



3.3.3: Number of Books and Chapters in edited volumes/books published and paper published in national/international conference proceedings per teacher during academic year 2022-2023.

Content

S. No	Title	Page No
1.	Books Published	2
2.	Conference	5
3.	Patents Published	22



MOHAMED SATHAK A.J. COLLEGE OF ENGINEERING

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Books Published in AY 2022-23				
Sl. No	Name of the author/s	Title of Book	ISBN No	Name of the Publisher
1	Ms. E. Jayanthi	Communication Systems	121962111211	Shalanx Publications
2	Mrs. Muthu Pandeewari	Object Oriented Analysis and Design	Nil	Charulatha Publications

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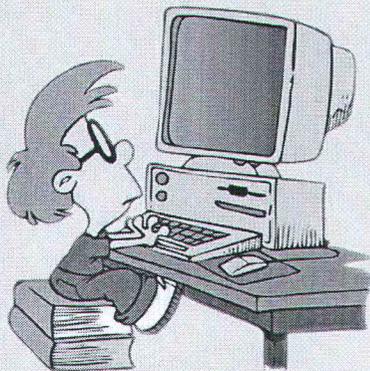
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Object Oriented Analysis Design

Object Oriented Analysis Design

Dr. D. Mansoor Hussain

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Sl. No	Name of the author/s	Title of paper	Name of the Journal/Conference	Year of publication	Name of the Publisher/Organiser
1	Dr. K.S.Srinivasan, Dr.I.Manju, Dr.M.Sivakumar	Design and Optimization of Compact RFID Antenna Tag for Biomedical Applications	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer
2	Dr.I.Manju	Fusion based underwater image enhancement and detail preserving	International Conference on Signal and Information Processing (IConSIP)	2022-23	IEEE
3	Dr.I.Manju	Underwater image enhancement using color constancy via high pass emphasis filter and DCP	International Conference on Signal and Information Processing (IConSIP)	2022-23	IEEE
4	Dr.M.Sivakumar	Night Surveillance Robot for Women Safety	3rd International Conference on Electronics and Sustainable Communication Systems (ICESC),	2022-23	IEEE
5	Dr.M.Sivakumar	Autonomous Health Care Robot	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer
6	Dr.M.Sivakumar	Thingspeak Based Garbage Monitoring and Collecting System	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer

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7	Dr.M.Sivakumar	Low Power Methodologies for FPGA – An Overview	Springer Tracts in Electrical and Electronics Engineering (Book Series)	2022-23	Springer
8	Dr.M.Sivakumar	IoT Devices Based Low Power Dependability	Springer Tracts in Electrical and Electronics Engineering (Book Series)	2022-23	Springer
9	Dr.M.Sivakumar	Edge and android application based health monitor	5 th International Conference on smart systems and inventive technology ICSSIT	2022-23	IEEE
10	Mr. C. Venkatesh	Chopping Down on Industry 4.0 using Automatic power Factor Correction units to Boost power Performance	International Conference on Electronics and Renewable Systems (ICEARS 2022)	2022-23	IEEE
11	Dr.S.Devikala	Sliding Mode Controlled and Phase-Shift Switches Capacitor based Multiport converter	8 th International Conference on Communication and Electronic Systems	2022-23	PPG Institute of Technology
12	Ms. S. Sudha	A new aspect of Triangular neutrosophic Chromatic Numbers and its Application	International Conference on 'Pure and Applied Mathematical Science'	2022-23	Saveetha Engg College
13	Ms. Kanmani	Information Pertaining to Network Security	International Conference & Computer Communication & Informatics	2022-23	Peri Institute of Technology
14	Mr. Vimalathithan	Transportation Mode detection based on Deep Learning	International Conference & Computer Communication & Informatics	2022-23	Peri Institute of Technology
15	Mr. S.R. Mohan	Evaluation of wear behaviour of stir and squeeze cast A356/SiC/Gr hybrid composites using TOPSIS method	International Conference on Recent and Advanced Composite Materials	2022-23	Bharath Institute of Higher Education and Research
16	Mr. S.R. Mohan	Investigation of microstructural Mechanical Behaviour of AA6351/B4c Composites Fabricated through Powder Methodology	National Conference on Mechanical, Mechatronics and Automobile Engineering	2022-23	Bharath Institute of Higher Education and Research

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17	Mr. S.R. Mohan	A study on Microstructural Mechanical Behaviour of AZ31D/SiC Composites Fabricated through Powder Methodology	National Conference on Mechanical, Mechatronics and Automobile Engineering	2022-23	SRM
18	Mr. Vimalathithan	Theft protection for vehicle by using GSM	International Conference on Artificial Intelligence and Autonomous systems	2022-23	Indra Ganesan College of engg

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Design and Optimization of Compact RFID Antenna Tag for Biomedical Applications



M. Sivakumar, I. Manju, K. Umapathy, K. S. Srinivasan,
and D. Muthukumaran

Abstract A compact RFID antenna tag is designed and optimized for biomedical applications. The sensors provide a good rate of transfer of data along with a lengthy reading of range. However, tags of antenna will face distortion in frequency if come across metals and surfaces of liquids. We focused on those factors to enhance the range of observation in antenna and increase in number for smaller applications. The RFID antenna is meant for designs smaller in size and better efficiency connected with surfaces of metal applications. The simulations are carried out by Matlab antenna tool box and optimization toolbox. The results show the values of observation as 6-m and 4.4-m for 902 to 928 MHz and 840 to 845 MHz typical frequency bands, respectively. The proposed design has low profile, low cost, and long readable range with good conjugate matching and unidirectional radiation.

Keywords RFID · IoT · Antenna tag · Optimizer

1 Introduction

This work presents modeling and analysis of a smart design of compact antenna appropriate for radio frequency identification (RFID) tag design using Matlab. The technique of RFID shall be employed for Medicare in conjunction of IOT and sensors economical in type. This approach also enhances the collection of data in real-time mode. The RFID antenna tag and H-Type microstrip patch antenna are designed for IoT-based RFID applications. Initially, the antenna tag is designed which has

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263

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Night Surveillance Robot for Women Safety

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Abstract - Recently, women's safety is a critical concern in different countries across the globe. As a result, a safety monitoring robot controlled by a Raspberry Pi is supported in this research. To secure the surroundings, the device utilizes an internet based digicam, an infrared sensor, and a sound sensor installed on the robot platform. The robot vehicle follows a predetermined path with the assistance of IoT network. The IR sensor is utilized in this system to locate the obstructions in the path of the robot. The digicam will continually record the surrounding environment. When a sound is detected by the sound sensor, the digital camera (digicam) starts taking pictures and sends alert messages.

Keywords: Internet of Things (IoT), Sensors, Raspberry PI, Security Patrolling.

I. INTRODUCTION

Technology plays an indispensable role in human lives. The development of different technologies has altered the way we live and work. The advent of computer systems and Internet has introduced a modern alternative to satisfy our day-to-day requirements. The majority of people rely on the Internet and computers to perform certain tasks. Most significantly, technology has altered our way of life while also making it more comfortable. The objects or devices present in the Internet of Things are well-equipped with sensors, software, and device learning techniques. The usage of such devices decreases the amount of human intervention in performing a certain task. The development of IoT has undoubtedly altered human living by reducing their effort and time. Every day, the advancing generation gives a boost to one-of-a-kind intelligent goods, consequently improving the standard of living of people. Sensors are installed in IoT devices to detect the changes in the environment. Sensors connected to the Internet can collect data from its surroundings.

Most of the people are unaware of several sensor packages. Automobiles, machines, aircraft, medical, manufacturing, and robotics are examples of such applications. In addition to recognizing the motion, an IR sensor can detect the temperature of an object. Generally, all things generate various types of heat radiation throughout the infrared spectrum. These types of radiation are undetectable to human sight; nevertheless, infrared sensors can detect them. One type of module used to detect sound is the sound sensor. In general, this module is used to determine the

depth of sound. This module's packages include the switch, safety, and tracking. This sensor's accuracy may be adjusted for user convenience. This sensor makes use of a microphone to provide input to a buffer, top detector, and amplifier. This sensor detects a valid signal and approaches a microcontroller's output voltage sign. Following that, it does the necessary processing. Nowadays, many safety operations are triggered as a result of certain types of sound, such as gunshots, competitive behaviour, and breaking glass. Cameras with built-in sound promotion centres may transfer huge amounts of data to the safety device. Because they send out alerts on a regular basis when real or potential issues come up. Then they immediately suggest brief and appropriate actions to mitigate the consequences.

The increase in technology also increases the violation against women. This has also led to devising new technologies to increase women's safety. Nowadays, robots are used in a variety of industries, including security and defence. Recently, a night surveillance robot is developed to strengthen women safety at night. It can be a great step forward in the advancement of automation and security. This research work focuses on human emotions that operate the hardware tool. The tool used in this case is an Android mobile phone, which recognises the gesture and sends the information to the microcontroller, which then executes the robotic operations, while a digital camera captures footage. This study focuses on human motions used to handle physical tools. The tool in this case is an Android mobile phone, which recognizes the gesture and sends the information to the microcontroller, which then performs the robotic operations and captures a video. It features a sound sensing cap potential, an obstruction sensing cap potential, and IOT capabilities to expose what it detects with the use of a digicam.

II. LITERATURE SURVEY

The robot uses an Arduino microcontroller and a smart phone for the purpose of monitoring activities [1]. Some robots are designed for executing indoor activities. They are meant for doing surveillance activity in allocated areas either by its own or by executing tele-operation [2]. These robots are designed for spying the operation with android application and camera in wireless mode [3]. The robot will perform periodic surveillance operations in a certain region, saving a significant amount of human labour.

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Autonomous Health Care Robot



K. Umapathy, S. Omkumar, D. Muthukumaran, S. Chandramohan,
and M. Sivakumar

Abstract The spread of corona virus has been intensive across the globe for the past two years. Medical services are one among the most vital things which can save the people with proper treatment and care. But, the doctors and hospital staff can also have a chance of getting affected with this virus during the treatment. So, robotic implementation can be a big boon in patient monitoring and healthcare services so that human interaction can be reduced with the virus affected patients to a large extent. This approach is not only useful in patient monitoring, but also in treating the patients and helping the staff over there in the hospitals with the robots started making their own mark. The proposed robot includes a Raspberry Pi controller along with appropriate sensors and motor drivers will assist the hospital staff and the patients for updating the patient details, dispatching the medicines in time, and informing the hospital authorities for any abnormal conditions of the patients.

Keywords Patient monitoring · Artificial intelligence · Mechatronics · Machine learning

1 Introduction

The robotic automation along with human intelligence and expertise in medical field can increase the efficiency and ability of the services to a large extent. In recent days, the robots were developed in large number for functioning in hospitals like helping the patients to take medication by reminders, updating the details of their

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227

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ThingSpeak-Based Garbage Monitoring and Collecting System



K. Umapathy, S. Omkumar, D. Muthukumaran, S. Chandramohan, and M. Sivakumar

Abstract Managing waste is one among the bothering factors in the present situation. It is our bound responsibility to look for an organized mechanism to sort out this problem. Hence, there is a need for smart systems with appropriate framework in tackling everyday garbage which includes major chunk of waste material of cities. This contributes to various environmental issues like global warming, environmental pollution, and health complications. This paper explains the prototype of a smart dust bin, where opening of dustbin occurs in the presence of human being. The occupancy of the dustbin is provided as an alert to mobile of the user. The smart dustbin is designed to give the exact percentage of occupancy of waste in the form of LCD display by employing a software application named as ThingSpeak.

Keywords Arduino · GSM · Dustbin · Ultrasonic Sensor · ThingSpeak

1 Introduction

IOT connects the objects relevant to a network. The technology is to transfer the flow of data within the network objects. IOT connect and activate the devices like ultrasonic sensor, rotating devices, controllers, etc. Generally, trash bin is employed for managing and storing of wastes. The tendency of human is to throw the waste in and around the dustbin if filled completely. To prevent this sort of situation, IOT technique is employed to keep the dustbin identify the level of occupancy with smart notification. This helps to keep the environment very clean. A regular dustbin is

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235

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Chapter 4

Low Power Methodologies for FPGA—An Overview



K. Umapathy, D. Muthukumaran, S. Chandramohan, M. Sivakumar,
and Oliver James

Introduction

Because of their reconfiguring characteristic, FPGA's are more appropriate for adaptive systems in general. The relevant applications include recognition of images or patterns, recovery of failures online, etc. (Hassan et al. 2005; Paulsson et al. 2006). Less efficiency is the only constraint of FGGA in comparison with ASIC's as far as the requirement of extra circuit for reconfiguration. Nowadays, more attention is focused on enhancement of efficiency in energy in FPGA's (Betz et al. 1999). This is because of increased requirement for applications connected with low power. There is an increased requirement for low power especially for portable devices and devices operated with battery. In case of non-portable applications, the reduction in consumption of power will have economical benefits with respect to functioning, cooling, etc. To put FPGA's into the track of energy efficiency; four methodologies can be implemented with respect to—system, device, circuit and architecture (Lamoureux et al. 2008).

