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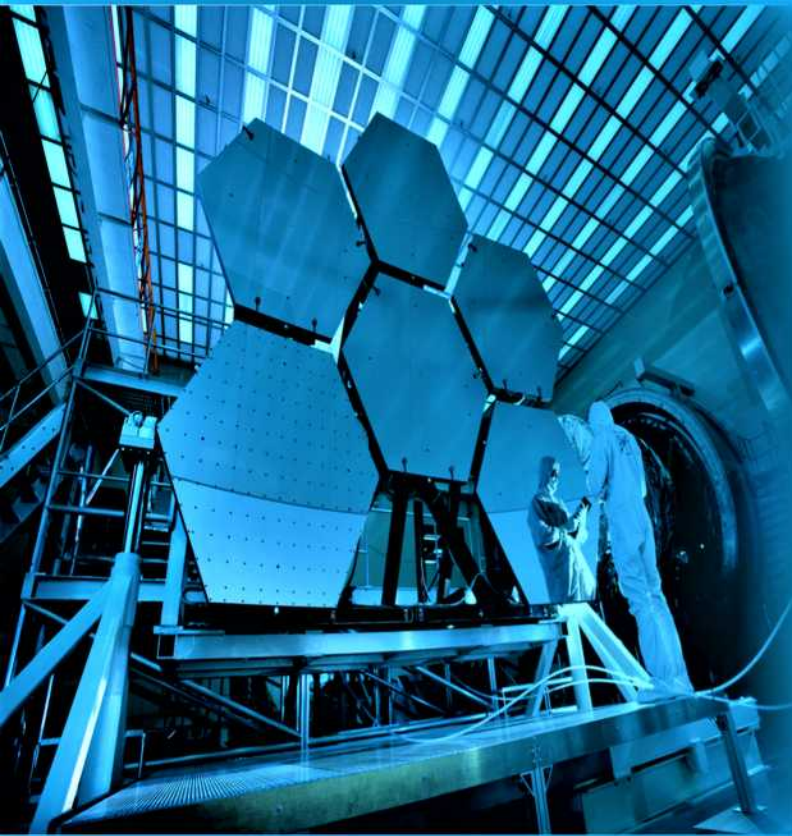
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**Author(s):** Maithili P, Kanakaraj J

**Title of the Article:** Transformer Less Self-Commutated PV Inverter

**Abstract:** The power demand is increased day by day and generation of electrical energy from non-renewable sources are not able to meet the demand. An alternate energy sources are the only solution to meet the power demand. The power generation from solar energy with photovoltaic effect is plays a major role. This Solar PV system has low efficiency. The power semiconductor devices and converter circuit along with inductive / magnetic circuit. The Inverter circuit have an influence on photovoltaic power generation to improve the level of output voltage along with efficiency. In this paper a new transformer less DC-AC converter is proposed, and it has high efficiency, requires less cost when compares with conventional inverter with transformer. Transformer less self-commutated photovoltaic inverter is reflected the advantages of central and string inverters. It gives high output power and low-cost converter. These transformer less DC-AC converter is connect with Boost/Buck-Boost converter for the better output. So, this proposed DC-AC converter topology is not required mechanical switching and it is lighter in size. The PV technology has low efficiency and utilize more cost for generation of power. The proposed transformer less PV inverter is the better choice to increase the usefulness and reduce the charge rate of this PV system.

**Keywords:** DC-AC Converter, Inverter without Transformer, PV technology, Simulink- MATLAB.

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**Author(s):** Najmuddin Ahmad, Balmukund Singh

**Title of the Article:** Numerical Solution of Integral Equation by using New Modified Adomian Decomposition Method and Newton Raphson Methods

**Abstract:** In this paper, we discuss the numerical solution of Adomian decomposition method and Taylor's expansion method in Volterra linear integral equation. And we apply modified Adomian decomposition method and Newton Raphson method in Volterra nonlinear integral equation with the help of example and estimated an error in MATLAB 13 versions.

