versatile grouping chain of importance (LEACH) may be a hierarchic protocol Previously, which The majority hubs transmit with group heads, and the bunch heads aggravator and compresses the information What's more ahead it of the build station (sink) which expands cognitive radio execution An non agreeable range sensing calculation might not worth of effort great with the goal agreeable range sensing (CSS) calculations Eventually Tom's perusing using multi-user assorted qualities determines with numerical outcomes it camwood be watched that Normal throughput will be attained through streamlining which bring been investigated through a normal throughput vs number from claiming helpful auxiliary clients for different combination lead. An radio which autonomously detects What's more exploits void range will expand your record exchange rate. Suppose this same radio Might recall those areas the place your calls have a tendency with drop Furthermore organize for your call on a chance to be overhauled by an alternate transporter for the individuals areas. These would exactly of the thoughts inspiring those advancement for cognitive radio by drain. Over effect, An cognitive radio will be a programming radio whose control procedures power situational learning and canny transforming with fill in towards accomplishing some objective identified with the necessities of the user, application, or system. Emerging from a legitimate advancement of the control techniques of a product radio, cognitive radio displays those likelihood about various revolutionary applications, first of which will be entrepreneurial range use.

Keywords: The result with relieve this issue will be “Spectrum Sharing”. ‘Cognitive radio, (CR)’. Cognitive radio, (LEACH) may be a hierarchic protocol Previously, (CSS) Over effect, radio control techniques of a product radio.

References:
2. Najam uıl Hasan. COOPERATIVE SPECTRUM SENSING IN COGNITIVE RADIO NETWORKS, 2006-NUST-MS PhD-ComE
3. http://enpub.fulton.asu.edu/PowerZone/FuzzyLogic/chapter%201/frame1.htm
### Investigation of Total Quality Management Principles in the Print Production Industry

**Abstract:** The purpose of the investigation was to determine the efficiency of the term “Total Quality management”, to define the principle of the quality concept and to test the effectiveness with in the print production industry. The research involves in-depth survey of quality management system, which was distributed to print production employees across the state. The aim of the survey was to collect data that was predominately qualitative. It inquired upon the utilization and effectiveness of quality management system, knowledge and usage of TQM principles with in the participant’s company. Using content analysis, the collected data was analysed and with the gathered information case studies were developed. The investigation result shows that the principle of TQM was widely executed in print production industry. In many of the print production industry employees not having the clear idea of TQM is, and the more successful industry tended to have a more solid knowledge and usage of TQM principles. These print production industries may benefit by taking time to fully understand TQM and use it to its fullest potential.

**Keywords:** TQM Principles, Print Production, Printing Industry, Quality Management System.

**References:**

**Authors:** Ghiath Al Aqel

### A Survey of The Optimization of The Flexible Job Shop Problem

**Abstract:** The flexible job shop problem is an important problem in modern manufacturing systems. It is known to be an NP-hard problem. The optimization of this problem can bring in considerable improvements in the manufacturing efficiency. In recent studies, it has attracted the attention of most researchers in this field. Several metaheuristic methods were proposed to solve this problem. These methods started with exact algorithms and later approximate algorithms, which include heuristic methods, evolutionary algorithms, swarm intelligence, local search and hybrid algorithms, were introduced to cope with the development and the growing scale of the flexible job shop problem. In this paper we explore the algorithms that are most commonly used to solve this problem. This paper also aims to evaluate and compare the performance of these algorithms.

**Keywords:** Flexible Job Shop, Optimization Algorithms.

**References:**
Abstract: A four-element planar UWB-MIMO antenna system with plus-sign stub (for achieving high isolation) is proposed here. The complete antenna system is constructed on 52mm x 52mm, FR4 substrate (dielectric constant=4.3). The structure consists of 4 identical antenna elements, with each element placed orthogonal to its adjacent element on the top of the substrate. The partial ground plane with circular slots is utilized on the back of the substrate. The antenna is simulated using CST Microwave Studio. Simulated S11~10dB, in the entire operating band (2.9~12.9 GHz) and the isolation among the elements is observed to be less than -20 dB in most of the band. Maximum gain of 4.82dB is observed at center frequency (7.9 GHz). VSWR<2 is present throughout the band. The impedance bandwidth of 126.58% shows its candidature for many wireless UWB communication applications.