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Chapter 5

IoT Devices Based Low Power Dependability



K. Umapathy, S. Omkumar, S. Chandramohan, M. Sivakumar,
and Wasana Boonsong

Introduction

With the proliferation of IoT technology, the design of low power IoT devices becomes easier, which can be implemented in the current smart environments, such as smart homes, smart cities, and smart industries. It is the wireless network of standard physical devices that can be monitored and controlled through the Internet. To analyse the collected data, the IoT network provides the necessary information to take decisions. The IoT structure is shown in Fig. 5.1.

IoT is a broad term in which various different objects are linked to the internet for catering to innovative and best services in the digital world (Samie et al. 2016; Umapathy et al. 2020a). Technical enhancements in communication engineering, embedded systems, transducers, etc. play an inevitable role in the design of low power portable economical devices (Muthukumaran et al. 2022).

The above are the vital parameters employed for various applications such as patient monitoring systems, home and office automation, smart glasses for the blind, etc. (Miorandi et al. 2012; Umapathy et al. 2020b). They provide essential support and aid for IoT to achieve the required application. The System of IoT is shown in Fig. 5.2 with different layers. Basically, IoT is a blend of various objects, machines,

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99

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Edge and Android Application based Health Monitor

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Abstract — It is a major concern to care for the sick and elderly people who require assistance throughout the day. This paper presents a development model that continuously monitors medical data such as pulse rate, body temperature, and oxygen level of those patients. This will allow care takers to view their real-time medical information via their edge devices. The model was promoted by integrating an Arduino controller with relevant sensors to monitor temperature, heart rate, and oxygen saturation levels. Furthermore, this application will consistently transmit medical data to a master computer that serves as a cloud server. In turn, the server will instantly update data on the Android device.

Keywords— Server, Arduino, Edge, Internet of Things, Android

I. INTRODUCTION

Generally in pandemic environment, sick people require extreme care at regular intervals of time in order to observe their health parameters. The care taking persons who used to monitor them may not be available all the time. But their medical data have to be monitored regularly which failing to do so will cost their lives. To handle these abnormal situations, a system has to be implemented which provides all sort of real time medical information at the remote place itself. This medical information shall be much useful for care taking persons to handle them either physically or virtually. There is a proverb - Health is wealth which goes in parallel with technology.

IoT network is the right choice to provide the above arrangement. Remote or Virtual screening of patients will give a lot of advantages such as feel like at home, reduced waiting time, reduced cost etc. The sensors and internet are also utilized for the above purpose. The idea of generating these types of frameworks is to reduce the frequent visits of a doctor thereby reducing the medical expenses. Extensive research work is going on to strengthen the services of health in an effective manner. A lot of smart equipments are available in the real time market for health care. These products will monitor the patients and maintain contacts of physicians thereby improving performance of medical system.

II. RELATED WORKS

Mostafa utilized Electrocardiogram (ECG) [1][2] for determining electrical events inside the heart and mechanical happenings during the course of heart cycle under various poses of human body. The integration [3] of ECG with Photoplethysmography (PPG) presented a system with good reliability in order to evaluate the medical parameters effectively with respect to time. These works [4][5] explained the usage of biomedical sensors to measure the temperature of human body in an optimized manner. The system presented in [6][14] tracks the health parameters of sick people consistently and helps the physicians thereby enhancing the health care appropriately. The technique implemented in this system [7][13] utilized the concept of wireless sensor networks to gather data and broadcast it to the concerned. An IoT dependent alert system [8] is provided to indicate the abnormal events occurring in industries by means of relevant integrated digital devices. The controller integrated with other devices [9] evaluated the pulse rate, temperature of body and provide them to the medical personnel in real time. It created a revolution in the health care sector to provide medical data of the sick people using the cloud architecture [10][12]. The system developed in [11][14] illustrated the measurement of various health factors along with analysis for detection of fall and sleeping patterns. Krishnaraj [15] implemented a system for observing the medical data of patients by using IoT sensors and Blynk cloud application.

III. MATERIALS AND METHODS

The proposed system is constructed by using a node microcontroller ESP 8266 which is meant to observe the temperature of body, pulse rate and oxygen level. The system will track the health conditions of sick persons at remote place and test them based on the requirement. The sensors integrated with system will do above measurements without the help of multiple medical equipments. The system will collect the data and update to android device in real time mode. Any abnormality in the medical data of patients will be viewed periodically and appropriate notification will be given to care taking persons based on the need. Figure 1 shows the block diagram of the system.

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Chopping Down on Industry 4.0 using Automatic Power Factor Correction Units to Boost Power Performance

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Abstract- The method of power factor adjustment serves to offset the impacts of loads which, with a power factor less than one, have an unwanted impact. There are two possible places to implement power factor correction: a utility company may do it to increase the efficiency and stability of the system, or a client may do it at his or her premise. This is vital to guarantee that electricity runs smoothly and costs little over time. An Arduino-based capacitor switching capacitor-assisted power factor adjustment technique has been introduced in this article.

I. INTRODUCTION

In most conventional electrical distribution networks, inductive loads predominate. Motors, transformers, and induction furnaces are all kinds of metal-working machines that belong in this category. Inductive loads use two types of power (one to activate and the other to maintain the current): inductive and capacitive. Electrically, the load and therefore the utility cost are increased, whether the labor is equal or not. The power needed to get things done, the electricity (kW) it takes to create heat, light, motion, or machine output, and supply to keep the magnetic field stable are values to be known. To measure power use, a wattmeter is used that tracks how many watts are consumed while you are working. The kilowatt is the metric used (kW). Reactive power does not produce "work" and is necessary to flow between the generator and the load in order to allow appropriate system operation.

KiloVolt-Amperes-Reactive (kVAR) is the measure of reactive power. Apparent power is the sum of working power and reactive power. KiloVolt-Amperes (KVA) is the standard unit of measure for electrical power (kVA). In load, the magnitude of

reactive power is defined as the cosine of the angle between the power used and the power delivered.

$$\text{Power factor} = \cos(\theta)$$

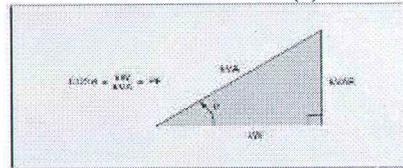


Fig. 1: Power triangle

To create a technology that enables Power Factor Correction (PFC) in both single and three-phase systems, the author uses thyristor-based capacitor bank switching to minimize harmonic generation due to relay operation. It is believed that the additional PIC microcontroller unduly complicates system programming. Paper [2] shows how a three-phase power factor correction was developed using a microcontrolling chip (PSoC). The method measured the angle between Y and B phase voltage and R phase current to determine $\sin(\theta)$ relationships. Also, reactive and active power (KVAR and KWA) of the system was determined by the reactive and active power from the KVAR and KWA of the YB phase and R phase. Current power factor was calculated using these values. It showed that it is possible to utilise the Arduino platform to achieve the same results as with expensive alternatives. The work demonstrates how a power factor corrector using the microcontroller chip is designed and developed. Using a microcontroller-based algorithm, PIC measures reactive power in the load and, when necessary, capacitors are switched on to provide extra reactive power locally, so the power factor is brought closer to unity.

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Certificate of Presentation

This is to certify that

S Devikala

have successfully presented the paper entitled

**Sliding Mode Controlled and Phase-Shift Switched Capacitor based
Multiport Converter**

at

**8th International Conference on
Communication and Electronics Systems (ICCES 2023)
organized by PPG Institute of Technology,
Coimbatore, India on 1-3, June 2023.**

Session Chair

Prof.S.V. Ramanan
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**Innovations in
Science and
Humanities
(ICISH - 2023)**
18th & 20th, April 2023

CERTIFICATE OF APPRECIATION

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Dr./Mr./Ms. **SUDHA.S**, AP of

MOHAMED SATHAK AJ COLLEGE OF ENGINEERING has participated
in the International Conference on **Innovations in Science and Humanities (ICISH - 2023)**,
and presented his / her research findings on the
Topic: **A New aspect of Triangular Neutrosophic Chromatic Number and its Application**
organized by Department of Science and Humanities, Saveetha Engineering College
held during 19th & 20th April, 2023

Dr. P.A. Vivekanand
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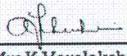

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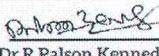
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Certificate of Presentation

This is to certify that Dr./Mr./Ms./Mrs. KANMANI from Mohammed Sathak AJ College of Engineering has presented a paper titled Information Pertaining to Network Security in the International Conference on Computer, Communication and Informatics (ICCCI'23) organized by Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science held on 19th April 2023.


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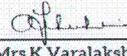

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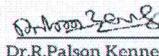
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Certificate of Presentation

This is to certify that Dr./Mr./Ms./Mrs. Vimalathithan S from Mohammed Sathak AJ College of Engineering has presented a paper titled Transportation Mode Detection Based on Deep Learning in the International Conference on Computer, Communication and Informatics (ICCCI'23) organized by Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science held on 19th April 2023.


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Paper ID
ICRACM-096

This certificate is awarded to Mr / Dr. M. Dhanashekar, P Loganathan, S.R. Mohan, S. Ayyanar
authors of Evaluation of Wear Behaviour of Stir and Squeeze cast A356/SiC/Gr Hybrid composites using TOPSIS Method
in
recognition of winning the BEST PAPER AWARD in the 2nd International Conference on Recent and Advanced Composite Materials (ICRACM-2023),
organised by the Centre for Composites and Advanced Materials, Department of Mechanical Engineering, SRM Institute of Science and Technology,
Kattankulathur, Tamil Nadu, India during 22-24 Feb-2023.

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held on 10th April 2023 organized by the Department of Mechanical Engineering, Bharath Institute of
Science and Technology, BIHER - Chennai-600 073, India.

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Associate Professor, Mechanical

Co-ordinators

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Dr. R. HARIHARAN
Asst. Professor, Mechanical

V. Balambica
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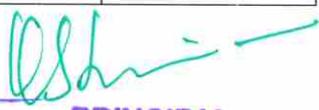
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Number of Patents published in AY 2022-23				
Sl. No	Name of the author/s	Title of patent	Appl. No / Patent No	Year of publication
1	Dr.K.S.Srinivasan Mrs. E.Jayanthi	A Smart Device to Monitoring the Optic Cable and Inform the Users in Case of any Discrepancies	202241071306	2022
2	Dr.K.S.Srinivasan Dr.I.Manju Dr.M.Sivakumar	FPGA Implementation of FBMC Transmitter Using Clock Gating Technique Based QAM, Inverse FFT, Filter Bank	202241044118	2022
3	Dr.I.Manju Mr. C. Venkatesh	ML Strategy for Performance Enhancement of Phase Change Material for a Smart Control Solar Application	202241071305	2022
4	Dr. Ramesh. G Mr. S. Syed Abudhahir	Smart Painting Roller With Temperature Sensor to detect the temperature of wall and paint	202241071203	2022
5	Mr.D. Weslin Mr.V. Vigneshwaran	A method and a device of Wireless Master Joystick Controller for Robotics	202241071210	2022
6	Dr. Someswaran Mr. Tharanikumar L	Machine Learning - Based Closed-Loop Mixture Of Concrete Equipment and The Method	202241071309	2022
7	Mrs. I.S. Suganthi Mrs.S.Priyadharsini	Design a Micro Strip Patch for Spectrum Utilization in Cognitive Radio	202241071307	2022


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8	Mrs.S.Anusuya	Document Classification Using Artificial Intelligence	202241052791	2022
9	Dr.M.Sivakumar Mr.M.Kamarajan Mrs.E.Jayanthi Mrs.S.Sonadevi Mr.M.Ashokkumar Mrs.S.Priyadharsini Mrs.S.Anusuya Mrs.I.S.Suganthi	Priority based Multiport simultaneous wireless charging methods on electric vehicles	202241063890	2022
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12	Mrs. Muthu Pandeewari	Design and Implementation of Surveillance system based on IOT	202341026947	2023
13	Mr. D. Sakthivel	Steelslag Reinforced Concrete Preparation Process Thereof	202331031936	2023
14	Mr. S.R. Mohan	Voice Based Product Recognition For Visually Impaired	202341031913	2023
15	Dr.S. Prasath	System And Method For Renewable Energy Forecasting	202341031911	2023
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17	Mr. J. Rajesh	Flat-Slab Construction using coconut shell concrete	202331038688	2023
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Number of Patents Granted in AY 2022-23				
Sl. No	Name of the author/s	Title of patent	Appl. No / Patent No	Year of Grant
1	Mr. S.R. Mohan	Refrigerator With Food Warming Apparatus Attachment	365189-001	2023


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Mohamed Sathak A.J. College of Engineering
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Chennai - 603103.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071306 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : A SMART DEVICE TO MONITORING THE OPTIC CABLE AND INFORM THE USERS IN CASE OF ANY DISCREPANCIES

<p>(51) International classification :H04B0010071000, G06N0020000000, G02B0006440000, H04B0010077000, H04N0007180000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. K S Srinivasan Address of Applicant :Principal, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mrs. Jayanthi Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -</p> <p>3)Mr. Madhivanan Address of Applicant :III Year, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>4)Potuganga Manoj Kumar Address of Applicant :IV Year, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :

The optical cable line monitoring system is an intelligent system for the management and maintenance of fiber optic networks. Utilizing a geographic information platform and backed up by powerful resource management functions, it integrates cable monitoring, alarm notifications, fault analysis, localization, fault management, and line maintenance and management to ensure the safe and efficient operation of optical cable networks. By doing so, physical optical fiber networks can be monitored, marketed, maintained, and managed. Smart device industry allows developers and designers to embed different sensors, processors, and memories in small-size electronic devices. Sensors are added to enhance the usability of these devices and improve the quality of experience through data collection and analysis. However, with the era of big data and machine learning, sensors' data may be processed by different techniques to infer various hidden information. The extracted information may be beneficial to device users, developers, and designers to enhance the management, operation, and development of these devices.

