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Assistant Professor, Department of Computer Science, Manav Rachna International Institute of Research and Studies, Faridabad (Haryana), India.
1. **Keywords:** Quality Management System, ISO 9001, Content Management System, Drupal, Document Management System.

2. **Keywords:** Remote Sensing, Land Use / Land Cover (LULC), Change Detection, Supervised Classification.

3. **Keywords:** Power Management Strategies of A Grid Connected Hybrid System in UPC and FFC Modes

**Abstract:** Companies that work according to ISO 9000 standards have to maintain a set of documents describing the quality system that include policies, procedures and instructions to assure the final product’s conformance with ISO 9001 requirements, the aim of this research is to develop and design the QMSISO system by referring to clause 4 Quality management system of ISO 9001-2008, ISO TR 10013 -2001, and ISO/TC 176/SC 2/N 525R2 Guidance on the documentation requirements of ISO 9001-2008 to effectively implement the ISO 9000 in a real environment, the QMSISO overall effectiveness assessment results found to reach an effectiveness ratio is 76.5 %. The documentation process improvement achieved through reducing the time required to finding a particular document is 97 %, the percentage of improvement in procedure document approval time to reach 89 % and the paper consuming improvement percentage is 100 %. The results showed the feasibility of using QMSISO by companies to get certified to ISO 9001.

**References:**

**Authors:** Hussein Salem Ketan, Muhammed Ahmed Mahdi, Aseel Jameel Haleed

**Paper Title:** Effective Collaborative Documentation System for ISO 9000

**Abstract:**

**References:**

**Authors:** M. Selim

**Paper Title:** Change Detection Analysis using New Nano Satellite Imagery

**Abstract:** Mapping Land use /Land cover (LULC), changes studies have become interesting over the past decades through using remote sensing. It is essential for a wide range of applications, including landslide, erosion, urban growth, agricultural expansion, land planning, global warming etc. In this study, LULC changes in a new Capital, North-East Cairo are investigated by using remote sensing images acquired by (Nano satellite / Planet Labs). For this purpose, firstly supervised classification technique is applied to Planet Labs images acquired in 21December, 2016 and 14 July, 2017. Image classification of four reflective bands of the two images is carried out by using maximum likelihood method with the aid of ground truth data obtained from topographic maps cover the study area (25x21km). The second part concern is detecting land use land cover changes by using change detection comparison (Image Differencing Method). In the third part of the study, land cover changes are analyzed according to the different features by using ERDAS functions. The results indicate that land cover changes have occurred in the urban area were increased approximately by 1,847,790 sq. m and roads area by 245,385 sq. m while a decrease in bare soil areas by -2,093,175 sq. m. This occurred due to the rapid construction operation. It can be seen that the LULC changes were occurred by the rate of 1,395,450 sq. m per year in the development area East side of the new Capital.

**Keywords:** Remote Sensing, Land Use / Land Cover (LULC), Change Detection, Supervised Classification.

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7. Change Detection Techniques to monitor land cover dynamics in mine environment. Suparn Pathak, Scientist/Engineer “SF” .Regional Remote Sensing Centre–West (RRSC-W), National Remote Sensing Centre (NRSC) ISRO/Department of space, Govt. of India
8. New Change Detection Techniques to monitor land cover dynamics in mine environment. Suparn P. Pathak, Scientist/Engineer “SF” .Regional Remote Sensing Centre–West (RRSC-W), National Remote Sensing Centre (NRSC) ISRO/Department of space, Govt. of India

**Authors:** N. Nynar Kumar, T. Deepti Prasanna, K. Kotaiah Chowdhary

**Paper Title:** Power Management Stategies of A Grid Connected Hybrid System in UPC and FFC Modes

**Abstract:** This paper proposes a method to operate a grid connected hybrid system which comprises photo voltaic (PV) array and proton exchange membrane fuel cell (PEMFC). To deliver highest power to load continuously PV array uses
maximum power point tracking (MPPT) technique when there are variations in irradiation and temperature, and makes it as an uncontrollable source. The output power of hybrid system becomes controllable with the coordination of PEMFC. The coordination of the two operating modes unit-power control (UPC) mode and the feeder-flow control (FFC) mode are applied to the hybrid system and determination of reference parameters are presented. The proposed operating strategy operates the PV array at maximum output power and the PEMFC with high efficiency performance band to enhance the performance of the system operation, system stability and decreasing the number of operating mode changes.