Keywords: Four-Element UWB-MIMO Antenna, Orthogonal, Plus-sign Stub, High Isolation.

References:
The performance of a given membrane is found to be degraded due to membrane fouling and hence it results into a significant decline in the permeate flux. Therefore it is very necessary to interpret the fouling mechanism in order to predict the profile of permeate flux. The present study illustrates the mechanism of membrane fouling through describing four pore blocking models such as complete pore blocking, standard pore blocking, intermediate pore blocking and cake filtration. The model parameters were also evaluated at varying trans-membrane pressures ranging from 196 to 392 kPa. The accuracy of the fitted model was further judged in terms of higher value of regression coefficient (R2) and here also it is confirmed from Table 1 that cake filtration model exhibits higher values of R2 (≈ 0.98). The degree of membrane fouling was indicated by model parameter k. The values of permeate fluxes calculated from different models are found to be less than the experimental values of the permeate flux indicating the under prediction of flux profile.

Keywords: Concentration Polarization, Fouling, Membrane, Permeate Flux, Pore Blocking.

References:
8. R. K. Bhoyar, Dr. C. C., Handa, “Design Consideration of Adjustable Height and Radial Belt Conveyor System.”[Vol.4, Issueno.10, page no. (4377-4382), (October, 2013)]

Authors: Niresh J., Abdul Samath A.

Paper Title: A Novel Approach Development of Electrically Assisted Braking System

Abstract: This paper provides the means to effectively improve the braking system using BLDC controlled by microcontroller. Efficiency of the conventional mechanical braking is drastically influenced by friction, because of this friction due to braking, life of the brake followed by integrity of the system became compromised. To overcome this, normal braking is assisted using BLDC. Prototype is developed, and the parameters such as braking distance and braking time for various vehicle speed are measured and discussed.

Keywords: Critical Speed, Arduino Board, IR Sensor and DC Moto

References:
1. G. Srinivasa rao and G. Kesewara “Design and Implementation of Micro Controller Blugging Barking in electric/ hybrid electric vehicle

8.

Authors: L.I.Sayyad, Makune Kanchan Karn, Landge Sakshi Sunil, Matade Kalyani Changdeo, More Swati Daulat

Paper Title: Double Helical Spiral Mixer

Abstract: Recent advances in mixer and blender designs have contributed to the growing success of food companies, meeting their requirement for consistency and developing new products while also lowering production costs. This paper discusses both traditional and new specialty mixing technologies available to food manufacturers today. Phase and viscosity are used to classify different mixing categories. Sample applications are presented as well to illustrate certain processing challenges and the mixing technologies used to resolve them.[In conventional method of mixing the metal oxide powder and vehicle mixing is carried out on “Unidirectional Stirring Machine” The stirrer of conventional machine rotates in one direction only which creates a particular flow pattern in the fluids hence the particles tend to stick to the walls of container owing to the centrifugal force rather than mixing thoroughly in mixture of paint, ultimately results into poor quality mixture of paints there by poor quality output of paint]

Keywords: Spiral Blades, Bidirectional Motion, Pneumatic Ram, Planetary Mixer.

References:
**Authors:** Sheena Latif, Saher J. S.

**Paper Title:** An Overview and Implementation of Control Strategies Adopted with DVR in DFIG based Wind Farms

**Abstract:** Doubly Fed Induction Generators have become popular among renewable energy technology associated with wind farms in distribution systems. The Grid Code requirements on LVRT capability of grid connected DFIG systems have gained attention during last few decades. Dynamic Voltage Restorer has emerged as one of the promising, reliable and stable solution for enhancing LVRT capability of grid connected wind generators in many countries. A state of the art review is presented in this paper on the various control strategies adopted in DVR connected DFIG wind farms by various researchers. A MATLAB Simulink based DFIG wind farm is analyzed with symmetric and asymmetric faults and PID controller based DVR is implemented as a solution to enhance the LVRT capability of the system. The active and reactive power flow as well as voltage during fault period is restored and compensated successfully.