**Keywords:** Adomian Decomposition Method, Newton Raphson Method, Volterra Integral Equation, Taylor Expansion Methods.

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**Author(s):** Rakesh Kumar Yadav, Abhay Pratap Mishra, Aman Singh

**Title of the Article:** Experimental Analysis of Covid-19 Spread Predictor using Linear Regression Algorithm

**Abstract:** In the past few years, people's life is affecting badly by the spread of coronavirus due to a lack of information about the spread of the virus and proper management to control it. The government is also looking for ways to get information that how beneficial is their preventive measures .So, that they can Know that whether their preventive measures need to be modified or not. The effect of coronavirus can be seen by the number of people affected, the number of people being treated, and the number of people dead. These are the data based on which our application will make a prediction. The goal of this paper is to make a model that will give us a good prediction based on other variables. In most cases, we use linear regression for data because linear regression gives good accuracy. This paper will be helpful for both people and the government, they will be able to predict the number of cases in the next month so that they can prepare themselves to face the problem and control it from further spreading.

**Keywords:** Covid, Spread, Linear, Regression, Algorithm, Predictor

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**Author(s):** Shubham Thakur, Risha Shetty, Sanskruti Sawant, Mrunali Rajigare, Santosh Sonavane

**Title of the Article:** Design and Fabrication of Uvc Based Sanitizing System

**Abstract:** Washing our hands regularly is extremely important to keep up with sanitation and to prevent ourselves from sickness, and we follow this standard consistently in this period because of the current pandemic crisis. Accordingly, People all around the world have normalized the significance of sanitation and disinfecting surfaces and objects in the area. Sanitation does not usually erase microbes, but instead lessens their presence by removing them.





The number of microbes lessened from a surface is quite dependent on type of material and product used to sanitize the area. Hence, we have come up with an object that is not only capable of wiping out the microbes completely but also it is cost effective. The corona virus is transmitted by people coming in contact with each other. This virus lives on variety of surfaces, but we can cleanse it by using various disinfecting and sterilizing products. It is therefore very important that people realize the necessity of sanitizing almost all the surfaces and objects in the environment around us. For example, people working in various sectors including dispensaries, hotels, shopping complexes, salons etc. to maintain hygienic environment. Keeping in mind, several devices have been designed for sanitizing hands and objects and increasing the need creating more such systems in affordable manner. Taking these areas into consideration, we planned to construct a sensor-based product which will play an essential role. Hence, we thought of a unique concept and worked on this latest technology using UV lamps for disinfecting the germs, viruses etc. This solution will not only be innovative but also conveyable so that it is ready to carry.

**Keywords:** Environment, Pandemic, Sanitation, UVC

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**Author(s):** Karan Singhai, A.K. Jain

**Title of the Article:** Seismic Strengthening of Existing RCC Structure by FRP Jacketing

**Abstract:** India has been facing many disasters since long. Among the entire disasters earthquake is of serious concern to Civil Engineers. Because of collapse of structures subjected to seismic loads many lives were lost because these buildings were not designed for seismic loads. The problem becomes more serious when additional storeys are constructed. In these buildings many of the columns are not safe if the building is analyzed for seismic load. To make the building safe we need to adopt the technique of FRP (Fiber Reinforced Polymer) jacketing. The FRP Jacketing is comparatively better than other retrofitting because no major strengthening of foundation is required in this technique, also original function of the building can be maintained without any major change in the original geometry of the building. The present study is on a four storey building that has been planned in STAAD.ProV8i, considering M30 cement and Fe415 steel bars.

**Keywords:** Equivalent Static Method, Jacketing, Flexural Capacity, Shear Limit, Retrofitting, Reinforced Concrete Structure, FRP Strengthening.

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**Author(s):** M. Venkatesh, R. Rashia Suba Shree

**Title of the Article:** IoT Based Automatic Seat Vacancy Detection in Travel Buses using Cloud Database

**Abstract:** The world has improving with lot of people utilities for living case. In this development technologies make the purpose of surviving easier. Internet of things is the inter-connecting technology used to pass the data to the required people via physical devices which are embedded with the software's, sensors, electronics etc. IoT lift up smart cities, transportation, industries with new innovations for the development. The proposed system is done in transport sector to effectively manage the vacant seats particularly on travel buses. The vacant seats may happen due to last minute cancellation, the passengers who missed bus, or the passengers who doesn't cancel their ticket even after they decide not to travel. In present situation, the seat allocation for the travelers is mostly done through online but when it comes to the vacant seats, the ticket checker has to allocate it manually. The system purpose is to verify whether all booked seats are occupied or not using sensors, and it automatically sends the signal to centralized server and make enable that particular seat for fresh booking. So that, the passengers who planned for travel by last minute can able to book ticket through online from the upcoming boarding stations.

**Keywords:** Seat vacancies, IoT Technology, IR sensors, Node MCU ESP8266, Vehicle seats.

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**Author(s):** Chandra Pal Kushwah, Kuruna Markam

**Title of the Article:** Semantic Segmentation of Satellite Images using Deep Learning

**Abstract:** Bidirectional in recent years, Deep learning performance in natural scene image processing has improved its use in remote sensing image analysis. In this paper, we used the semantic segmentation of remote sensing images for deep neural networks (DNN). To make it ideal for multi-target semantic segmentation of remote sensing image systems, we boost the SegNet encoder-decoder CNN structures with index pooling & U-net. The findings reveal that the segmentation of various objects has its benefits and drawbacks for both models. Furthermore, we provide an integrated algorithm that incorporates two models. The test results indicate that the integrated algorithm proposed will take advantage of all multi-target segmentation models and obtain improved segmentation relative to two models.

**Keywords:** A Satellite Image, Deep Neural Network, U-net, SigNet.

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**Title of the Article:** Gesture Detection using Tensorflow lite EfficientNet Model for Communication and E-learning Module for Mute and Deaf

**Abstract:** Human communication plays a vital role; without communicating, day-to-day tasks seem difficult to complete. And the world has an almost 5% population that struggles with hearing or speaking disability, which contributes to 430 million people worldwide, and this will grow up to 900million just in the next 25 to 30 years. With the increasing noise pollution, hearing capacity degrades, leading to various hearing problems. The WHO statistics show that 32million kids are acoustically impaired. With disabilities, there are multiple issues these people face, such as lack of learning facilities, job opportunities, communication platforms, etc. These people need a cooperative environment to express, learn at their pace and level of understanding. This paper focuses on developing an application that bridges the gap between these acoustically disabled people and people unknown to their way of communication. The proposed research is an edge device application provides features like a gesture to text, speech to text, e-learning platform, and Alert mechanism. This paper majorly focuses on developing a friendly all in one platform for mute and deaf community for communication, learning and emergency alerts. The research was conducted with two approaches the traditional CNN and Tensorflow lite EfficientNet model to train the ASL (American Sign Language) dataset for the communication platform, where we obtained accuracy of 98.91% and 98.82% respectively. To overcome the computational barriers of traditional CNN approach, Tensorflow lite EfficientNet model was brought into the picture. The proposed methodology would help build a platform for the deaf and mute community to express themselves better and gain wider exposure to the world.

**Keywords:** ASL, android application, CNN, image classification, E-learning, alert mechanism, firebase

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**Title of the Article: Effects of Polypropylene Fibers on the Mechanical Performance of a 3D Printable Mix**

**Abstract:** Application of automation in construction work has now become need of the hour. Automation in construction work can be done by implementing a technique known as additive manufacturing technique. Use of additive manufacturing in construction sector has the potential to bring fourth industrial revolution by using 3D concrete printers. This paper is based on a parametric experimental study to evaluate the effect of Polypropylene (PP) fibers on mechanical properties of a 3D printable concrete. PP fibers were used in varying percentage ratio of 0.02, 0.04, 0.08, 0.12 and 0.16 of binder at constant W/B ratio.

**Keywords:** Additive Manufacturing, 3d Concrete Printing, Free-Form Construction, Polypropylene Fibers, Compressive Strength, Split Tensile Strength And Flexural Strength.

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**Title of the Article:** Genetic Algorithm-Based Optimization of Friction Stir Welding Process Parameters on Aa7108

**Abstract:** This research paper deals with the characterization of friction stir welding aluminium 7108 with twin stir technology. The coupons of the above metal were friction stir welded using a cylindrical pin with counter-rotating twin stir technology using at constant speed 900, 1200, 1500,1800 with four different feed rates of 30,50,70,90 mm/min. Microstructure examination showed the variation of each zone and their influence on the mechanical properties. Also, tensile strength and hardness measurements were done as a part of the mechanical characterization and correlation between mechanical and metallurgical properties and deduced at the speed of 1500 rpm. Friction stir welding process parameters such as tool rotational speed (rpm), tool feed (mm/min) were considered to find their influence on the tensile strength (MPa) and hardness (HRB). A genetic algorithm (GA) was employed by taking the fitness function as a combined objective function to optimize the friction welding process parameters to predict the maximum value of the tensile strength and hardness. The confirmation test also revealed good closeness to the genetic algorithm predicted results and the optimized value of process parameters for different weights of the tensile and hardness have been predicted in the model.

**Keywords:** Friction Stir Welding, Design Of Experiment, Optimization, Ultimate Tensile Strength, Hardness, Genetic Algorithm.

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**Title of the Article:** Multi Objective Optimization of Machining Parameters in End Milling of AISI1020

**Abstract:** In current research, artificial neural network (ANN) and Multi objective genetic algorithm (MOGA) have been used for the prediction and multi objective optimization of the end milling operation. Cutting speed, feed rate, depth of cut, material density and hardness have been considered as input variables. The predicted values and optimized results obtained through ANN and MOGA are compared with experimental results. A good correlation has been established between the ANN predicted values and experimental results with an average accuracy of 91.983% for material removal rate, 99.894% for tool life, 92.683% for machining time, 92.671% for tangential cutting force, 92.109% for power and 90.311% for torque. The MOGA approach has been proposed to obtain the cutting condition for optimization of each responses. The MOGA gives average accuracy of 96.801% for MRR, 99.653% for tool life, 86.833% for machining time, 93.74% for cutting force, 93.74% for power and 99.473% for torque. It concludes that ANN and MOGA are efficiently and effectively used for prediction and multi objective optimization of end milling operation for any selected materials before the experimental. Implementation of these techniques in industries before the experimentation is useful to reduce the lead time, experimental cost and power consumption also increase the productivity of the product.

**Keywords:** Word; ANN; Prediction; MOGA; Multi Objective Optimization; Modelling; DOE.

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**Title of the Article:** A Novel Current-Mode Multifunction Inverse Filter using Single CFA

**Abstract:** A novel current-mode multifunction inverse filter configuration using single current feedback amplifier (CFA) is presented. The proposed filter employs only one CFA and few passive components. The proposed circuit realizes inverse lowpass, inverse bandpass and inverse highpass filter functions with proper admittances. The characteristics of proposed multifunction inverse filter configuration are- current-mode realization; use of only one CFA; use of grounded passive components except one virtually grounded and realizing all three basic inverse filters. The proposed current-mode inverse filter circuit has been tested by TINA PRO simulation program and results justified the theoretical analysis.

**Keywords:** Current Feedback Amplifier, Current-mode, Voltage Mode, Multifunction, Inverse Filter, Admittances.

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**Author(s):** Yogini C.Kulkarni, S.D.Joshi

**Title of the Article:** Security Design Pattern for Login System through Authentication using Modified Sha-384 Algorithm

**Abstract:** The research has been carried out to develop secure login system by authenticating the login using modified SHA-384 algorithm. It derives 896-bit hash value for the password entered by the user in the user registration form and saves the credentials entered by the user in system's database. Results obtained are evaluated by resolving the general attacks confirmed that the modified SHA-384 algorithm was more secured compared to the original SHA-384 algorithm as it was not broken using generic attacks such as brute force, rainbow table and other cracking tools available online such as Cain and Abel. The performance of the modified algorithm was measured with only 2 ms additional execution time from SHA-384.

**Keywords:** Modified SHA-384 hash algorithm, attacks, login authentication

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**Author(s):** Byeongtae Ahn

**Title of the Article:** Implementation of Digital Signage for Smart Facility System using IoT

**Abstract:** Recently, as wireless communication and smart phone spread and technology develop, there is an increasing demand for a system capable of real-time communication and business processing using online information anytime, anywhere in the offline field. In particular, changes in digital signage technology are developing in various ways due to the development of advanced convergence technologies. With the development of convergence technologies, digital signage has been constructed to provide information through a structured structure between each component in order to develop in a form that can deliver information in response to environmental changes rather than user input. This paper developed a system that outputs and services various contents together with industrial facility inspection and management by using wireless communication Bluetooth in a display device equipped with an operating system. This system is an Internet-of-Things-based system that simultaneously outputs various contents and a business management function that enables facility inspection.

**Keywords:** Video, Remote Education, Mpeg, Semantic, Image

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**Author(s):** W. A. Akpan, A. A. Okon, E. J. Awaka-Ama

**Title of the Article:** Optimal Age-Based Preventive Maintenance Policy for a System Subject to Cumulative Damage Degradation and Random Shocks

**Abstract:** This research investigates the problem of cumulative degradation and random shocks a system like a centrifugal pump may experience during normal and adverse operating conditions. An accelerated life testing method was employed to determine the degradation of the pump under cumulative damage degradation and random shocks conditions. An age- Based policy was used to determine the optimum time interval that will minimize the total expected cost of the system. The random shock increases the number of failures and hence reduces the reliability of the system.

The total expected preventive maintenance cost obtained varies from N1700.00 (One thousand seven hundred naira) to N16,000.00 (sixteen thousand naira), depending on the shock and shock duration. The methodology presented is useful and thus recommended for use to study cumulative damage degradation and random shocks for similar systems.

**Keywords:** Age-Based, Degradation, Cumulative Damage, Random Shocks, Preventive Maintenance.

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**Author(s):** Ravi Chandra, Basavaraj Vaddatti

**Title of the Article:** Sentiment Analysis using Deep Belief Network for User Rating Classification

**Abstract:** People's attitudes, opinions, feelings and sentiments which are usually expressed in the written languages are studied by using a well known concept called the sentiment analysis. The emotions are expressed at various different levels like document, sentence and phrase level are studied by using the sentiment analysis approach. The sentiment analysis combined with the Deep learning methodologies achieves the greater classification in a larger dataset. The proposed approach and methods are Sentiment Analysis and deep belief networks, these are used to process the user reviews and to give rise to a possible classification for recommendations system for the user. The user assessment classification can be progressed by applying noise reduction or pre-processing to the system dataset. Further by the input nodes the system uses an exploration of user's sentiments to build a feature vector. Finally, the data learning is achieved for the suggestions; by using deep belief network. The prototypical achieves superior precision and accuracy when compared with the LSTM and SVM algorithms.

**Keywords:** Bag of Words, Deep Belief Network, Restricted Boltzmann machine, Term Frequency/Inverse Document Frequency, Word2Vector, Support Vector Machine, and Long Short Term Memory.

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**Title of the Article:** A Novel Approach of Image Fusion Techniques using Ant Colony Optimization

**Abstract:** Ant Colony Optimization (ACO) is a relatively high approach for finding a relatively strong solution to the problem of optimization. The ACO based image fusion technique is proposed. The objective function and distance matrix is designed for image fusion. ACO is used to fuse input images at the feature-level by learning the fusion parameters. It is used to select the fusion parameters according to the user-defined cost functions. This algorithm transforms the results into the initial pheromone distribution and seeks the optimal solution by using the features. As to relevant parameters for the ACO, three parameters ( $\alpha$ ,  $\beta$ ,  $\rho$ ) have the greatest impact on convergence. If the values of  $\alpha$ ,  $\beta$  are appropriately increased, convergence can speed up. But if the gap between these two is too large, the precision of convergence will be negatively affected. Since the ACO is a random search algorithm, its computation speed is relatively slow.

**Keywords:** Convergence, Heuristic, Pheromone

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**Title of the Article:** A Comprehensive Overview on Cybersecurity: Threats and Attacks

**Abstract:** In the world of evolving technologies, we are being driven by online transaction, AI technologies and automated processes. With the increased use of technologies in our life, the cybercrimes have amplified. Various new attacks, tools and techniques have been developed which allow the attackers to access more complex and well-managed systems, creating damage and even remain untraceable. The statistics about cyber crime tell that as of 2021 January, google has registered around 2 million phishing websites. In 2019 around 93.6% of observed malware was polymorphic, which means it changes the code continuously to evade detection. According to FBI and internet crime complaint center 2020crime report has doubled compared to 2019. International Data Corporation predicts that global spending on cybersecurity solutions will reach \$133.7 billion by 2022 as cyber threats continue to increase.



Governments around the world have acknowledged to growing cyber-attacks by providing directions to organizations implementing efficient cybersecurity practices. Cybersecurity protects computer systems and networks from creating damage to hardware and software, information disclosure, theft and from the interference or misdirection of the services they provide. The need to understand different kinds of cybercrime. In order to develop necessary measures against cybercrime, we need to understand different kinds of cybercrime. Our paper gives you an overview of various types of cyber-crime like malware, phishing, zero-day exploit, Advanced Persistent Threat (APT). The study provides an overview to different preventive existing solutions proposal and methods to detect attack. A strong understanding of such attacks would benefit us to be cautious and develop effective solutions.

**Keywords:** Attacks, Cybercrime, Cybersecurity, Malware Detection, Preventive.

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**Title of the Article:** Virtual Sketch using Open CV

**Abstract:** Virtual Sketch is in where we can draw by just capturing the motion of a colored marker with a camera. One colored object at the tip of the finger is mainly used as the marker. We are here now, using the techniques of computer vision in open cv to build this project. The required language for this project is python due to its more exhaustive libraries and easy to make use of the syntax and but understanding the basics as well as it can be implemented in any open cv supported languages The colour tracking and detection processes are used to achieve the goal of this project. The color marker here used is detected and mask is produced. The next steps of morphological operations on the mask produced those are Erosion and Dilation. Erosion makes the impurities present in the mask to get reduced and Dilation further regains the eroded main mask.

**Keywords:** Open CV, Python, Erosion, Dilation, Color Tracking, Color Detection, Mask.

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**Author(s):** Shaik Gousia begum, Syed Sarfaraz Nawaz, G. Sai Anjaneyulu

**Title of the Article:** Implimentation of Fuzzy Logic Controller for DC–DC step Down Converter

**Abstract:** This paper presents the design of a Fuzzy logic controller for a DC-DC step-down converter. Buck converters are step-down regulated converters which convert the DC voltage into a lower level standardized DC voltage. The buck converters are used in solar chargers, battery chargers, quadcopters, industrial and traction motor controllers in automobile industries etc. The major drawback in buck converter is that when input voltage and load change, the output voltage also changes which reduces the overall efficiency of the Buck converter. So here we are using a fuzzy logic controller which responds quickly for perturbations, compared to a linear controllers like P, PI, PID controllers. The Fuzzy logic controllers have become popular in designing control application like washing machine, transmission control, because of their simplicity, low cost and adaptability to complex systems without mathematical modeling So we are implementing a fuzzy logic controller for buck converter which maintains fixed output voltage even when there are fluctuations in supply voltage and load. The fuzzy logic controller for the DC-DC Buck converter is simulated using MATLAB/SIMULINK. The proposed approach is implemented on DC-DC step down converter for an input of 230V and we get the desired output for variations in load or references. This proposed system increases the overall efficiency of the buck converter.

**Keywords:** DC-DC Buck Converter, Fuzzy Logic Controller, Pulse Width Modulation (PWM), MATLAB/SIMULINK.

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**Author(s):** Namratha Sampath, P.V.S.S. Parimala

**Title of the Article:** D-STATCOM Control using SRFT Method for PQ Improvement in a PV System

**Abstract:** The set of restrictions defined for a system's electrical characteristics so that the entire electrical system can function in the intended manner and without losses is known as power quality. Power quality issues such as transients, harmonics, voltage swell, sag, flicker, fluctuations, and power factor difficulties are becoming more common as power electronic devices become more widely used. The usage of a Distribution Static Compensator (D-STATCOM) to mitigate power quality issues is discussed in this study. In this case, D-STATCOM functions as a shunt active power filter to reduce harmonics caused by non-linear loads. The simulation studies on a PV-based Cascaded-H-Bridge Multi-Level Inverter i.e Solar PV and Cascaded H Bridge MLI are integrated using Selective Harmonic Elimination method with D-STATCOM injected at the load side to improve power quality are presented in this project. The Solar PV system is mathematically modelled using Boost regulator and P&O MPPT technique and to the D-STATCOM the controller is designed utilizing Synchronous Reference Frame Theory (SRFT) out of many control strategies for reactive power compensation, harmonic mitigation, and power factor enhancement as it is more accurate. A 2<sup>nd</sup> order low pass filter is employed at the load side to reduce the harmonics to some extent, and both 5-level and 7-level models are evaluated. MATLAB/SIMULINK is used for simulation.

**Keywords:** Multi-level Inverter (MLI), PV System, Boost converter, P&O (Perturb and Observe) Cascaded H-Bridge (CHB), Selective Harmonic Elimination (SHE), D-STATCOM, Voltage Source Converter (VSC), SRFT, PI controller, Hysteresis Controller, 2<sup>nd</sup> order low pass filter.

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**Author(s):** Raveena Jokim Crastha, Roopa M

**Title of the Article:** Design of SMPS Buck Converter with Protection Circuits for Automotive Charger

**Abstract:** The automotive manufacturers are working towards enhancing sophisticated designs and technologies that enable better vehicle-user connectivity by integrating all the control units to one infotainment system. This key feature with high-level intelligence and competency plays an important role with an increase in demand in the production process of the automotive industry. This paper proposes a unique design of USB smart charger module that is designed in a way to fit into limited space in a front panel of the vehicle. The specific design methodology of the DC-DC SMPS buck converter with the protection circuits which serves as the important section of the smart charger is explained. The module is designed with both single and double port that are identical to each other. Each of these models provides effective connectivity of devices in the vehicle network with secured over-current, over-voltage and short circuit protection circuitry. The configuration of controllers and connectors used is implemented in Altium. The functionality of the system designed is examined and verified in TINA-TI tool.

**Keywords:** Electromagnetic Compatibility, Switched Mode Power Supply, Universal Serial Bus.

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**Author(s):** Sabarikanth kk

**Title of the Article:** Pothole Decton Syatem In Vehicle

**Abstract:** In India major road accident is based on potholes. To identify this potholes and humps in roads may reduces the road accident and also reduces the damages in cars and bike. To identify the holes and humps or speed breakers, the ultra sonic sensor, display board and buzzer also used in it. Project is mainly used in the prototype model of the vehicle which has the capable to find holes and humps in the road. When the vehicle identify the holes and hump it started showing the distance of obstacles, once the distance of obstacles reduced to 10m range the buzzer gives the alarm signals to drives that obstacles is near to vehicle so that they can reduces the speed of the vehicle and go slow through the obstacles or they can change the path. The display board given near the dash board that drivers can easily view the board and buzzer is given inside the vehicles and ultrasonic sensors given in the front of the bumper so it act efficiently. Here the arduino board is used for the power supply and programs, so this project reduces the accident occurs in the road due to holes and humps.

**Keywords:** Potholes, Buzzer, Ultra Sonic Sensor, Humps.

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**Author(s):** Ankaj Kumar, Gouri Sankar Mishra, Parma Nand, Madhav Singh Chahar, Sonu Kumar Mahto

**Title of the Article:** Financial Fraud Detection in Plastic Payment Cards using Isolation Forest algorithm

**Abstract:** The need for technology has always found space in Financial Transaction as the number of fraud in financial transactions increases day by day. In this research we have proposed a new methodology by using the isolation forest algorithm and local outlier detection algorithm to detect the financial fraud. A standard data set is used in experimentation to classify a transaction occurred is a fraudulent or not. We have used neural networks and machine learning for classification. We have focused on the deployment of anomaly detection algorithms that is Local Outlier Factor and Isolation Forest algorithm (IFA) on financial fraud transactions data.

**Keywords:** In This Research We Have Proposed A New Methodology By Using The Isolation Forest Algorithm And Local Outlier Detection Algorithm To Detect The Financial Fraud.

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