Keywords: Photovoltaic, fuel cell, hybrid system, distributed generation, micro-grid, and power management.

References:

Authors: Rakesh Prajapati, Jigar Patel, Ronak Soni, Saurabh Modi

Paper Title: Hydro Carbon and Carbon Monoxide Reduction from Exhaust of Vehicles

Abstract: In Present Scenario, Wet scrubbing, a relatively new technology, is used on absorption of pollutants such as carbon dioxide (CO2), unburned hydrocarbons (UHC), oxides of nitrogen (NOX) and lead and other particulate emissions from the engines. Fabrication and falls into the category of automobiles. The total cost of the experimental modal price is 6225 INR. In today's developing world, filtering and cleaning of exhaust gases from automobiles are essential before launching them into the atmosphere. Systems like catalytic converter and scrubber system plays essential role. When the catalytic converter fails to deliver its desired work, Hydrocarbon, Carbon monoxide and NOX directly goes into the atmosphere which is directly impacts on human health and pollutes the environment. To identify the problem, which we have implement to “Advanced Scrubber System”. This works on the principle of simple reaction between exhaust gases and scrubbing liquid. It is filtration process which removes the HC and CO from exhaust gases by passing through three different modules.

Keywords: catalytic converter, Scrubber System, Scrubbing Liquid, Filtration, Exhaust Gases.

References:

Authors: M. Divya Sri, M. Veera Kumari

Paper Title: Transmission Expansion Planning using Multi-Criteria Decision Making Methods

Abstract: This paper introduces a new heuristic model for transmission expansion planning (TEP) which uses a multi-criteria decision making (MCDM) framework. In order to do this, at first, new candidates are recommended for TEP. Investment cost and total cost are calculated for new candidates that are considered for the existing test system. Finally, using an analytic hierarchy process (AHP) and Simple additive weighing (SAW), the ranking is allotted according to the best optimal cost which is selected among candidates. IEEE 24-Bus system is used to confirm the proposed algorithm’s performance.

Keywords: Transmission Expansion Planning, Multi-Criteria Decision Making Methods, Analytic Heirarchpy Process, Simple Additive Weighting.

References:
Paper Title: Renewable Energy: Identifying Potential and Development of Solar Energy to Contribute to Sustainable Energy Delivery in Pakistan

Abstract: Pakistan, a developing country of South Asia, is an energy deficient country. The power sector of the country is suffering due to inadequate capacity and insufficient fuel supply to its power plants, resulting in load shedding. Pakistan despite being greatly blessed with Renewable Energy resources depends on fossil fuels for electricity generation. The reliance on fossil fuels is not only affecting foreign currency reserves of the country but also increasing Green House Gas emission. According to estimates, share of renewable energy in total energy mix is around 1%. This paper highlights the potential of renewable energy development in Pakistan with particular focus on the potential and development of solar energy in the country. The estimated potential of solar energy is 2.9 Million MW in Pakistan. The exploitation of solar energy resource can contribute to sustainable development and also offers socioeconomic benefits. This paper also illustrates the potential applications and benefits of solar energy, and the sustainability of this technology. In addition, the barriers to solar energy development despite its enormous potential have also been discussed.

Keywords: Energy Crisis, Renewable Energy, Solar Energy, Sustainable Energy Delivery.