**Keywords:** DFIG, DVR, LVRT, Controller, etc.

**References:**

7. Indian Wind Grid Code, Centre for Wind Energy Technology, July 2009: niwe.res.in
8. Indian Electricity Grid Code, Central Electricity Regulatory Commission New Delhi
14. Cristian Wessels, Friedrich W. Fuchs, Fault Ride through of DFIG wind turbines during symmetrical voltage dip with crowbar or stator current feedback solution, Energy Conversion Congress and Exposition (ECCE), 2010 IEEE, Sep 12-16
32. A.F Abdou, a. Abu Siaha, H.R Pota, Application of STATCOM to improve the LVRT of DFIG during RSC fire through fault, Power Engineering Conference (AUPEC), 2012 22nd Australian Universities, 26-29 Sept
A Novel Video Watermarking Scheme Based on DWT and PCA

Abstract: Digital Video Watermarking is one of the great applications of hiding the data in the video for many kind of application like copyright information hiding, secure data travelling etc. Various watermarking techniques are popular in the research community e.g. Discrete wavelet transform (DWT), Discrete cosine transform (DCT), Principal component analysis (PCA). In this paper, Video Water Marking (VWM) scheme related to DWT and PCA is used. DWT and PCA are utilized in the proposed algorithm which enhances the watermarking embedding and decrypting technique. An Arnold’s cap map method has been introduced in the DWT mechanism due to which the resultant video is unsusceptible to much kind of attacks like uniform, Gaussian Noise and Median Filtering. The algorithm become more robust and difficult for the attackers. Data are embedded in the LL coefficients and decoding is encountered based on decrypting technology.

Keywords: Principal Component Analysis (PCA), Watermarking, Frame Extraction, Discrete Wavelet transform (DWT), Visual Saliency.

References:
Abstract: Video watermarking is an important issue to encrypt intellectual property information for the data creators. Increasing data exchange over the internet also enhancing the probability of piracy and attacks on the encrypted/watermarked video. This problem is encouraging the research community to work over the robust watermarking algorithm which provides ideally attack free watermarked video with the quality maintenance of the video. The Video watermarking techniques using Discrete Wavelet Transform (DWT) or Principal Component Analysis (PCA) played a vital role to develop enhanced algorithm to develop the digital watermarking techniques since the last decade. In this paper, a rigorous literature survey has been done to understand the new possible trends in digital watermarking. An investigation of DWT, PCA, and other possible techniques has been done. The possible attacks also discussed along with a survey to understand the robustness of the proposed algorithm of watermarking. This study and survey provide a better way to understand the new areas and scope of research to the researchers.

Keywords: DWT, PCA, DCT, Watermarking, Attacks
References:


18. V. Vickers, R. Jordan “ON DIGITAL IMAGE WATERMARKING ROBUST TO GEOMETRIC TRANSFORMATIONS” IEEE, 0-7803-6297-7


28. Arash Saboori, S.AbolfazliHosseini, “A New Method For Digital Watermarking Based on Combination of DCT and PCA”, TELFOR 2014, pp 521-524


30. Dejey, R.S. Rajesh; ‘Robust Color Image Watermarking Schemes In the Wavelet Domain'; ICTACT JOURNAL ON IMAGE AND VIDEO PROCESSING, Iss 01, 2010


34. Gwena el-Dor and Jean-Luc Doglay, “Collusion Issue in Video Watermarking,” Download Link: https://pdfs.semanticscholar.org


42. S. Voloshynovsky, S. Pereira, T. P.N. Eggers, and J.K. Su. “Attacks on Digital Watermarks: Classification,Error-based Attacks, and Benchmarks.”


Research in Computer Engineering & Technology (IJARCET) Volume 3 Issue 4, April 2014, pp: 1171-1174


48. V. M. Potdar, S.Han, Elizabeth Chang,”A Survey of Digital Watermarking Techniques ” in 3rd IEEE International Conference on Industrial Informatics (INDIN), 10-12 August 2005, Australia

---

Authors: Harshvardhan N. Shinde

Paper Title: Preference of Flexible Pavement Crust Type for Traffic 50msa and Above, Based on Low Direct Construction Cost

Abstract: This paper expedites minimizing the cost of road construction through analysis done based on the road types cited in IRC 37. There are five flexible road types cited in IRC 37-2012 for different traffic volumes and construction materials at various CBRs ranging from 2% to 15% and different traffic volume. This paper includes the analysis for traffic volume 50msa, 100msa and 150msa. District schedule rates and the specification and standards of the Roads (MORTH Specifications) are used to calculate material, equipment and direct construction cost. Co-relation between the cost, road types, CBRs and Traffic volumes is established, which act as baseline to select the low costing road crust type at a particular site for traffic volume from 50 to 150msa.