No. of Pages : 18 No. of Claims : 8

The Patent Office Journal No. 52/2022 Dated 30/12/2022



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82589

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241044118 A

(19) INDIA

(22) Date of filing of Application :02/08/2022

(43) Publication Date : 12/08/2022

(54) Title of the invention : FPGA IMPLEMENTATION OF FBMC TRANSMITTER USING CLOCK GATING TECHNIQUE BASED QAM, INVERSE FFT, FILTER BANK

(51) International classification :H04L0027260000, H04W0016140000, H04L0027360000, H04L0027340000, H03H0017020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :
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(57) Abstract :

Abstract: The present invention related to filter bank multicarrier modulation (FBMC) technique is one of multicarrier modulation technique (MCM), more particularly to improve channel capacity of cognitive radio (CR) network and frequency spectrum access technique. To reduce the area, delay and power of FBMC structure, a clock gating technique is applied in the QAM modulation, radix2 multipath delay commutator (R2MDC) based inverse FFT and unified addition and subtraction (UAS) based FIR filter with parallel asynchronous self-time adder (PASTA) and clock gating technique is used to reduce the unwanted clock switching activity. Hence speed is high and power consumption is low. FBMC with clock gating technique gives low power and high speed than the previous FBMC structures.

No. of Pages : 9 No. of Claims : 10


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The Patent Office Journal No. 32/2022 Dated 12/08/2022

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071305 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 16/12/2022

(54) Title of the invention : ML STRATEGY FOR PERFORMANCE ENHANCEMENT OF PHASE CHANGE MATERIAL FOR A SMART CONTROL SOLAR APPLICATION

(51) International classification :H01L0045000000, C09K0005060000, F28D0020020000, H01L0027240000, H04L0027260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Solar energy is a renewable energy source that can be utilized for different applications in today's world. The effective use of solar energy requires a storage medium that can facilitate the storage of excess energy, and then supply this stored energy when it is needed. An effective method of storing thermal energy from solar is through the use of phase change materials (PCMs). PCMs are isothermal in nature, and thus offer higher density energy storage and the ability to operate in a variable range of temperature conditions. This article provides a comprehensive review of the application of PCMs for solar energy use and storage such as for solar power generation, water heating systems, solar cookers, and solar dryers. This paper will benefit the researcher in conducting further research on solar power generation, water heating system, solar cookers, and solar dryers using PCMs for commercial development.

No. of Pages : 18 No. of Claims : 3


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The Patent Office Journal No. 50/2022 Dated 16/12/2022

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/12/2022

(21) Application No.202241071203 A

(43) Publication Date : 16/12/2022

(54) Title of the invention : SMART PAINTING ROLLER WITH TEMPERATURE SENSOR TO DETECT THE TEMPERATURE OF WALL AND PAINT

(51) International classification :E04F0021080000, B05C0017020000, G03G0015200000, A61M0001140000, B29B0007620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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Name of Applicant : NA

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(57) Abstract :

Temperature sensor to detect wall and paint is a kind of special functional coating which measures the temperature distribution by judging the color changes of the paint film. It is widely applied in aero-engine testing to solve the problem of measuring the temperature profile of hot end components. In this paper, the methods of temperature indicating paints formula design, preparation process and painting process are studied firstly. Then a calibration system based on isotherm identification method has been specially designed to confirm the performance and characteristics of the paints. Certain type of multi-change TIP is taken as an example to illustrate the whole development process as well as the practical application of TIP in one aero-engine turbine component. It is proved that the paints attached firmly even in severe environment with high temperature and high velocity gas flushed and recorded the temperature profile successfully.

No. of Pages : 22 No. of Claims : 5



PRINCIPAL

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The Patent Office Journal No. 50/2022 Dated 16/12/2022

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071210 A

(19) INDIA

(22) Date of filing of Application :09/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : A METHOD AND A DEVICE OF WIRELESS MASTER JOYSTICK CONTROLLER FOR ROBOTICS

(51) International classification :B25J0009160000, B25J0005000000, G05D0001020000, H04L0001000000, B25J0015000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The popularity of using robots in industries and factories instead of human workers has seen a high rise. Through this work we have attempted to make an alternative system of human for reducing the human labor by using simple and available components. This robotic system is controlled by a user through joystick. By the use of the joystick the user can operate both the robotic vehicle and the robotic arm. It will move from one place to another according to the command of the user and pick the desired object and place it for the user. This design of the robot is easy, cheap and versatile, making it a great commercial candidate. With the increasing use of this kinds of robot the production rate will increase and the number of mishaps will decrease.

No. of Pages : 20 No. of Claims : 5

The Patent Office Journal No. 52/2022 Dated 30/12/2022


PRINCIPAL
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/12/2022

(21) Application No.202241071309 A
(43) Publication Date : 30/12/2022

(54) Title of the invention : MACHINE LEARNING - BASED CLOSED-LOOP MIXTURE OF CONCRETE EQUIPMENT AND THE METHOD

<p>(51) International classification :C04B0111000000, G06F0030200000, G06Q0050080000, B28C0007020000, G06F0111100000</p> <p>(86) International Application No Filing Date :NA :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. Someshwaran Address of Applicant :Professor and Head, Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mr. Tharani Kumar Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>3)Mr. Dhanush Aditiya Address of Applicant :II Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>4)A Mohamed Faizal Address of Applicant :II Year Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :
Concrete mix design is one of the most critical issues in concrete technology. This process aims to create a concrete mix which helps deliver concrete with desired features and quality. Contemporary requirements for concrete concern not only its structural properties, but also increasingly its production process and environmental friendliness, forcing concrete producers to use both chemically and technologically complex concrete mixtures. The concrete mix design methods currently used in engineering practice are joint analytical and laboratory procedures derived from the Three Equation Method and do not perform well enough for the needs of modern concrete technology. This often causes difficulties in predicting the final properties of the designed mix and leads to precautionary oversizing of concrete properties for fear of not providing the required parameters. A new approach that would make it possible to predict the newly designed concrete mix properties is highly desirable.

No. of Pages : 18 No. of Claims : 8

The Patent Office Journal No. 52/2022 Dated 30/12/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071307 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 16/12/2022

(54) Title of the invention : DESIGN A MICRO STRIP PATCH FOR SPECTRUM UTILIZATION IN COGNITIVE RADIO NETWORKS

<p>(51) International classification :H04W0016140000, H04W0072120000, H04B0007185000, H04W0024020000, H04W0084040000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>-----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Mrs. Suganthi Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai--</p> <p>-----</p> <p>2)Mrs. Priyadharshini Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -</p> <p>-----</p> <p>3)Ms. Abitha Address of Applicant :III Year Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>-----</p> <p>4)Ms. Abinaya Address of Applicant :III Year Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>-----</p>
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(57) Abstract :

A micro strip patch antenna with multiple parasitic patches for Cognitive Radio Network applications is presented to enhance the bandwidth. Multiple resonances are used for the design of antenna, with a view to broaden bandwidth. A modified Koch Fractal antenna is imprinted from micro strip radiating patch. A Parasitic Strip line helps to grasp micro hertz communication through antenna. A slotted patch energized by a gap feed was established before with a large angular coverage over a bandwidth of 13.1%. In this paper, it is proposed that multiple parasitic patches are potential for cognitive radio applications where circular patch (CP) covers bandwidth of 85% with radiation pattern for Spectrum Utilization (SU) and CP with meander lines feeding behaves as communication antenna operating at Wireless Local Area Network 802.11y (3.637 GHz). The transceiver in a communication network is powered by Proposed Antenna, to acquire improved energy efficiency of 95.7%.

No. of Pages : 18 No. of Claims : 5

The Patent Office Journal No. 50/2022 Dated 16/12/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241052791 A

(19) INDIA

(22) Date of filing of Application :15/09/2022

(43) Publication Date : 23/09/2022

(54) Title of the invention : Document Classification using Artificial Intelligence

(51) International classification :G06K0009620000, G06N0020000000, G16B0020000000, G06N0003020000, A63F0009100000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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9)Mr. Vittam Rakesh
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(57) Abstract :

[015] This work deals with the classification of documents using artificial intelligence. It describes the principles of classification and machine learning. It introduces AI methods and further presents the naive Bayes classification method in detail. It then describes the practical implementation of the classifier in the MS Office environment and discusses other possible extensions. Accompanied Drawing [FIG. 1] [FIG. 2] [FIG. 3] [FIG. 4] [FIG. 5] [FIG. 6]

No. of Pages : 23 No. of Claims : 3

The Patent Office Journal No. 38/2022 Dated 23/09/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241063890 A

(19) INDIA

(22) Date of filing of Application :09/11/2022

(43) Publication Date : 25/11/2022

(54) Title of the invention : PRIORITY BASED MULTIPORT SIMULTANEOUS WIRELESS CHARGING METHODS ON ELECTRIC VEHICLES

(51) International classification :H02J0007000000, B60L0053300000, B60L0053660000, H02J0007040000, H02J0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention discloses a priority based wireless charging system of electric vehicles. That means, the electric vehicles are charged by a wireless multiport simultaneous charging system based on priority factors like low battery vehicles, emergency vehicles, VIP vehicles, public transport vehicles, etc., The present invention also discloses about charging the electric vehicles in public places like charge station, parking area, traffic signals, etc., based on priority of the vehicles.

No. of Pages : 9 No. of Claims : 5

The Patent Office Journal No. 47/2022 Dated 25/11/2022


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Application Details

APPLICATION NUMBER	202241056841
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/10/2022
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TITLE OF INVENTION	Hydro- chemical assessment of environmental status of surface and ground water in mine areas
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	senanipindia@gmail.com
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	-
PUBLICATION DATE (U/S 11A)	14/10/2022

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071308 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : DEDICATED DRONE-BASED TESTING OF BUILDING'S STRENGTH LOCATED IN A HAZARDOUS ENVIRONMENT

<p>(51) International classification :C07D021380000, A61K0009500000, G01N0021880000, G02B0023240000, B21J0005000000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>-----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. Balakrishnan Address of Applicant :Head Academics Department of S & H Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mr. Vinothkumar Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>3)Mr. Shaik Irfan Address of Applicant :II Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR),Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>4)Mr. Sandesh Kumar K Address of Applicant :II Year Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR),Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :

Visual inspection is a very simple, non-destructive technique and usual in diagnosing buildings and structures' conditions. It also plays an important role in the rapid assessment of constructive problems as well as in the definition of an appropriate way for eventual remedial interventions. However, the use of this methodology often meets difficulties, especially when places to be inspected are difficult to access; it involves security risks for inspectors or even when a reactive inspection of urgent nature becomes unfeasible due to the high costs and the necessary means involved. In this context, the introduction of new technologies, such as drones, can bring substantial benefits. Currently, great focus has been put on this type of device as an emerging technology in the construction industry.

No. of Pages : 19 No. of Claims : 7

The Patent Office Journal No. 52/2022 Dated 30/12/2022


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Application Details

APPLICATION NUMBER	202331031936
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	04/05/2023
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TITLE OF INVENTION	STEELSLAG REINFORCED CONCRETE PREPARATION PROCESS THEREOF
FIELD OF INVENTION	CHEMICAL
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	19/05/2023

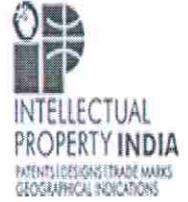
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सत्यमेव जयते



INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Application Details

APPLICATION NUMBER	202341026947
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	11/04/2023
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TITLE OF INVENTION	DESIGN AND IMPLEMENTATION OF SURVEILLANCE SYSTEM BASED ON IOT
FIELD OF INVENTION	ELECTRONICS
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	05/05/2023

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341031913 A

(19) INDIA

(22) Date of filing of Application :04/05/2023

(43) Publication Date : 23/06/2023

(54) Title of the invention : VOICE BASED PRODUCT RECOGNITION FOR VISUALLY IMPAIRED

<p>(51) International classification :A24F 404850, A61H 030600, G07G 010000, G09B 210000, G10L 130000</p> <p>(86) International Application No Filing Date :PCT// :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant : 1)Dr. B.VIJAYA PRAKASH Address of Applicant :ASSISTANT PROFESSOR(SENIOR) DEPARTMENT OF MECHANICAL ENGINEERING SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY L & T BY - PASS, SRI SHAKTHI NAGAR, POST CHINNIYAMPALAYAM, COIMBATORE, TAMILNADU 641062 -----</p> <p>2)Dr. S. RANGANATHAN 3)Mr. L. VETTRIVENDAN 4)Mr. MOHAN S R 5)Dr. P. SURESH 6)Dr. B.SENTHIL KUMAR 7)Mr. M.HARIPRABHU</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. B.VIJAYA PRAKASH Address of Applicant :ASSISTANT PROFESSOR(SENIOR) DEPARTMENT OF MECHANICAL ENGINEERING SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY L & T BY - PASS, SRI SHAKTHI NAGAR, POST CHINNIYAMPALAYAM, COIMBATORE, TAMILNADU 641062 -----</p> <p>2)Dr. S. RANGANATHAN Address of Applicant :PROFESSOR DEPARTMENT OF MECHANICAL ENGINEER ACADEMY OF MARITIME EDUCATION AND TRAINING - DEEMED TO BE UNIVERSITY, KANATHUR, CHENNAI- 603112 -----</p> <p>3)Mr. L. VETTRIVENDAN Address of Applicant :SCHOOL OF COMPUTING SCIENCE AND ENGINEERING PLOT NO. 2, YAMUNA EXPY, OPPOSITE BUDDHA INTERNATIONAL CIRCUIT, SECTOR 17A, GREATER NOIDA, UTTAR PRADESH 203201 INDIA. -----</p> <p>4)Mr. MOHAN S R Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING MOHAMED SATHAK A J COLLEGE OF ENGINEERING, SIRUSERI,SIPCOT IT PARK, OMR, CHENNAI-603103 -----</p> <p>5)Dr. P. SURESH Address of Applicant :PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING GALGOTIAS UNIVERSITY, GREATER NOIDA, GAUTAM BUDDH NAGAR, UTTAR PRADESH -203201 -----</p> <p>6)Dr. B.SENTHIL KUMAR Address of Applicant :ASSOCIATE PROFESSOR DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING, St. JOSEPHS COLLEGE OF ENGINEERING OLD MAHABALIPURAM ROAD, KAMARAJ NAGAR, SEMMANCHERI, CHENNAI, TAMIL NADU 600119 -----</p> <p>7)Mr. M.HARIPRABHU Address of Applicant :ASSISTANT PROFESSOR DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING M.KUMARASAMY COLLEGE OF ENGINEERING THALAVAPALAYAM, KARUR, TAMILNADU 639113 -----</p>
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(57) Abstract :
ABSTRACT VOICE BASED PRODUCT RECOGNITION FOR VISUALLY IMPAIRED This invention is developed to make the existence of visually impaired individuals simple. This is a camera-based framework to examine the standardized tag behind the picture and read the depiction of the item with the assistance of ID put away in the scanner tag. This is extremely valuable in the event of figuring out the portrayal of bundled merchandise to the visually impaired individuals and subsequently helping them in choosing to buy an item or not particularly which are bundled. To utilize this framework, the client should simply catch the picture on the item in the cell phone which then, at that point, settle the scanner tag which implies it filters the picture and figure out the Id put away. This is exceptionally simple to utilize and reasonable as it requires a scanner to check the standardized identification and a camera telephone to snap the photo of the picture containing the standardized tag. This is presently simple to carry out as the majority of the cell phones today have the necessary goal all together item depiction

No. of Pages : 22 No. of Claims : 6


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341031911 A

(19) INDIA

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(43) Publication Date : 23/06/2023

(54) Title of the invention : SYSTEM AND METHOD FOR RENEWABLE ENERGY FORECASTING

(51) International classification :C10G 020000, C25B 010400, F03D 150000, G06Q 300200, H02J 033800
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD FOR RENEWABLE ENERGY FORECASTING The short-term forecasts of renewable power generation are essential for effectively integrating renewable energy sources. With the waning and overrated petroleum product assets, the globe has at long last moved its concentration towards the utilization of Environmentally friendly power Assets, chiefly Sun based Energy. In this time span, the world has likewise seen a flood in specialized developments in the field of information science and AI. Additionally, it turned out to be exceptionally fundamental for the energy business to anticipate the result of the sun based power and subsequently needed to utilize different AI procedures among different strategies. This work includes 24-hour ahead sun oriented and wind power anticipating utilizing AI calculations. Two AI calculations, to be specific Back spread brain organization and Irregular woods are tried with same dataset. As inexhaustible power age is profoundly reliant upon weather patterns thus, for this work meteorological information of specific area is taken as info information for preparing the organization. For assessment of determining model, a legitimate assessment measure has been utilized for both guaging model individually. Exhibitions of back spread and arbitrary woods calculations are thought about for summer, winter and blustery seasons for sun based power determining. As wind power doesn't rely upon seasons, complete 5 years information is taken for guaging. The model is likewise tried for the remarkable situations where sun oriented irradiance esteem changes radically to arbitrary qualities because of overcast cover

No. of Pages : 28 No. of Claims : 7


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341023034 A

(19) INDIA

(22) Date of filing of Application :29/03/2023

(43) Publication Date : 21/04/2023

(54) Title of the invention : TABATA TRAINING WITH AND WITHOUT YOGIC PRACTICES ON SELECTED PHYSICAL FITNESS PHYSIOLOGICAL AND PSYCHOLOGICAL VARIABLES AMONG PERONS

<p>(51) International classification :A61B 050000, A61B 052200, A61H 010200, A63B 710600, H04W 080000</p> <p>(86) International Application No Filing Date :NA :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr. K. P. SANTHOSH NATHAN Address of Applicant :DIRECTOR, DEPARTMENT OF PHYSICAL EDUCATION, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA, 603103. -----</p> <p>2)DR.R.MOHANA KRISHNAN 3)DR. M. SIVAKUMAR Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Dr. K. P. SANTHOSH NATHAN Address of Applicant :DIRECTOR, DEPARTMENT OF PHYSICAL EDUCATION, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA, 603103. -----</p> <p>2)DR.R.MOHANA KRISHNAN Address of Applicant :DIRECTOR SPORTS, DIRECTORATE OF SPORTS, DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES, SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR, TAMILNADU, INDIA 603203. -----</p> <p>3)DR. M. SIVAKUMAR Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA 603103. -----</p>
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(57) Abstract :

ABSTRACT The present invention related to study attempts to estimate toe impact of tabata training with and without yogic practices on selected physical fitness, physiological and psychological variables among engineering college men students. To attain the purposo, 60 men students from Mohamed Sathak A J college of Engineering, Chennai were selected as subjects for this study and they were in 18 to 22 years of age. Equal division of three groups was made in which two experimental and one control groups and each group had twenty subjects. Pre-tests were taken on selected criterion variables for all the subjects before start of the training. Tabata training with yogic practices was allotted to Experimental Group I; tabata training without yogic practices was allotted to Experimental Group II and another group called Control Group was allotted no training except their daily routine. Training period for the experimental groups was restricted to 12 weeks. Post-tests were taken immediately after 12 weeks of training period. ANCOVA and Scheffe's post hoc test were employed to analyze the obtained data. The study showed that the tabata training with yogic practices group had greater influence on the selected criterion variables in comparison with all the other groups.

No. of Pages : 16 No. of Claims : 9


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(21) Application No.202331038688 A

(19) INDIA

(22) Date of filing of Application :06/06/2023

(43) Publication Date : 09/06/2023

(54) Title of the invention : FLAT-SLAB CONSTRUCTION USING COCONUT SHELL CONCRETE

(51) International classification :E04G1/06
(86) International Application No :PCT/
Filing Date :01/01/1900
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT FLAT-SLAB CONSTRUCTION USING COCONUT SHELL CONCRETE This invention investigates and evaluates the results of using coconut shell concrete having mix proportion 1:1.47:0.65 with water cement ratio 0.42 in the construction of flat slab. Three flat slabs of varying reinforcement were casted in both coconut shell concrete and normal control concrete. Totally six flat slabs were casted and used for punching shear study. The slabs were loaded inverted and subjected to loading on the column. This study includes the deflection, cracking, strain and ultimate punching load. The study result data obtained has been analyzed and compared. It was found that the punching behavior of coconut shell concrete is comparable to that of the normal control concrete. However, the punching effect was more predominantly visible around the column in coconut shell concrete. The coconut shell concrete showed increased deflection and earlier cracking. The load vs. deflection curve for each flat slab is represented graphically. Result data shows that the coconut shell concrete flat slabs has reduced load bearing capacity compared to normal control concrete by 25 - 30 % for M-25 Grade of Concrete.

No. of Pages : 26 No. of Claims : 6


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The Patent Office Journal No. 23/2023 Dated 09/06/2023 Chennai - 603103.

41853



ORIGINAL

मूल/No : 131226



भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
डिजाइन के पंजीकरण का प्रमाणपत्र
CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 365189-001
तारीख / Date : 31/05/2022
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **REFRIGERATOR WITH FOOD WARMING APPARATUS ATTACHMENT** से संबंधित है, का पंजीकरण, श्रेणी **15-07** में 1.Dr. S. Dinesh Kumar 2. Mr. Mohan S R 3.Dr. M. Dhanashekar 4.Dr. D. Chandramohan के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **15-07** in respect of the application of such design to **REFRIGERATOR WITH FOOD WARMING APPARATUS ATTACHMENT** in the name of 1.Dr. S. Dinesh Kumar 2. Mr. Mohan S R 3.Dr. M. Dhanashekar 4.Dr. D. Chandramohan.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

निर्गमन की तारीख/Date of Issue : 16/03/2023

महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

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पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार अधिनियम एवं नियम के निबंधनों के अधीन, पांच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

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Number of Books and Chapters in edited volumes and papers published in national/international conference proceedings per teacher in AY 2022-23					
Sl. No	Name of the author/s	Title of paper	Name of the Journal/ Conference	Year of publication	Name of the Publisher/ Organiser
1	Dr. K.S.Srinivasan, Dr.I.Manju, Dr.M.Sivakumar	Design and Optimization of Compact RFID Antenna Tag for Biomedical Applications	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer
2	Dr.I.Manju	Fusion based underwater image enhancement and detail preserving	International Conference on Signal and Information Processing (IConSIP)	2022-23	IEEE
3	Dr.I.Manju	Underwater image enhancement using color constancy via high pass emphasis filter and DCP	International Conference on Signal and Information Processing (IConSIP)	2022-23	IEEE
4	Dr.M.Sivakumar	Night Surveillance Robot for Women Safety	3rd International Conference on Electronics and Sustainable Communication Systems (ICESC),	2022-23	IEEE
5	Dr.M.Sivakumar	Autonomous Health Care Robot	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer
6	Dr.M.Sivakumar	Thingspeak Based Garbage Monitoring and Collecting System	6th International Conference on Micro electronics and telecommunicati on Engineering (ICMETE)	2022-23	Springer

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7	Dr.M.Sivakumar	Low Power Methodologies for FPGA – An Overview	Springer Tracts in Electrical and Electronics Engineering (Book Series)	2022-23	Springer
8	Dr.M.Sivakumar	IoT Devices Based Low Power Dependability	Springer Tracts in Electrical and Electronics Engineering (Book Series)	2022-23	Springer
9	Dr.M.Sivakumar	Edge and android application based health monitor	5 th International Conference on smart systems and inventive technology ICSSIT	2022-23	IEEE
10	Mr. C. Venkatesh	Chopping Down on Industry 4.0 using Automatic power Factor Correction units to Boost power Performance	International Conference on Electronics and Renewable Systems (ICEARS 2022)	2022-23	IEEE
11	Dr.S.Devikala	Sliding Mode Controlled and Phase-Shift Switches Capacitor based Multiport converter	8 th International Conference on Communication and Electronic Systems	2022-23	PPG Institute of Technology
12	Ms. S. Sudha	A new aspect of Triangular neutrosophic Chromatic Numbers and its Application	International Conference on 'Pure and Applied Mathematical Science'	2022-23	Saveetha Engg College
13	Ms. Kanmani	Information Pertaining to Network Security	International Conference & Computer Communication & Informatics	2022-23	Peri Institute of Technology
14	Mr. Vimalathithan	Transportation Mode detection based on Deep Learning	International Conference & Computer Communication & Informatics	2022-23	Peri Institute of Technology
15	Mr. S.R. Mohan	Evaluation of wear behaviour of stir and squeeze cast A356/SiC/Gr hybrid composites using TOPSIS method	International Conference on Recent and Advanced Composite Materials	2022-23	Bharath Institute of Higher Education and Research
16	Mr. S.R. Mohan	Investigation of microstructural Mechanical Behaviour of AA6351/B4c Composites Fabricated through Powder Methodology	National Conference on Mechanical, Mechatronics and Automobile Engineering	2022-23	Bharath Institute of Higher Education and Research

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17	Mr. S.R. Mohan	A study on Microstructural Mechanical Behaviour of AZ31D/SiC Composites Fabricated through Powder Methodology	National Conference on Mechanical, Mechatronics and Automobile Engineering	2022-23	SRM
18	Mr. Vimalathithan	Theft protection for vehicle by using GSM	International Conference on Artificial Intelligence and Autonomous systems	2022-23	Indra Ganesan College of engg

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Design and Optimization of Compact RFID Antenna Tag for Biomedical Applications



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and D. Muthukumaran

Abstract A compact RFID antenna tag is designed and optimized for biomedical applications. The sensors provide a good rate of transfer of data along with a lengthy reading of range. However, tags of antenna will face distortion in frequency if come across metals and surfaces of liquids. We focused on those factors to enhance the range of observation in antenna and increase in number for smaller applications. The RFID antenna is meant for designs smaller in size and better efficiency connected with surfaces of metal applications. The simulations are carried out by Matlab antenna tool box and optimization toolbox. The results show the values of observation as 6-m and 4.4-m for 902 to 928 MHz and 840 to 845 MHz typical frequency bands, respectively. The proposed design has low profile, low cost, and long readable range with good conjugate matching and unidirectional radiation.

Keywords RFID · IoT · Antenna tag · Optimizer

1 Introduction

This work presents modeling and analysis of a smart design of compact antenna appropriate for radio frequency identification (RFID) tag design using Matlab. The technique of RFID shall be employed for Medicare in conjunction of IOT and sensors economical in type. This approach also enhances the collection of data in real-time mode. The RFID antenna tag and H-Type microstrip patch antenna are designed for IoT-based RFID applications. Initially, the antenna tag is designed which has

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263

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Underwater Image Enhancement Using Color Constancy Via Homomorphic Filtering and Depth Estimation

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Abstract— Underwater image visibility depends on the light scattering and absorption, and the illumination variations degrade the image details with color distortion, low contrast, blurring, non-uniform illumination etc. An image enhancement framework is proposed to address the degradation problems in underwater images. This framework comprises three steps: The first step is to process an input RGB image via white patch retinex (WPR) based gamma correction for illumination compensation and chromatic adaptation technique (CAT) in adjusting the color in RGB image based on estimated scene illuminant by WPR; Second step is to perform image enhancement via homomorphic filtering by considering only the high-frequency components with high frequency emphasis filter (HFEF), and finally dark channel prior (DCP) method is adapted to obtain the visually enhanced image by preserving the image details. The proposed method is tested on a standard underwater image dataset, and observed that qualitative and quantitative evaluations are better with visibility and color restoration with reduced artifacts and halo effects.

Keyword: DCP, Underwater image restoration, color constancy, Homomorphic filtering, Guided filter

I. INTRODUCTION

Underwater image restoration and enhancement are critical for various key underwater applications, including marine ecology, sea creature research, and underwater object detection. However, the captured images or videos are influenced by various factors, including light scattering or absorption, air and image deterioration, resulting in low image contrast and visibility.

An underwater imaging model is shown in Fig. 1. According to the imaging model of [1], as demonstrated in Fig. 1, the forward and direct scattering components depend on the underwater object's light reflectance. In addition, the background scattering component depends on the light propagation and scattering of light due to the suspended particle in underwater. As in Fig. 1, the light characteristics change due to irregular particles of different sizes existing underwater, causing various scattering components to degrade underwater images. As a result, there is a significant need for research into enhancing and restoration techniques of underwater images, and these techniques improve the visibility due to the direct transmission component. In recent years many researchers have considered only scattering and absorption that may lead to degradation of the underwater scene image, with scattering leading to image blurring, as discussed in [2]–[4].

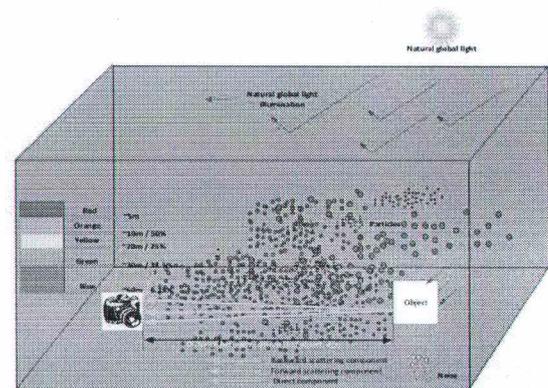


Fig. 1. Underwater optical imaging model and its wavelength attenuation based on the sea depth..

The proposed framework removes haze from the underwater image scene by considering the following direct and background scattering component. The proposed method includes the following main research contributions:

- Input RGB image is processed with white patch retinex with gamma correction for illumination of the scene from the RGB image and chromatic adaptation to balance the color in the RGB image based on the evaluated illuminant for individual channels.
- The white balance is processed with homomorphic filtering to address the illumination variations by considering only high-frequency components with a high-frequency emphasis filter.
- The radiance image scene is recovered by using DCP by estimating the transmission map depth. The depth is further refined using the guided filter to preserve the image details. The proposed method refines the backscattering component for color retention problems, which is due to illumination variations,

The paper is organized as follows: Section II briefs about the existing methods and corresponding related works. The proposed framework is briefly discussed in Section III. The qualitative and quantitative experimental results are discussed in detailed in Section IV. Finally, the conclusion of this paper is concluded in Section V.

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Night Surveillance Robot for Women Safety

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Abstract - Recently, women's safety is a critical concern in different countries across the globe. As a result, a safety monitoring robot controlled by a Raspberry Pi is supported in this research. To secure the surroundings, the device utilizes an internet based digicam, an infrared sensor, and a sound sensor installed on the robot platform. The robot vehicle follows a predetermined path with the assistance of IoT network. The IR sensor is utilized in this system to locate the obstructions in the path of the robot. The digicam will continually record the surrounding environment. When a sound is detected by the sound sensor, the digital camera (digicam) starts taking pictures and sends alert messages.

Keywords: Internet of Things (IoT), Sensors, Raspberry PI, Security Patrolling.

I. INTRODUCTION

Technology plays an indispensable role in human lives. The development of different technologies has altered the way we live and work. The advent of computer systems and Internet has introduced a modern alternative to satisfy our day-to-day requirements. The majority of people rely on the Internet and computers to perform certain tasks. Most significantly, technology has altered our way of life while also making it more comfortable. The objects or devices present in the Internet of Things are well-equipped with sensors, software, and device learning techniques. The usage of such devices decreases the amount of human intervention in performing a certain task. The development of IoT has undoubtedly altered human living by reducing their effort and time. Every day, the advancing generation gives a boost to one-of-a-kind intelligent goods, consequently improving the standard of living of people. Sensors are installed in IoT devices to detect the changes in the environment. Sensors connected to the Internet can collect data from its surroundings.

Most of the people are unaware of several sensor packages. Automobiles, machines, aircraft, medical, manufacturing, and robotics are examples of such applications. In addition to recognizing the motion, an IR sensor can detect the temperature of an object. Generally, all things generate various types of heat radiation throughout the infrared spectrum. These types of radiation are undetectable to human sight; nevertheless, infrared sensors can detect them. One type of module used to detect sound is the sound sensor. In general, this module is used to determine the

depth of sound. This module's packages include the switch, safety, and tracking. This sensor's accuracy may be adjusted for user convenience. This sensor makes use of a microphone to provide input to a buffer, top detector, and amplifier. This sensor detects a valid signal and approaches a microcontroller's output voltage sign. Following that, it does the necessary processing. Nowadays, many safety operations are triggered as a result of certain types of sound, such as gunshots, competitive behaviour, and breaking glass. Cameras with built-in sound promotion centres may transfer huge amounts of data to the safety device. Because they send out alerts on a regular basis when real or potential issues come up. Then they immediately suggest brief and appropriate actions to mitigate the consequences.

The increase in technology also increases the violation against women. This has also led to devising new technologies to increase women's safety. Nowadays, robots are used in a variety of industries, including security and defence. Recently, a night surveillance robot is developed to strengthen women safety at night. It can be a great step forward in the advancement of automation and security. This research work focuses on human emotions that operate the hardware tool. The tool used in this case is an Android mobile phone, which recognises the gesture and sends the information to the microcontroller, which then executes the robotic operations, while a digital camera captures footage. This study focuses on human motions used to handle physical tools. The tool in this case is an Android mobile phone, which recognizes the gesture and sends the information to the microcontroller, which then performs the robotic operations and captures a video. It features a sound sensing cap potential, an obstruction sensing cap potential, and IOT capabilities to expose what it detects with the use of a digicam.

II. LITERATURE SURVEY

The robot uses an Arduino microcontroller and a smart phone for the purpose of monitoring activities [1]. Some robots are designed for executing indoor activities. They are meant for doing surveillance activity in allocated areas either by its own or by executing tele-operation [2]. These robots are designed for spying the operation with android application and camera in wireless mode [3]. The robot will perform periodic surveillance operations in a certain region, saving a significant amount of human labour.

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Autonomous Health Care Robot



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and M. Sivakumar

Abstract The spread of corona virus has been intensive across the globe for the past two years. Medical services are one among the most vital things which can save the people with proper treatment and care. But, the doctors and hospital staff can also have a chance of getting affected with this virus during the treatment. So, robotic implementation can be a big boon in patient monitoring and healthcare services so that human interaction can be reduced with the virus affected patients to a large extent. This approach is not only useful in patient monitoring, but also in treating the patients and helping the staff over there in the hospitals with the robots started making their own mark. The proposed robot includes a Raspberry Pi controller along with appropriate sensors and motor drivers will assist the hospital staff and the patients for updating the patient details, dispatching the medicines in time, and informing the hospital authorities for any abnormal conditions of the patients.

Keywords Patient monitoring · Artificial intelligence · Mechatronics · Machine learning

1 Introduction

The robotic automation along with human intelligence and expertise in medical field can increase the efficiency and ability of the services to a large extent. In recent days, the robots were developed in large number for functioning in hospitals like helping the patients to take medication by reminders, updating the details of their

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227

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ThingSpeak-Based Garbage Monitoring and Collecting System



K. Umapathy, S. Omkumar, D. Muthukumaran, S. Chandramohan, and M. Sivakumar

Abstract Managing waste is one among the bothering factors in the present situation. It is our bound responsibility to look for an organized mechanism to sort out this problem. Hence, there is a need for smart systems with appropriate framework in tackling everyday garbage which includes major chunk of waste material of cities. This contributes to various environmental issues like global warming, environmental pollution, and health complications. This paper explains the prototype of a smart dust bin, where opening of dustbin occurs in the presence of human being. The occupancy of the dustbin is provided as an alert to mobile of the user. The smart dustbin is designed to give the exact percentage of occupancy of waste in the form of LCD display by employing a software application named as ThingSpeak.

Keywords Arduino · GSM · Dustbin · Ultrasonic Sensor · ThingSpeak

1 Introduction

IOT connects the objects relevant to a network. The technology is to transfer the flow of data within the network objects. IOT connect and activate the devices like ultrasonic sensor, rotating devices, controllers, etc. Generally, trash bin is employed for managing and storing of wastes. The tendency of human is to throw the waste in and around the dustbin if filled completely. To prevent this sort of situation, IOT technique is employed to keep the dustbin identify the level of occupancy with smart notification. This helps to keep the environment very clean. A regular dustbin is

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235

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Chapter 4

Low Power Methodologies for FPGA—An Overview



K. Umapathy, D. Muthukumaran, S. Chandramohan, M. Sivakumar,
and Oliver James

Introduction

Because of their reconfiguring characteristic, FPGA's are more appropriate for adaptive systems in general. The relevant applications include recognition of images or patterns, recovery of failures online, etc. (Hassan et al. 2005; Paulsson et al. 2006). Less efficiency is the only constraint of FGGA in comparison with ASIC's as far as the requirement of extra circuit for reconfiguration. Nowadays, more attention is focused on enhancement of efficiency in energy in FPGA's (Betz et al. 1999). This is because of increased requirement for applications connected with low power. There is an increased requirement for low power especially for portable devices and devices operated with battery. In case of non-portable applications, the reduction in consumption of power will have economical benefits with respect to functioning, cooling, etc. To put FPGA's into the track of energy efficiency; four methodologies can be implemented with respect to—system, device, circuit and architecture (Lamoureux et al. 2008).

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Chapter 5

IoT Devices Based Low Power Dependability



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and Wasana Boonsong

Introduction

With the proliferation of IoT technology, the design of low power IoT devices becomes easier, which can be implemented in the current smart environments, such as smart homes, smart cities, and smart industries. It is the wireless network of standard physical devices that can be monitored and controlled through the Internet. To analyse the collected data, the IoT network provides the necessary information to take decisions. The IoT structure is shown in Fig. 5.1.

IoT is a broad term in which various different objects are linked to the internet for catering to innovative and best services in the digital world (Samie et al. 2016; Umapathy et al. 2020a). Technical enhancements in communication engineering, embedded systems, transducers, etc. play an inevitable role in the design of low power portable economical devices (Muthukumaran et al. 2022).

The above are the vital parameters employed for various applications such as patient monitoring systems, home and office automation, smart glasses for the blind, etc. (Miorandi et al. 2012; Umapathy et al. 2020b). They provide essential support and aid for IoT to achieve the required application. The System of IoT is shown in Fig. 5.2 with different layers. Basically, IoT is a blend of various objects, machines,

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99

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Edge and Android Application based Health Monitor

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Abstract — It is a major concern to care for the sick and elderly people who require assistance throughout the day. This paper presents a development model that continuously monitors medical data such as pulse rate, body temperature, and oxygen level of those patients. This will allow care takers to view their real-time medical information via their edge devices. The model was promoted by integrating an Arduino controller with relevant sensors to monitor temperature, heart rate, and oxygen saturation levels. Furthermore, this application will consistently transmit medical data to a master computer that serves as a cloud server. In turn, the server will instantly update data on the Android device.

Keywords— Server, Arduino, Edge, Internet of Things, Android

I. INTRODUCTION

Generally in pandemic environment, sick people require extreme care at regular intervals of time in order to observe their health parameters. The care taking persons who used to monitor them may not be available all the time. But their medical data have to be monitored regularly which failing to do so will cost their lives. To handle these abnormal situations, a system has to be implemented which provides all sort of real time medical information at the remote place itself. This medical information shall be much useful for care taking persons to handle them either physically or virtually. There is a proverb - Health is wealth which goes in parallel with technology.

IoT network is the right choice to provide the above arrangement. Remote or Virtual screening of patients will give a lot of advantages such as feel like at home, reduced waiting time, reduced cost etc. The sensors and internet are also utilized for the above purpose. The idea of generating these types of frameworks is to reduce the frequent visits of a doctor thereby reducing the medical expenses. Extensive research work is going on to strengthen the services of health in an effective manner. A lot of smart equipments are available in the real time market for health care. These products will monitor the patients and maintain contacts of physicians thereby improving performance of medical system.

II. RELATED WORKS

Mostafa utilized Electrocardiogram (ECG) [1][2] for determining electrical events inside the heart and mechanical happenings during the course of heart cycle under various poses of human body. The integration [3] of ECG with Photoplethysmography (PPG) presented a system with good reliability in order to evaluate the medical parameters effectively with respect to time. These works [4][5] explained the usage of biomedical sensors to measure the temperature of human body in an optimized manner. The system presented in [6][14] tracks the health parameters of sick people consistently and helps the physicians thereby enhancing the health care appropriately. The technique implemented in this system [7][13] utilized the concept of wireless sensor networks to gather data and broadcast it to the concerned. An IoT dependent alert system [8] is provided to indicate the abnormal events occurring in industries by means of relevant integrated digital devices. The controller integrated with other devices [9] evaluated the pulse rate, temperature of body and provide them to the medical personnel in real time. It created a revolution in the health care sector to provide medical data of the sick people using the cloud architecture [10][12]. The system developed in [11][14] illustrated the measurement of various health factors along with analysis for detection of fall and sleeping patterns. Krishnaraj [15] implemented a system for observing the medical data of patients by using IoT sensors and Blynk cloud application.

III. MATERIALS AND METHODS

The proposed system is constructed by using a node microcontroller ESP 8266 which is meant to observe the temperature of body, pulse rate and oxygen level. The system will track the health conditions of sick persons at remote place and test them based on the requirement. The sensors integrated with system will do above measurements without the help of multiple medical equipments. The system will collect the data and update to android device in real time mode. Any abnormality in the medical data of patients will be viewed periodically and appropriate notification will be given to care taking persons based on the need. Figure 1 shows the block diagram of the system.

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Chopping Down on Industry 4.0 using Automatic Power Factor Correction Units to Boost Power Performance

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Abstract- The method of power factor adjustment serves to offset the impacts of loads which, with a power factor less than one, have an unwanted impact. There are two possible places to implement power factor correction: a utility company may do it to increase the efficiency and stability of the system, or a client may do it at his or her premise. This is vital to guarantee that electricity runs smoothly and costs little over time. An Arduino-based capacitor switching capacitor-assisted power factor adjustment technique has been introduced in this article.

I. INTRODUCTION

In most conventional electrical distribution networks, inductive loads predominate. Motors, transformers, and induction furnaces are all kinds of metal-working machines that belong in this category. Inductive loads use two types of power (one to activate and the other to maintain the current): inductive and capacitive. Electrically, the load and therefore the utility cost are increased, whether the labor is equal or not. The power needed to get things done, the electricity (kW) it takes to create heat, light, motion, or machine output, and supply to keep the magnetic field stable are values to be known. To measure power use, a wattmeter is used that tracks how many watts are consumed while you are working. The kilowatt is the metric used (kW). Reactive power does not produce "work" and is necessary to flow between the generator and the load in order to allow appropriate system operation.

KiloVolt-Amperes-Reactive (kVAR) is the measure of reactive power. Apparent power is the sum of working power and reactive power. KiloVolt-Amperes (KVA) is the standard unit of measure for electrical power (kVA). In load, the magnitude of

reactive power is defined as the cosine of the angle between the power used and the power delivered.

$$\text{Power factor} = \cos(\theta)$$

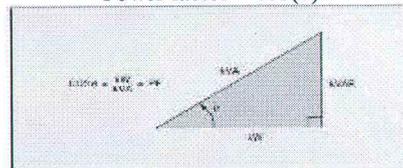


Fig. 1: Power triangle

To create a technology that enables Power Factor Correction (PFC) in both single and three-phase systems, the author uses thyristor-based capacitor bank switching to minimize harmonic generation due to relay operation. It is believed that the additional PIC microcontroller unduly complicates system programming. Paper [2] shows how a three-phase power factor correction was developed using a microcontrolling chip (PSoC). The method measured the angle between Y and B phase voltage and R phase current to determine $\sin(\theta)$ relationships. Also, reactive and active power (KVAR and KWA) of the system was determined by the reactive and active power from the KVAR and KWA of the YB phase and R phase. Current power factor was calculated using these values. It showed that it is possible to utilise the Arduino platform to achieve the same results as with expensive alternatives. The work demonstrates how a power factor corrector using the microcontroller chip is designed and developed. Using a microcontroller-based algorithm, PIC measures reactive power in the load and, when necessary, capacitors are switched on to provide extra reactive power locally, so the power factor is brought closer to unity.

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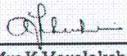

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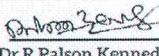
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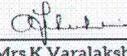

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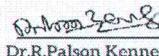
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This is to certify that Dr./Mr./Ms./Mrs. Vimalathithan S from Mohammed Sathak AJ College of Engineering has presented a paper titled Transportation Mode Detection Based on Deep Learning in the International Conference on Computer, Communication and Informatics (ICCCI'23) organized by Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science held on 19th April 2023.


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HOD/CONVENOR
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PERI Institute Of Technology


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Centre for Composites and Advanced Materials (CCAM)
Department of Mechanical Engineering
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
SRM Nagar, Kattankulathur, Chengalpattu District - 603203, Tamil Nadu, India



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Best Paper Award

Paper ID
ICRACM-096

This certificate is awarded to Mr / Dr. M. Dhanashekar, P Loganathan, S.R. Mohan, S. Ayyanar
authors of Evaluation of Wear Behaviour of Stir and Squeeze cast A356/SiC/Gr Hybrid composites using TOPSIS Method

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organised by the Centre for Composites and Advanced Materials, Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India during 22-24 Feb-2023.

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Certificate

This is to certify that Dr./ Mr. / Ms. Mohan SR has participated /presented a paper entitled Investigation of Microstructural Mechanical behaviour of AA6351/B₄C Composites Fabricated Through Powder Metallurgy in the "National Conference on Mechanical, Mechatronics and Automobile Engineering" (NCMMAE -2023) held on 10th April 2023 organized by the Department of Mechanical Engineering, Bharath Institute of Science and Technology, BIHER - Chennai-600 073, India.

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Associate Professor, Mechanical

Co-coordinators

R. H.
Dr. R. HARIHARAN
Asst. Professor, Mechanical

V. B.
Dr. V. BALAMBICA
Professor, HOD - Mechanical

Conveners

M. S.
Dr. M. SUNDARARAJ
Academics Co-ordinator

J. H.
Dr. J. HAMEED HUSSAIN
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National Conference on Mechanical, Mechatronics and
Automobile Engineering (NCMMAE -2023)

Certificate

This is to certify that Dr./ Mr. / Ms. Mohan SR has participated /presented a paper entitled A Study on Microstructural and Mechanical Behaviour of AZ31D/SiC Composites fabricated Through Powder Metallurgy in the "National Conference on Mechanical, Mechatronics and Automobile Engineering" (NCMMAE -2023) held on 10th April 2023 organized by the Department of Mechanical Engineering, Bharath Institute of Science and Technology, BIHER - Chennai-600 073, India.

Dr. A. RAMAMURTHY
Associate Professor, Mechanical

Co-ordinators

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Asst. Professor, Mechanical

Dr. V. BALAMBICA
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5
INTERNATIONAL
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has presented/participated the research article entitled

Theft Protection for Vehicle by using GSM

in the International Conference on Artificial Intelligence and Autonomous Systems organised by

Indra Ganesan College of Engineering held on 20.05.2023

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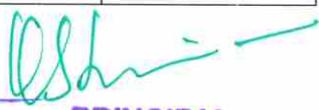
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Number of Patents published in AY 2022-23				
Sl. No	Name of the author/s	Title of patent	Appl. No / Patent No	Year of publication
1	Dr.K.S.Srinivasan Mrs. E.Jayanthi	A Smart Device to Monitoring the Optic Cable and Inform the Users in Case of any Discrepancies	202241071306	2022
2	Dr.K.S.Srinivasan Dr.I.Manju Dr.M.Sivakumar	FPGA Implementation of FBMC Transmitter Using Clock Gating Technique Based QAM, Inverse FFT, Filter Bank	202241044118	2022
3	Dr.I.Manju Mr. C. Venkatesh	ML Strategy for Performance Enhancement of Phase Change Material for a Smart Control Solar Application	202241071305	2022
4	Dr. Ramesh. G Mr. S. Syed Abudhahir	Smart Painting Roller With Temperature Sensor to detect the temperature of wall and paint	202241071203	2022
5	Mr.D. Weslin Mr.V. Vigneshwaran	A method and a device of Wireless Master Joystick Controller for Robotics	202241071210	2022
6	Dr. Someswaran Mr. Tharanikumar L	Machine Learning - Based Closed-Loop Mixture Of Concrete Equipment and The Method	202241071309	2022
7	Mrs. I.S. Suganthi Mrs.S.Priyadharsini	Design a Micro Strip Patch for Spectrum Utilization in Cognitive Radio	202241071307	2022


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8	Mrs.S.Anusuya	Document Classification Using Artificial Intelligence	202241052791	2022
9	Dr.M.Sivakumar Mr.M.Kamarajan Mrs.E.Jayanthi Mrs.S.Sonadevi Mr.M.Ashokkumar Mrs.S.Priyadharsini Mrs.S.Anusuya Mrs.I.S.Suganthi	Priority based Multiport simultaneous wireless charging methods on electric vehicles	202241063890	2022
10	Dr. A. Balakrishnan	Hydro-Chemical assessment of environmental status of surface and ground water in mine areas	202241056841	2022
11	Dr. A. Balakrishnan Mr. Vinothkumar	Dedicated drone based testing of buildings strength located in a hazardous environment	202241071308	2022
12	Mrs. Muthu Pandeewari	Design and Implementation of Surveillance system based on IOT	202341026947	2023
13	Mr. D. Sakthivel	Steelslag Reinforced Concrete Preparation Process Thereof	202331031936	2023
14	Mr. S.R. Mohan	Voice Based Product Recognition For Visually Impaired	202341031913	2023
15	Dr.S. Prasath	System And Method For Renewable Energy Forecasting	202341031911	2023
16	Dr. K.P. Santhosh Nathan, Dr. M. Sivakumar	Tabata Training with and without yogic practices on selected physical fitness physiological and psychological variables among perons	202341023034	2023

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17	Mr. J. Rajesh	Flat-Slab Construction using coconut shell concrete	202331038688	2023
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Number of Patents Granted in AY 2022-23				
Sl. No	Name of the author/s	Title of patent	Appl. No / Patent No	Year of Grant
1	Mr. S.R. Mohan	Refrigerator With Food Warming Apparatus Attachment	365189-001	2023


PRINCIPAL
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071306 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : A SMART DEVICE TO MONITORING THE OPTIC CABLE AND INFORM THE USERS IN CASE OF ANY DISCREPANCIES

<p>(51) International classification :H04B0010071000, G06N0020000000, G02B0006440000, H04B0010077000, H04N0007180000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. K S Srinivasan Address of Applicant :Principal, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mrs. Jayanthi Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -</p> <p>3)Mr. Madhivanan Address of Applicant :III Year, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>4)Potuganga Manoj Kumar Address of Applicant :IV Year, Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :

The optical cable line monitoring system is an intelligent system for the management and maintenance of fiber optic networks. Utilizing a geographic information platform and backed up by powerful resource management functions, it integrates cable monitoring, alarm notifications, fault analysis, localization, fault management, and line maintenance and management to ensure the safe and efficient operation of optical cable networks. By doing so, physical optical fiber networks can be monitored, marketed, maintained, and managed. Smart device industry allows developers and designers to embed different sensors, processors, and memories in small-size electronic devices. Sensors are added to enhance the usability of these devices and improve the quality of experience through data collection and analysis. However, with the era of big data and machine learning, sensors' data may be processed by different techniques to infer various hidden information. The extracted information may be beneficial to device users, developers, and designers to enhance the management, operation, and development of these devices.

No. of Pages : 18 No. of Claims : 8

The Patent Office Journal No. 52/2022 Dated 30/12/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241044118 A

(19) INDIA

(22) Date of filing of Application :02/08/2022

(43) Publication Date : 12/08/2022

(54) Title of the invention : FPGA IMPLEMENTATION OF FBMC TRANSMITTER USING CLOCK GATING TECHNIQUE BASED QAM, INVERSE FFT, FILTER BANK

(51) International classification :H04L0027260000, H04W0016140000, H04L0027360000, H04L0027340000, H03H0017020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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Address of Applicant : NA

(72)Name of Inventor :

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Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF ECE, SCSVMV DEEMED UNIVERSITY, KANCHIPURAM, TAMIL NADU, INDIA 631561. -----

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Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF ECE, SCSVMV DEEMED UNIVERSITY, KANCHIPURAM, TAMIL NADU, INDIA 631561. -----

(57) Abstract :

Abstract: The present invention related to filter bank multicarrier modulation (FBMC) technique is one of multicarrier modulation technique (MCM), more particularly to improve channel capacity of cognitive radio (CR) network and frequency spectrum access technique. To reduce the area, delay and power of FBMC structure, a clock gating technique is applied in the QAM modulation, radix2 multipath delay commutator (R2MDC) based inverse FFT and unified addition and subtraction (UAS) based FIR filter with parallel asynchronous self-time adder (PASTA) and clock gating technique is used to reduce the unwanted clock switching activity. Hence speed is high and power consumption is low. FBMC with clock gating technique gives low power and high speed than the previous FBMC structures.

No. of Pages : 9 No. of Claims : 10


PRINCIPAL
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The Patent Office Journal No. 32/2022 Dated 12/08/2022

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071305 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 16/12/2022

(54) Title of the invention : ML STRATEGY FOR PERFORMANCE ENHANCEMENT OF PHASE CHANGE MATERIAL FOR A SMART CONTROL SOLAR APPLICATION

(51) International classification :H01L0045000000, C09K0005060000, F28D0020020000, H01L0027240000, H04L0027260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Name of Applicant : NA

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(72)Name of Inventor :

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Address of Applicant :Head Technology Centre Department of Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----

2)Mr. Venkatesh

Address of Applicant :Assistant Professor, Department of Electrical and Electronics Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----

3)Mr. Arshad

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(57) Abstract :

Solar energy is a renewable energy source that can be utilized for different applications in today's world. The effective use of solar energy requires a storage medium that can facilitate the storage of excess energy, and then supply this stored energy when it is needed. An effective method of storing thermal energy from solar is through the use of phase change materials (PCMs). PCMs are isothermal in nature, and thus offer higher density energy storage and the ability to operate in a variable range of temperature conditions. This article provides a comprehensive review of the application of PCMs for solar energy use and storage such as for solar power generation, water heating systems, solar cookers, and solar dryers. This paper will benefit the researcher in conducting further research on solar power generation, water heating system, solar cookers, and solar dryers using PCMs for commercial development.

No. of Pages : 18 No. of Claims : 3


PRINCIPAL
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The Patent Office Journal No. 50/2022 Dated 16/12/2022

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/12/2022

(21) Application No.202241071203 A

(43) Publication Date : 16/12/2022

(54) Title of the invention : SMART PAINTING ROLLER WITH TEMPERATURE SENSOR TO DETECT THE TEMPERATURE OF WALL AND PAINT

(51) International classification :E04F0021080000, B05C0017020000, G03G0015200000, A61M0001140000, B29B0007620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING

Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

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Address of Applicant :Professor and Head, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----

2)Mr. S Syed Abudhahir

Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----

3)Mr. Umar Jaffer Ali

Address of Applicant :III Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----

4)Mr. Mohamed Fazid S

Address of Applicant :II Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----

(57) Abstract :

Temperature sensor to detect wall and paint is a kind of special functional coating which measures the temperature distribution by judging the color changes of the paint film. It is widely applied in aero-engine testing to solve the problem of measuring the temperature profile of hot end components. In this paper, the methods of temperature indicating paints formula design, preparation process and painting process are studied firstly. Then a calibration system based on isotherm identification method has been specially designed to confirm the performance and characteristics of the paints. Certain type of multi-change TIP is taken as an example to illustrate the whole development process as well as the practical application of TIP in one aero-engine turbine component. It is proved that the paints attached firmly even in severe environment with high temperature and high velocity gas flushed and recorded the temperature profile successfully.

No. of Pages : 22 No. of Claims : 5



PRINCIPAL

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Chennai - 603103. 79186

The Patent Office Journal No. 50/2022 Dated 16/12/2022

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071210 A

(19) INDIA

(22) Date of filing of Application :09/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : A METHOD AND A DEVICE OF WIRELESS MASTER JOYSTICK CONTROLLER FOR ROBOTICS

<p>(51) International classification :B25J0009160000, B25J0005000000, G05D0001020000, H04L0001000000, B25J0015000000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Mr. Weslin Address of Applicant :Professor and Head, Department of Information Technology Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mr. Vigneshwaran Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>3)Mr. Dwaraka JS Address of Applicant :II Year Department of Information Technology Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>4)Mr. Salman S Address of Applicant :III Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :
The popularity of using robots in industries and factories instead of human workers has seen a high rise. Through this work we have attempted to make an alternative system of human for reducing the human labor by using simple and available components. This robotic system is controlled by a user through joystick. By the use of the joystick the user can operate both the robotic vehicle and the robotic arm. It will move from one place to another according to the command of the user and pick the desired object and place it for the user. This design of the robot is easy, cheap and versatile, making it a great commercial candidate. With the increasing use of this kinds of robot the production rate will increase and the number of mishaps will decrease.

No. of Pages : 20 No. of Claims : 5


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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/12/2022

(21) Application No.202241071309 A
(43) Publication Date : 30/12/2022

(54) Title of the invention : MACHINE LEARNING - BASED CLOSED-LOOP MIXTURE OF CONCRETE EQUIPMENT AND THE METHOD

<p>(51) International classification :C04B0111000000, G06F0030200000, G06Q0050080000, B28C0007020000, G06F0111100000</p> <p>(86) International Application No Filing Date :NA :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. Someshwaran Address of Applicant :Professor and Head, Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mr. Tharani Kumar Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>3)Mr. Dhanush Aditiya Address of Applicant :II Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>4)A Mohamed Faizal Address of Applicant :II Year Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :
Concrete mix design is one of the most critical issues in concrete technology. This process aims to create a concrete mix which helps deliver concrete with desired features and quality. Contemporary requirements for concrete concern not only its structural properties, but also increasingly its production process and environmental friendliness, forcing concrete producers to use both chemically and technologically complex concrete mixtures. The concrete mix design methods currently used in engineering practice are joint analytical and laboratory procedures derived from the Three Equation Method and do not perform well enough for the needs of modern concrete technology. This often causes difficulties in predicting the final properties of the designed mix and leads to precautionary oversizing of concrete properties for fear of not providing the required parameters. A new approach that would make it possible to predict the newly designed concrete mix properties is highly desirable.

No. of Pages : 18 No. of Claims : 8

The Patent Office Journal No. 52/2022 Dated 30/12/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071307 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 16/12/2022

(54) Title of the invention : DESIGN A MICRO STRIP PATCH FOR SPECTRUM UTILIZATION IN COGNITIVE RADIO NETWORKS

<p>(51) International classification :H04W0016140000, H04W0072120000, H04B0007185000, H04W0024020000, H04W0084040000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>-----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Mrs. Suganthi Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai--</p> <p>-----</p> <p>2)Mrs. Priyadharshini Address of Applicant :Assistant Professor, Department of Electronics & Communication Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -</p> <p>-----</p> <p>3)Ms. Abitha Address of Applicant :III Year Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>-----</p> <p>4)Ms. Abinaya Address of Applicant :III Year Department of Electronics & Communication Engineering, Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai – 603103, Tamil Nadu, India Chennai -----</p> <p>-----</p>
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(57) Abstract :

A micro strip patch antenna with multiple parasitic patches for Cognitive Radio Network applications is presented to enhance the bandwidth. Multiple resonances are used for the design of antenna, with a view to broaden bandwidth. A modified Koch Fractal antenna is imprinted from micro strip radiating patch. A Parasitic Strip line helps to grasp micro hertz communication through antenna. A slotted patch energized by a gap feed was established before with a large angular coverage over a bandwidth of 13.1%. In this paper, it is proposed that multiple parasitic patches are potential for cognitive radio applications where circular patch (CP) covers bandwidth of 85% with radiation pattern for Spectrum Utilization (SU) and CP with meander lines feeding behaves as communication antenna operating at Wireless Local Area Network 802.11y (3.637 GHz). The transceiver in a communication network is powered by Proposed Antenna, to acquire improved energy efficiency of 95.7%.

No. of Pages : 18 No. of Claims : 5


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The Patent Office Journal No. 50/2022 Dated 16/12/2022

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241052791 A

(19) INDIA

(22) Date of filing of Application :15/09/2022

(43) Publication Date : 23/09/2022

(54) Title of the invention : Document Classification using Artificial Intelligence

(51) International classification :G06K0009620000, G06N0020000000, G16B0020000000, G06N0003020000, A63F0009100000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

[015] This work deals with the classification of documents using artificial intelligence. It describes the principles of classification and machine learning. It introduces AI methods and further presents the naive Bayes classification method in detail. It then describes the practical implementation of the classifier in the MS Office environment and discusses other possible extensions. Accompanied Drawing [FIG. 1] [FIG. 2] [FIG. 3] [FIG. 4] [FIG. 5] [FIG. 6]

No. of Pages : 23 No. of Claims : 3

The Patent Office Journal No. 38/2022 Dated 23/09/2022


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241063890 A

(19) INDIA

(22) Date of filing of Application :09/11/2022

(43) Publication Date : 25/11/2022

(54) Title of the invention : PRIORITY BASED MULTIPORT SIMULTANEOUS WIRELESS CHARGING METHODS ON ELECTRIC VEHICLES

(51) International classification :H02J0007000000, B60L0053300000, B60L0053660000, H02J0007040000, H02J0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention discloses a priority based wireless charging system of electric vehicles. That means, the electric vehicles are charged by a wireless multiport simultaneous charging system based on priority factors like low battery vehicles, emergency vehicles, VIP vehicles, public transport vehicles, etc., The present invention also discloses about charging the electric vehicles in public places like charge station, parking area, traffic signals, etc., based on priority of the vehicles.

No. of Pages : 9 No. of Claims : 5

The Patent Office Journal No. 47/2022 Dated 25/11/2022


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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202241056841
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/10/2022
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TITLE OF INVENTION	Hydro- chemical assessment of environmental status of surface and ground water in mine areas
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	senanipindia@gmail.com
ADDITIONAL-E-MAIL (As Per Record)	admin@senanip.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	-
PUBLICATION DATE (U/S 11A)	14/10/2022

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241071308 A

(19) INDIA

(22) Date of filing of Application :10/12/2022

(43) Publication Date : 30/12/2022

(54) Title of the invention : DEDICATED DRONE-BASED TESTING OF BUILDING'S STRENGTH LOCATED IN A HAZARDOUS ENVIRONMENT

<p>(51) International classification :C07D021380000, A61K0009500000, G01N0021880000, G02B0023240000, B21J0005000000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)MOHAMED SATHAK A J COLLEGE OF ENGINEERING Address of Applicant :34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai --</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. Balakrishnan Address of Applicant :Head Academics Department of S & H Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>2)Mr. Vinothkumar Address of Applicant :Assistant Professor, Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>3)Mr. Shaik Irfan Address of Applicant :II Year Department of Mechanical Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR),Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p> <p>4)Mr. Sandesh Kumar K Address of Applicant :II Year Department of Civil Engineering Mohamed Sathak A J College of Engineering, 34, Rajiv Gandhi Salai (OMR),Siruseri IT Park, Siruseri, Chennai - 603103, Tamil Nadu, India Chennai -----</p>
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(57) Abstract :

Visual inspection is a very simple, non-destructive technique and usual in diagnosing buildings and structures' conditions. It also plays an important role in the rapid assessment of constructive problems as well as in the definition of an appropriate way for eventual remedial interventions. However, the use of this methodology often meets difficulties, especially when places to be inspected are difficult to access; it involves security risks for inspectors or even when a reactive inspection of urgent nature becomes unfeasible due to the high costs and the necessary means involved. In this context, the introduction of new technologies, such as drones, can bring substantial benefits. Currently, great focus has been put on this type of device as an emerging technology in the construction industry.

No. of Pages : 19 No. of Claims : 7

The Patent Office Journal No. 52/2022 Dated 30/12/2022


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Application Details

APPLICATION NUMBER	202331031936
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	04/05/2023
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TITLE OF INVENTION	STEELSLAG REINFORCED CONCRETE PREPARATION PROCESS THEREOF
FIELD OF INVENTION	CHEMICAL
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	19/05/2023

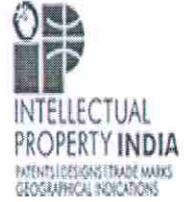
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सत्यमेव जयते



INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Application Details

APPLICATION NUMBER	202341026947
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	11/04/2023
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TITLE OF INVENTION	DESIGN AND IMPLEMENTATION OF SURVEILLANCE SYSTEM BASED ON IOT
FIELD OF INVENTION	ELECTRONICS
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	05/05/2023


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341031913 A

(19) INDIA

(22) Date of filing of Application :04/05/2023

(43) Publication Date : 23/06/2023

(54) Title of the invention : VOICE BASED PRODUCT RECOGNITION FOR VISUALLY IMPAIRED

<p>(51) International classification :A24F 404850, A61H 030600, G07G 010000, G09B 210000, G10L 130000</p> <p>(86) International Application No Filing Date :PCT// :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant : 1)Dr. B.VIJAYA PRAKASH Address of Applicant :ASSISTANT PROFESSOR(SENIOR) DEPARTMENT OF MECHANICAL ENGINEERING SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY L & T BY - PASS, SRI SHAKTHI NAGAR, POST CHINNIYAMPALAYAM, COIMBATORE, TAMILNADU 641062 -----</p> <p>2)Dr. S. RANGANATHAN 3)Mr. L. VETTRIVENDAN 4)Mr. MOHAN S R 5)Dr. P. SURESH 6)Dr. B.SENTHIL KUMAR 7)Mr. M.HARIPRABHU</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. B.VIJAYA PRAKASH Address of Applicant :ASSISTANT PROFESSOR(SENIOR) DEPARTMENT OF MECHANICAL ENGINEERING SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY L & T BY - PASS, SRI SHAKTHI NAGAR, POST CHINNIYAMPALAYAM, COIMBATORE, TAMILNADU 641062 -----</p> <p>2)Dr. S. RANGANATHAN Address of Applicant :PROFESSOR DEPARTMENT OF MECHANICAL ENGINEER ACADEMY OF MARITIME EDUCATION AND TRAINING - DEEMED TO BE UNIVERSITY, KANATHUR, CHENNAI- 603112 -----</p> <p>3)Mr. L. VETTRIVENDAN Address of Applicant :SCHOOL OF COMPUTING SCIENCE AND ENGINEERING PLOT NO. 2, YAMUNA EXPY, OPPOSITE BUDDHA INTERNATIONAL CIRCUIT, SECTOR 17A, GREATER NOIDA, UTTAR PRADESH 203201 INDIA. -----</p> <p>4)Mr. MOHAN S R Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING MOHAMED SATHAK A J COLLEGE OF ENGINEERING, SIRUSERI,SIPCOT IT PARK, OMR, CHENNAI-603103 -----</p> <p>5)Dr. P. SURESH Address of Applicant :PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING GALGOTIAS UNIVERSITY, GREATER NOIDA, GAUTAM BUDDH NAGAR, UTTAR PRADESH -203201 -----</p> <p>6)Dr. B.SENTHIL KUMAR Address of Applicant :ASSOCIATE PROFESSOR DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING, St. JOSEPHS COLLEGE OF ENGINEERING OLD MAHABALIPURAM ROAD, KAMARAJ NAGAR, SEMMANCHERI, CHENNAI, TAMIL NADU 600119 -----</p> <p>7)Mr. M.HARIPRABHU Address of Applicant :ASSISTANT PROFESSOR DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING M.KUMARASAMY COLLEGE OF ENGINEERING THALAVAPALAYAM, KARUR, TAMILNADU 639113 -----</p>
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(57) Abstract :
ABSTRACT VOICE BASED PRODUCT RECOGNITION FOR VISUALLY IMPAIRED This invention is developed to make the existence of visually impaired individuals simple. This is a camera-based framework to examine the standardized tag behind the picture and read the depiction of the item with the assistance of ID put away in the scanner tag. This is extremely valuable in the event of figuring out the portrayal of bundled merchandise to the visually impaired individuals and subsequently helping them in choosing to buy an item or not particularly which are bundled. To utilize this framework, the client should simply catch the picture on the item in the cell phone which then, at that point, settle the scanner tag which implies it filters the picture and figure out the Id put away. This is exceptionally simple to utilize and reasonable as it requires a scanner to check the standardized identification and a camera telephone to snap the photo of the picture containing the standardized tag. This is presently simple to carry out as the majority of the cell phones today have the necessary goal all together item depiction

No. of Pages : 22 No. of Claims : 6


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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341031911 A

(19) INDIA

(22) Date of filing of Application :04/05/2023

(43) Publication Date : 23/06/2023

(54) Title of the invention : SYSTEM AND METHOD FOR RENEWABLE ENERGY FORECASTING

(51) International classification :C10G 020000, C25B 010400, F03D 150000, G06Q 300200, H02J 033800
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD FOR RENEWABLE ENERGY FORECASTING The short-term forecasts of renewable power generation are essential for effectively integrating renewable energy sources. With the waning and overrated petroleum product assets, the globe has at long last moved its concentration towards the utilization of Environmentally friendly power Assets, chiefly Sun based Energy. In this time span, the world has likewise seen a flood in specialized developments in the field of information science and AI. Additionally, it turned out to be exceptionally fundamental for the energy business to anticipate the result of the sun based power and subsequently needed to utilize different AI procedures among different strategies. This work includes 24-hour ahead sun oriented and wind power anticipating utilizing AI calculations. Two AI calculations, to be specific Back spread brain organization and Irregular woods are tried with same dataset. As inexhaustible power age is profoundly reliant upon weather patterns thus, for this work meteorological information of specific area is taken as info information for preparing the organization. For assessment of determining model, a legitimate assessment measure has been utilized for both guaging model individually. Exhibitions of back spread and arbitrary woods calculations are thought about for summer, winter and blustery seasons for sun based power determining. As wind power doesn't rely upon seasons, complete 5 years information is taken for guaging. The model is likewise tried for the remarkable situations where sun oriented irradiance esteem changes radically to arbitrary qualities because of overcast cover

No. of Pages : 28 No. of Claims : 7


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(21) Application No.202341023034 A

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(54) Title of the invention : TABATA TRAINING WITH AND WITHOUT YOGIC PRACTICES ON SELECTED PHYSICAL FITNESS PHYSIOLOGICAL AND PSYCHOLOGICAL VARIABLES AMONG PERONS

<p>(51) International classification :A61B 050000, A61B 052200, A61H 010200, A63B 710600, H04W 080000</p> <p>(86) International Application No Filing Date :NA :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number Filing Date :NA :NA</p> <p>(62) Divisional to Application Number Filing Date :NA :NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr. K. P. SANTHOSH NATHAN Address of Applicant :DIRECTOR, DEPARTMENT OF PHYSICAL EDUCATION, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA, 603103. -----</p> <p>2)DR.R.MOHANA KRISHNAN 3)DR. M. SIVAKUMAR Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Dr. K. P. SANTHOSH NATHAN Address of Applicant :DIRECTOR, DEPARTMENT OF PHYSICAL EDUCATION, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA, 603103. -----</p> <p>2)DR.R.MOHANA KRISHNAN Address of Applicant :DIRECTOR SPORTS, DIRECTORATE OF SPORTS, DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES, SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR, TAMILNADU, INDIA 603203. -----</p> <p>3)DR. M. SIVAKUMAR Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, MOHAMED SATHAK AJ COLLEGE OF ENGINEERING, SIRUSERI, CHENNAI, TAMILNADU, INDIA 603103. -----</p>
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(57) Abstract :

ABSTRACT The present invention related to study attempts to estimate toe impact of tabata training with and without yogic practices on selected physical fitness, physiological and psychological variables among engineering college men students. To attain the purposo, 60 men students from Mohamed Sathak A J college of Engineering, Chennai were selected as subjects for this study and they were in 18 to 22 years of age. Equal division of three groups was made in which two experimental and one control groups and each group had twenty subjects. Pre-tests were taken on selected criterion variables for all the subjects before start of the training. Tabata training with yogic practices was allotted to Experimental Group I; tabata training without yogic practices was allotted to Experimental Group II and another group called Control Group was allotted no training except their daily routine. Training period for the experimental groups was restricted to 12 weeks. Post-tests were taken immediately after 12 weeks of training period. ANCOVA and Scheffe's post hoc test were employed to analyze the obtained data. The study showed that the tabata training with yogic practices group had greater influence on the selected criterion variables in comparison with all the other groups.

No. of Pages : 16 No. of Claims : 9


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Filing Date :NA

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(57) Abstract :

ABSTRACT FLAT-SLAB CONSTRUCTION USING COCONUT SHELL CONCRETE This invention investigates and evaluates the results of using coconut shell concrete having mix proportion 1:1.47:0.65 with water cement ratio 0.42 in the construction of flat slab. Three flat slabs of varying reinforcement were casted in both coconut shell concrete and normal control concrete. Totally six flat slabs were casted and used for punching shear study. The slabs were loaded inverted and subjected to loading on the column. This study includes the deflection, cracking, strain and ultimate punching load. The study result data obtained has been analyzed and compared. It was found that the punching behavior of coconut shell concrete is comparable to that of the normal control concrete. However, the punching effect was more predominantly visible around the column in coconut shell concrete. The coconut shell concrete showed increased deflection and earlier cracking. The load vs. deflection curve for each flat slab is represented graphically. Result data shows that the coconut shell concrete flat slabs has reduced load bearing capacity compared to normal control concrete by 25 - 30 % for M-25 Grade of Concrete.

No. of Pages : 26 No. of Claims : 6


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भारत सरकार
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THE PATENT OFFICE
डिजाइन के पंजीकरण का प्रमाणपत्र
CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 365189-001
तारीख / Date : 31/05/2022
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **REFRIGERATOR WITH FOOD WARMING APPARATUS ATTACHMENT** से संबंधित है, का पंजीकरण, श्रेणी **15-07** में 1.Dr. S. Dinesh Kumar 2. Mr. Mohan S R 3.Dr. M. Dhanashekar 4.Dr. D. Chandramohan के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **15-07** in respect of the application of such design to **REFRIGERATOR WITH FOOD WARMING APPARATUS ATTACHMENT** in the name of 1.Dr. S. Dinesh Kumar 2. Mr. Mohan S R 3.Dr. M. Dhanashekar 4.Dr. D. Chandramohan.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्याधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

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निर्गमन की तारीख/Date of Issue : 16/03/2023

महानियंत्रक पेटेंट डिजाइन और व्यापार चिह्न
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पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति देश के नाम पर की गई है। डिजाइन का सत्त्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार अधिनियम एवं नियम के निबंधनों के अधीन, पांच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

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