References:
Abstract: GPS high accuracy applications are based on the phase measurements. Such phase measurements are frequently subjected to cycle slips. So, special attention should be paid to the detection and fixation of cycle slips. Previous works concerned with this issue dealt with single frequency data was faced with the low sensitivity of these models as most of them are based on differentiating the change in both code and phase differences between consecutive epochs. Although the resulted test quantity is free of most GPS biases, it is contaminated by twice the ionospheric error due to its opposite sign in both code and phase equations. In this paper, a new test quantity is proposed. This test quantity, which was denoted as CPR, is defined as the ratio between the code and phase differences between consecutive epochs. CPR values exhibited very smooth manner between consecutive epochs. Different simulated cycle slips are introduced in this paper which are backward and forward scenarios. In backward scenario, the 1st corrupted CPR value is estimate proportional to the time gap between the estimated and the used values. Results proved that weighting of the most recent seven CPR values yielded the best float solution in both backward and forward scenarios.

Keywords: Cycle slips, Single frequency data, Code/Phase Ratio (CPR), Detection sensitivity, Fixation reliability.
Abstract: Weather monitoring is a global phenomenon and its impact world-wide cannot be over emphasized. The monitored parameters are always factored into result-based performance and efficiency. This efficiency can also be determined by the solar irradiance. Solar energy installations are some of the alternative energy generation strategy adopted globally, hence it is important to determine the location, size and position of the panel to ensure maximum solar irradiance. This work is aimed to study the effect of sun tracking solar installation on charging voltage using microcontroller. AT89S52 microcontroller was adopted to implement a model prototype for sun tracking solar installation during cloudy morning and sunny weather conditions. Readings from the prototype were used to characterize the cloudy and non-cloudy weather conditions. From the characteristic curves plotted, it was established that the optimum performance could be obtained during the cloudy morning and sunny afternoon. This further elucidates the impact of sun tracking in solar installations which could be beneficial to solar installation managers and scientists.

Keywords: Charging voltage, cloudy, Microcontroller, Prototype model, solar installation, sunny, Sun Tracking.

References:
Keywords: Security, Privacy, Biometric encryption, Pervasive Computing, RSA, RSA cryptography, Biometry and Cryptography

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Authors: Noor Ullah, M.Idrees, Taimoor Mohsin, M.Usama, Imtiaz Ali Shah

Paper Title: Priority Based Load Management System Using Bluetooth Device

Abstract: Energy crises nowadays is a big issue in the entire world and countries like Pakistan are affected more and severe short fall occurs in energy sector which affects economic growth and industrial development. In Pakistan fossil fuels like (furnace oil, natural gas, coal), hydel are the main sources of energy generation along with very limited renewable energy resources. Government have been planning various strategies to resolve the issue of energy crises and most of them are long term planning. In this research, a cost effective method of smart metering has been applied to narrow down the gap between supply and demand where electricity units can be calculated in peak and off peak hours separately and switch off unnecessary loads in peak hours, so by managing the different loads in peak and off peak hours we can overcome the energy crises and also a great impact will be seen in utility bills.

Keywords: Smart meter, energy management system, Demand side management, Load Control, energy management controller, Smart pricing, consumer participation.

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Authors: Gamal M. Mahrouk, Hassan A. Mahdy, Khaled A. Kandil

Paper Title: Utilization of Steel Slag Aggregate in Hot Mix Asphalt in Egypt

Abstract: Steel slag is a byproduct from either the conversion of iron to steel in a basic oxygen furnace, or the melting
of scrap to make steel in an electric arc furnace. This paper presents the influences of the utilization of steel slag as a coarse aggregate replacing the traditional limestone aggregate on the properties of a binder and surface course hot mix asphalt (HMA). Six percentages (0%, 20%, 40%, 60%, 80%, and 100%) of limestone aggregate were replaced by steel slag aggregate (SSA) for both binder and surface course. The effectiveness of SSA in HMA was measured by preparing Marshall Specimens and measure their stability, flow, stiffness, indirect tensile stress, and loss of stability. It was observed that replacing up to 60% of limestone coarse aggregate by SSA improved the mechanical properties of the mixtures and it was the optimal percentage.