Keywords: Direct Construction cost, cost variance, Road Types, Traffic, CBRs & Material and construction cost proportions.

---

References:


7. Guidelines for the design of flexible pavements :IRC 37, July 2012

8. Government of Maharashtra Public Works Department State e-DSR for year 2017-18, w.e.f. 14/06/2017

9. MORTH - Specifications for Road & Bridge Works (5th Revision ) 1, 2013.

---

Authors: Maher Shehadi, Anne Lucietto

Paper Title: Engineering Technology Students Response to Hands-on Fluid Power Exercises

Abstract: Hands-on interventions have been the focus of many studies; however, they frequently are not done using a population of students involved in active learning. Engineering technology programs are established with the premise that the program will encourage hands-on exercises, in field experiences, and contact with those that have experience in the field. These researchers work with engineering technology students throughout the academic year, some of them have experience in other programs such as engineering, mathematics, and business. They find the contrast between these groups of students often remarkable. Some studies have focused on the cognitive development of this population, others have focused on survey response that includes student or graduate introspection. Few focus on how the students respond to short, hands-on tasks involving the use of existing skills, and those they acquire in class. This study presents a set of exercises to students and analyzes the lev

Keywords: Active Learning, Performance Comparisons and Improvements, Student-Centered Learning.

References:


Authors: Harshit Ramteke, Manoj Kumar Singh, Abhishek Shrivastava
Paper Title: Implementation of Emotion Recognition By Real Image Expression using Web Camera With The Help of Matlab Tool
Abstract: The human face assumes a tremendous part for programmed acknowledgment of feeling in the field of recognizable proof of human feeling and the connection amongst human and PC for some genuine application like driver state observation, customized learning, wellbeing checking and so on. Most announced facial feeling acknowledgment frameworks, in any case, are not completely thought to be subject-autonomous dynamic highlights, so they are not sufficiently vigorous for genuine acknowledgment assignments with subject (human face) variety, head development and brightening change. In this article we have endeavored to outline a computerized structure for feeling location utilizing outward appearance. For human-PC cooperation outward appearance makes a stage for non-verbal correspondence. The feelings are adequately variable happenings that are evoked because of actuating power. So, in actuality, application, discovery of feeling is exceptionally testing undertaking. Outward appearance acknowledgment framework requires to defeat the human face having various changeability, for example, shading, introduction, demeanor, stance and surface so on. In our structure we have taken edge from live gushing and prepared it utilizing Grabor highlight extraction and neural system. To distinguish the feeling facial traits extraction by foremost segment investigation is utilized and a clustering of various outward appearance with individual Feelings. At long last to decide outward appearances independently, the handled element vector is directed through the officially learned example classifiers. Outward appearances offer essential information concerning feelings of somebody. Understanding outward appearances precisely is one in all the troublesome assignments for social connections. Programmed feeling identification abuse outward appearances acknowledgment is as of now a principle space of enthusiasm among changed fields like registering, drug, and science. HCI examination groups also utilize machine-controlled facial highlights acknowledgment framework for higher outcomes. changed element extraction systems are produced for acknowledgment of articulations from static pictures in addition as ongoing recordings. This paper gives an audit of investigation work dispensed and uncovered inside the field of facial highlights acknowledgment and changed methods utilized for facial highlights acknowledgment.

15. Keywords: Automated Facial Expression Recognition System, Face Detection, Emotion Detection, And Human Computer Interaction (HCI).

References:

Authors: Bhupendra Ambikar, Manoj Kumar Singh, Abhishek Shrivastava
Paper Title: Implementation of Stroke Risk Stratification using Ultrasonic Echolucent Carotid Wall Plaque Morphology: By using MATLAB Tool
Abstract: Stroke hazard stratification visible of grayscale morphology of the ultrasound arterial blood vessel divider has as these days been looked as if it would have a guarantee in arrangement of high hazard versus usually safe plaque or symptomatic versus symptomless plaques. In past examinations, this stratification has been primarily visible of investigation of the furthest mass of the arterial blood vessel vein. thanks to the multifocal plan of hardening of the arteries malady, the plaque development is not restricted to the way divider alone. This paper displays another approach for stroke likelihood appraisal by incorporating analysis of each the shut and much dividers of the arterial blood vessel itinerary utilizing grayscale morphology of the plaque. Further, this paper displays a logical approval framework for stroke hazard appraisal. each these advancements have not been displayed. The philosophy includes of
a mechanized division arrangement of the shut divider and much divider locales in grayscale arterial blood vessel B-mode ultrasound checks. Sixteen grayscale surface highlights square measure patterned, and nourished into the machine learning framework. The preparation framework uses the lumen breadth to form ground truth names for the stratification of stroke hazard. The cross-approval strategy is adjusted keeping in mind the tip goal to amass the machine reading testing characterization exactness mistreatment 3 arrangements of parcel conventions: (5, 10, and Jack Knife). The mean order exactness over all of the arrangements of section conventions for the computerized framework within the way and shut dividers is ninety five.08% and 93.47%, on an individual basis. The relating correct nesses for the manual framework square measure ninety four.06% and 92.02%, on an individual basis. The accuracy of import of the mechanized machine learning framework once analyzed against manual hazard analysis framework square measure ninety eight.05% and 97.53% for the way and shut dividers, separately. The mythical creature of the hazard analysis framework for the way and shut dividers is close to one.0 showing high exactness.

Keywords: Coronary Artery IVUS, Carotid IMT, Machine learning PCA, Risk Assessment

References:


Authors: Jayarenjini N, Unni C

Paper Title: Hexagonal Shaped Microstrip Patch Antenna for Satellite and Military Applications

Abstract: In this work, investigation of the effect of different slots in a hexagonal shaped microstrip patch antenna is presented. The proposed antenna is designed on FR4-epoxy substrate and the performance is obtained by using CST Microwave Studio. The antenna has been analyzed for various dimensions of slots and the optimum has been chosen. By increasing the number of slots, the gain, bandwidth and return loss of the structure has been improved. The simulated antenna structures also show dual band characteristics. The antenna offers application in WiFi IEEE802.11n (2.4 to 5 GHz) and UWB range especially for X-band uplink satellite system (7.9–8.4GHz). As the designed structures resonate in C-band (4-8 GHz), it offers applications in Fixed Satellite Services (FSS) and military also.

Keywords: Microstrip Patch Antenna, Ultra Wide Band, Fixed Satellite Services, Return Loss.

References:

Opinion mining also known as sentiment analysis is the computational study of subjective information towards different entities. Entities usually refer to products, organizations, services or and their features, functions, components and attributes. Opinion mining is a major task of Natural Language Processing (NLP) that studies methods for identifying and extracting opinions from written text, such as product reviews, discussion groups, forums and blogs. Natural Language Processing techniques and lexicon-based approaches for opinion mining are used to extract aspects and customer opinions. Extracting opinion words and product features is an important task in many sentiment analysis applications. Opinion lexicon also plays a very important role because it is very useful for a wide range of tasks. Although there are several opinion lexicons available, it is hard to maintain a universal opinion lexicon to cover all domains. So, it is necessary to expand a known opinion lexicon that is useful for some domains. The aim of this system is to automatically expand opinion lexicon and to extract product features based on the dependency relations. Stanford Core NLP dependency parser is used to identify the dependency relations between features and opinions. Extraction rules are predefined according to these dependency relations. This work proposed an algorithm based on double Propagation to extract feature and opinions. The polarity orientation is annotated by using Vader lexicon. Unlike the existing approaches, this system contributes verbs opinions and verb product features. In order to increase the precision and recall, the system also proposes additional patterns besides 8 rules in Double Propagation. And, general words that are not features and adjectives that are not opinions are filtered in the proposed system. According to experimental studies, our approach is better than the existing state of the art approaches.

Keywords: Opinion Mining, Opinions, Aspects.

References:
The use of glass fibers to reinforce soil is an old and ancient idea. Traditional geosynthetics such as geotextile, geogrid etc. have proved to be efficient, and are increasingly used in geotechnical engineering. In contrast, the use of glass fibers in geotextile, geogrid etc. have proved to be efficient, and are increasingly used in geotechnical engineering.  In this paper, we investigate the potential of glass fibers in improving the properties of soil.