**Keywords:** Steel Slag Aggregate, Asphalt Mixtures, Marshall, Indirect Tensile Strength.

**References:**
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**Authors:** Ahmed khaled Mohamed, Hassan A. Mahdy, Khaled A. Kandil

**Paper Title:** The Use of Waste Plastics in Hot Asphalt Mixtures in Egypt

**Abstract:** Nowadays plastics are used everyday in every aspect of our lives which is a great problem as they are non-biodegradable. They are disposed either by landfilling or incineration of the waste materials which causes environmental pollution and health problems. This paper studies the influence of reusing waste plastic (WP) in hot mix asphalt (HMA). Three different methods were used to add waste plastics to HMA with five different percentages of plastic waste at each method. To determine the best method of adding WP to HMA and the optimum WP content Marshall specimens were prepared and tested to measure their stability, flow, stiffness, indirect tensile strength, and loss of stability. It was concluded that the third method was the best method for adding WP, the optimum WP content differs for each type of WP, using WP improved the mechanical properties of the HMA, and its durability.

**Keywords:** Hot mix asphalt, Indirect tensile strength, Loss of stability, Marshall, Waste plastics.

**References:**

**Authors:** Ehsan Amini

**Paper Title:** Strategies to Changing Patterns of Land Use in a Worn Area Located at Central Business District of City, Case Study: Sabzevar City, Iran

**Abstract:** The worn and inefficient tissues make up a significant part of Sabzevar city. On the one hand, These tissues...
suffer from a wide range of physical, functional and environmental problems and on the other hand, those are city’s most important potential for utilizing land for providing services space, create mobility infrastructure and environmental improvements. Golestan area is one of the oldest neighborhoods in the city, which form the initial core of the city and has an organic form. This neighborhood faces physical problems such as passage ways with low width, poor road networks, the existence of old habitats, low durability and compressed structure, poor quality of building materials and lack of facilities and equipment required. In this paper, Preliminary knowledge of the old city texture and physical aspects of Golestan area will be reviewed.

Keywords: Worn Texture, Land Use, Central Business District, Sabzevar City.

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Authors: Drissa Traoré, Diouba Sacko, Marie Bernard Sidibé

Paper Title: Review of Reconfigurable Finite State Machine

Abstract: This paper surveys a review of reconfigurable finite state machine. It’s a powerful methodology for achieving high performance. Minimizing the resource required in the implementation of many applications points out the difference between run time reconfigurable finite state machine and programmable finite state machine. The application of the concept of self-reconfigurable finite state machine to achieve VLSI architecture of dynamically reconfiguration is also discussed.

Keywords: Finite State Machine, VLSI, FPGA, Reconfiguration.

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Authors: Mahmoud Al-Zyood

Paper Title: Impact of Saudi Payments Network (Span) On Bank Efficiency

Abstract: This paper examined the inspect relationship between Saudi Payments Network and bank efficiency in Saudi Arabia. The regression analysis method was used to test the hypotheses of study, Alpha Coronachs was calculated for the instrument of study (0. 953). It is therefore acceptable for the purposes of statistical analysis, and the five-dimensional Likert scale has been adopted to measure the availability of the variables of the study model. Demographics of the respondents have proven that 100% male, 35% non-executive and the Age of respondents 33.1% (18-25 years old), 35.4% (26-35 years old), 30.4% (36-45 years old) and 1.1% (46-55 years old). The results of the regression analysis show that the use of Saudi Payments Network (SPAN) has had a direct impact B=0.682, P< 0.05 in banks’ effectiveness in Saudi Arabia, it turns out that the coefficient of determination (ADJUSTED R2 = 0.280) This means that Saudi Payments Network (SPAN may be interpreted (28%) of the variation in the level of banks’ effectiveness, and notes that the statistical test value (F = 19.215) which is statistically significant at the level of (P≤ 0.05). Banks should pay attention to the development and modernization of the technological infrastructure of the bank this leads to increase bank productivity; also Attention should be given to current and future needs of the market and consumers in order to maximize the Bank's market share.

Keywords: Efficiency, Saudi Payments Network, ATMS, POS, Transactions, SPAN Cards.

References:

Authors: Ravindra D. Kale, Sangeeta Barwar, Prerana Kane, Asfiyya Contractor

Paper Title: Betel Leaves Mediated Green Synthesis of Nickel Nanoparticles: Synthesis and Characterization

Abstract: Bio-nanotechnology offers biosynthetic, environment friendly pathways for the preparation of nanomaterials. In this work, nickel nanoparticles (NiNPs) are synthesized by using betel leaves as reducing agent. Reduction to NiNPs was done on TEM and nanoparticle size analyser. The crystallinity of the nanospheres formed was established using (CCD). The chemical group present on the deposited nanoparticles was identified using FT

Keywords: Betel Leave, Central Composite Design, Nickel, Nanoparticles.

References:
Abstract: High frequency ac applications with a reduced component of a cascaded multilevel inverter using switched capacitor are proposed in this project. Here switched capacitor and H-Bridges are constructed in front end and back end through the connections of series and parallel conversions. An increasing the voltage level by switched capacitor, output harmonics can be reduced. High Frequency AC Applications (HFAC) is alternative to DC distribution due to lower cost. These are most commonly used for applications in small scale and closed electrical network in electric vehicles due to moderate size and reduced weight for distribution network. The type of multilevel inverter used in this project is cascaded H-Bridge and they built by the series connection of H-Bridges. It is similar to dc–dc converters. The cascaded H-Bridge needs individual input and four power switches for construction in order to increase number of voltage levels with their staircase output. However control strategy is difficult because of input current will be in discontinuous; therefore Electromagnetic Interference (EMI) becomes worst. The advantages for this topology at rated output frequency of about 20 kHz are feasible to operate, increasing reliability and high efficiency. By increasing number of voltage levels, the total harmonic distortion (THD) content of staircase output can be decreased and further in such a way that, has a particular meaning to simplifying the filter design. This topology will be analyzed by symmetrical modulation for 13–level inverter, which is based on switched capacitor of a cascaded multilevel inverter for HFAC PDS. The entire system is simulated in MATLAB/SIMULINK TOOL.

Keywords: Cascaded H-Bridge, High-Frequency Ac (HFAC), Multilevel inverter, Switched Capacitor (SC), Symmetrical Phase-Shift Modulation (PSM).


Authors: M. S. S. Bhadri Nadh, R. V. D. Rama Rao

Paper Title: A Cascaded H-Bridge Multilevel Inverter based on Switched-Capacitor for High Frequency Ac Applications

Keywords: Cascaded H-Bridge, High-Frequency Ac (HFAC), Multilevel inverter, Switched Capacitor (SC), Symmetrical Phase-Shift Modulation (PSM).
The construction industry in Kenya has grown in leaps and bounds over the years. Bon and Crosswithaite (2000) state that the industry makes a significant contribution to the economy of any country since it not only creates employment for many people but also supports other sectors of the economy. It is because of this significance that special consideration should be paid to the execution of construction projects since they are the backbone of the industry. Better execution of projects will lead to improved growth of the industry. In order for projects to be delivered effectively, resources ought to be managed in an optimum manner. According to Simon, Gwaya and Diang’a (2017) the two most critical aspects of resource management could be said to be resource planning and leveling. While it was established by the same authors that resource planning and leveling are highly practiced in the Kenyan construction industry though in an unstructured manner, the authors failed to outline the factors which influence such practices. It is because of such gap that the researcher sought to undertake this study. The purpose of this study was to establish the factors influencing the adoption of resource planning in the Kenyan construction industry. A survey research design was adopted and a response rate of 76% was attained. There seemed to be consensus among the respondents regarding the following factors influencing Resource Planning: Financial status of the contractor (RII=0.8390); adequacy of labour (RII=0.8308); adequacy of plant and equipment (RII=0.8304); presence of qualified personnel (RII=0.8152); prompt honouring of payments certificates (RII=0.7901); level of project documentation (RII=0.7410); compliance with safety procedures (RII=0.7154); type of procurement system (RII=0.6949); weather (RII=0.6127) and contractor’s ICT Compliance (RII=0.5897). The most significant factor was financial status while the least important was contractor’s ICT Compliance. Multiple regression analysis revealed that higher levels of Resource Planning are associated with higher levels of adequacy of labour and equipment, ICT compliance, high level of project documentation, high financial status, prompt payments, type of procurement, identifying the number of people required, establishing quantities of equipment, quantification of amount of materials. The analysis also revealed that higher levels of Resource Planning are associated with lower levels of Compliance with safety and bad weather.

Keywords: Resource Planning, Construction

References:

Paper Title: Automatic Pneumatic Pick and Place Robot
Abstract: The main aim of this project is to create automation in manufacturing and assembly field. The usage of robotic arm for assembly process in industries will have more benefits. The installation of robotic arm in Salzer Industry in assembly section to quick up process and also to reduce the manual work and time consumption.

Keywords: Project, Robotic, Salzer Industry.

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4. P.S.G. College of technology, Coimbatore.

Authors: Ajitha A.R., Chandrakaran S., Sheela Evangeline Y.
Paper Title: Effect of Chromium on The Engineering Properties of Amended Clay Liner
Abstract: Waste generated by the full extent of human activities range from dumping relatively innocuous substances such as food and paper waste to toxic substances, dumping of waste in a disposal facility serves to minimize the effect of waste on the environment. In many region centralized disposal facility has been formed by landfilling. In order to prevent ground water contamination liners are provided in a landfill. Barrier layer in a liner system prevents the migration of leachate and from polluting the ground water. In this study amended soil liner was prepared using the clay mineral Calcium Bentonite, locally available kaolinite soil and fine sand. The liner was mixed with chromium solution of four different concentrations and the change in engineering properties of the liner is reported in this paper. It is found that there is only marginal increase in permeability of liner due to chromium where as there are noticeable variation on the other geotechnical properties

Keywords: Landfill, Liner, Chromium.

References:

Authors: Divya Raj S, K Mophin Kani
Paper Title: Water Quality Assessment of Sasthamcotta Lake, Kollam, Kerala
Abstract: Sasthamcotta Lake is the largest natural fresh water lake in Kerala, known as “Queen of Lakes”. This lake is located in Kollam district between 9º 0’- 9º 5’ N latitude and 76º 35’- 76º 46’ E longitude at an elevation of 33m above MSL. This lake has an area of 373 ha and volume of 22.4 km3. It is one of the 26 sites in India included in the Ramsar list of wetlands of international importance. The Sasthamcotta Lake is a drinking water source for about 700000 people lived in Kollam District and is also one of the major tourist attraction places. Inland navigation and fishing are the major economical based activities takes place in this lake. This lake is facing degradation due to anthropogenic activities such as directing human waste, soil erosion due to destruction of vegetation, construction activities etc leading to the deterioration of environmental quality as well as decrease in the surface area and depth. The present study was carried out to assess the physico chemical and biological quality of water in Sasthamcotta Lake. In this study 16 water quality parameters were analyzed for water samples collected from 27 sampling points. The results showed water quality deterioration during the months of November and December 2017 whereas in January and February 2018 slight improvement in water quality. An observation of present study helps to increase
the effectiveness of management strategies to bringing back the originality of the lake.

**Keywords:** Sasthamcottama, Physic Chemical Parameters, Ramsar Lists, Degradation, Water Quality Assessment.

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