Thereafter, the compaction and California bearing ratio (CBR) were carried out on the unstabilized (control) soil samples.  The required quantity will enhance soils' CBR and density. The use of natural fibers to reinforce soil is an old and ancient idea. Traditional geosynthetics such as geotextile, geogrid etc. have proved to be efficient, and are increasingly used in geotechnical engineering.  In contrast, the use of glass fibers in geotextile, geogrid etc. have proved to be efficient, and are increasingly used in geotechnical engineering.  In this paper, we investigate the potential of glass fibers in improving the properties of soil.

Two soils were used for the compaction and CBR tests. The soils were obtained from a borrow pit at Ajibode and Chapel both located in the University of Ibadan, Ibadan, Nigeria and stabilized with procured glass fiber at proportions of 0.4%, 0.8%, 1.2%, 1.6%, 2.0%, 2.5% and 3.0% by weight. Tests such as particle size analysis, compaction and California bearing ratio (CBR) were carried out on the unstabilized (control) soil samples. Thereafter, the compaction and CBR tests were carried out on stabilized soil samples. The results showed an improvement in the two soils’ maximum dry density and CBR on addition of the glass fibers. The glass fibers had optimum effect on the soils between 1.2% and 1.6% of soil samples. Therefore, incorporating glass fiber into the soils in the required quantity will enhance soils' CBR and density.

**Keywords:** Glass Fiber, Soil Stabilization, California Bearing Ratio, Maximum Dry Density, Reinforcement.

**References:**
27. BS 1377, Method of test for soils for civil engineering purposes, London British Standard Institute, 1990.

Authors: Gbenga Matthew Ayinuola, Olaniyi Diran Afolayan

Paper Title: Potential of Oyster Shell Ash Activated with Cement as soil Stabilizer for Road Construction

Abstract: The study investigated the suitability of oyster shell ash activated with cement as additive to improve soil geotechnical properties. Three Lateritic soil samples were collected and stabilized with varying percentages of oyster shell ash (OYA) from 2% - 15% activated with 5 % cement by dry weight. The mixtures’ geotechnical properties: Atterberg limit, specific gravity, California bearing ratio (CBR) and shear strength parameters (cohesion and angle of friction) were determined. Chemical analysis of the oyster shell ash was carried out in laboratory. Results showed that the OYA is rich in specific gravity and silicon oxides (CaO and SiO2) with other oxides. OYA addition led to increase in specific gravity (2.42 to 2.43 sample 1; 2.24 to 2.50 sample 2 and 2.25 - 2.28 sample 3 ), improvement in Atterberg’s limit through decrease in the plasticity index, increase in the CBR (22.5% - 145% sample 1, 0.54% - 30.78% sample 2 and 1.56% - 54.54% sample 3) and improvement of cohesive shear strength property (50 - 65kN/m² sample 1, 20 - 21 kN/m² sample 2, and 42 – 78 kN/m² sample 3) ) due to the formation of cementitious layer and alteration in the structure and grain composition of soil samples. Therefore, using 6% OYA activated with 5% cement will enhance soil geotechnical properties.

Keywords: Oyster Shell Ash, Soil Stabilization, Geotechnical Properties, Lateritic Soil.

References:

Authors: A. Sivatharan, D. HariPriya

Paper Title: Hand Gesture Controlled Vehicle Using Accelerometer with The Help of Zigbee Pairs

Abstract: In this paper a model to control the vehicle via hand gesture using accelerometer is presented. Accelerometer is a three axis device which is mounted on the human hand in order to perform the movement of the
vehicle as per the actions performed by the human hand. The signal transmission from transmitter to receiver is done by zigbee technology. The microcontroller used is a ATmega328 microcontroller, it is programmed to take analog reading as input from accelerometer and to transmit the signal at the receiving end of the robotic arm. The DC motor are used to achieve the movement of the vehicle. The main aim is to control the robotic arm via human gesture in a wired fashion with ease in motion over a given range. It consists of mainly two parts, one is transmitter part and another is receiver part. The transmitter will transmit the signal according to the position of accelerometer and your hand gesture and the receiver will receive the signal and make the vehicle move in respective direction. Here, the program is designed by using Arduino UNO.

Keywords: MCU, Gesture, Accelerometer, DC Motor, Arduino UNO, Zigbee.

References: