DEPARTMENT OF ECE

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ADITYA

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ADVITYA 2K17

ADITYA INISTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI (AUTONOMOUS)

Department of Electronic and Communication Engineering

Vision of the Institute:

To evolve into a premier engineering institute in the country by continuously enhancing the range of our competencies, expanding the gamut of our activities and extending the frontiers of our operations.

Mission of the Institute:

Synergizing knowledge, technology and human resource, we impart the best quality education in Technology and Management. In the process, we make education more objective so that the efficiency for employability increases on a continued basis.

Vision of the Department:

Create high-quality engineering professionals through research, innovation and teamwork for a lasting technology development in the area of Electronics and Communication Engineering.

Mission of the Department:

1. To offer a well-balanced Program of instruction, lab practices, research & development activities, product incubation.
2. Develop accomplished technical personnel with a strong background on fundamental and advanced concepts, have excellent professional conduct.
3. Enhance overall personality development which includes innovative and group work exercises, entrepreneur skills, communication skills and employability.
4. Ensuring effective teaching–learning process to provide in-depth knowledge of principles and its applications pertaining to Electronics & Communication Engineering and interdisciplinary areas.
5. Providing industry and department interactions through consultancy and sponsored research.

Message from Dr. K. Someswara Rao, CHAIRMAN

At AITAM, we are committed to excellence in everything we do. We strive to mould the students in balancing intellectual and practical skills to become leaders in all the fields of Technical know-how and Management. We have created the finest facilities for the students to make the most of their scholastic pursuits. We are closely aligned with the corporate world which ensures exchange of ideas and experiences that keep our curricula focussed on current developments and challenges in the field of engineering. We are firmly committed to research and consulting activities to contribute to the development of the discipline of engineering. Our vitality lies in our spirit of innovation. Our strength lies in our pragmatic approach. Our success lies in our will to do.

Message Sri L.L. Naidu, SECRETARY

Aditya Institute of Technology and Management is founded to meet the increasing demand for competent engineering graduates. Within a short span of its inception, AITAM has grown to be a premier engineering college of its kind and has won laurels and kudos from the industry. The faculty and staff in AITAM are dedicated to providing first-class education that instils strong and potent basic knowledge for sound practice in science and engineering for the well-being of the society. The Institute offers curricula that nurtures creative thinking and prepares students for productive and rewarding careers. The Institute offers programmes that deepen learning experiences of our students and prepare them for successful careers as engineers.

Message from Prof. V.V. Nageswara Rao, DIRECTOR

Engineering education at AITAM is indeed a rewarding intellectual experience. The Institute prepares the engineering professionals of tomorrow imbued with insight, imagination and ingenuity to flourish as successful engineers. Our programs are attuned to the needs of the changing times. The classrooms are ultra-modern; the library and labs are cutting-edge; and all the members of the faculty are workaholic professionals and masters in their fields. Not surprisingly, our students are recruited by such renowned organizations as HCL, Satyam, WIPRO, INFOSYS, TCS, Visual Soft, Innova-Solutions and InfoTech. The exceptional dedication of our students, faculty and staff, and our collaborations with Industry and other institutions ensure that the Institute is well-poised to create a unique niche in the horizons of engineering education.

Message from Dr. K.B. Madhu Sahu, PRINCIPAL

It is only through knowledge that man attains immortality. Knowledge has to expand or grow to remain as knowledge. The road to excellence is toughest, roughest and steepest in the Universe. The world requires and honors only excellence. Available information has to be directed by wisdom and intelligence to create new knowledge. Promotion of creativity is the new role of education. It is only through creative thinking that the present and future problems can be addressed to find dynamic solutions. Technology should be used to help remove poverty from the world. In fact forty per cent of the world's poor are in India. Confidence leads to capacity. It is faith in oneself that produces miracles. Education at AITAM helps build character, strengthen the mind, expand the intellect and establish a culture of looking at problems in a new perspective. The student is put through rigorous training so that he can stand on his own feet after leaving the portals of the Institute.

Message from Dr. Sateesh Kumar, H.O.D of ECE

Aditya Institute of technology and management (AITAM) is one among the reputed engineering colleges imparting finest quality education. The department of Electronics and Communication Engineering was established in the year 2001. Our aim is to produce graduates capable of effectively using professional skills with values for betterment of society and to meet the varying demands of industry and research environment. The department is well equipped with significant infrastructural design and state of art laboratories for both academics and research purpose.

Our department has a fine blend of a team of qualified and experienced faculty. The faculty members have excellent academic credentials. The notable asset of our department is the available diversity of expertise and highly motivated, well experienced faculty members ensure quality education from our department. The faculty and students are associated with memberships of professional bodies such as Institution of Electronics and Telecommunications Engineering (India), Institution of Engineers (India), Indian Society for Technical Education.

Our students earned name and fame all over the globe and rendering best of their services to topmost companies. The department of ECE endeavors to provide to our students best professional opportunities and look forward their bright future. We as a team resolve to take the department to heights of success and prepare our students for future challenges. We are striving hard continuously to improve upon the quality of education. Our goal is to ensure that the education we provide opens the doorway to greater opportunities.

B.TECH PROJECT ABSTRACTS

Sl. No.	Roll No.	Name of the Student	Project Title
1	14A51A0479	KORADA PRIYANKA	ENHANCEMENT OF SPEECH SIGNAL USING WAVELET TRANSFORM
	14A51A0464	KANITI SEETARAM	
	14A51A04B3	PONNANA HEMANTH KUMAR	
	15A55A0412	LAKKOJU KRANTHI KUMAR	
	14A51A0479	KORADA PRIYANKA	

Abstract: Communication involves the transfer of information from one point to another. The most important aspect is that in its transmission from source to user, the message signal is corrupted by noise. It is often necessary to perform de-noising in speech processing system operating in highly noisy environment. Wavelet transform is one of the most promising techniques used in signal processing, due to its ability to decompose signals and to reduce noise having non-stationary characteristics. In this project, we are going implement different wavelets like Haar, Symlet and Daubechies to decompose the given noisy speech signal. The decomposed noisy wavelet coefficients are soft threshold to eliminate the noise. We also compare the performance of these wavelets with shift invariant wavelets like dual tree complex wavelet transform and quaternion wavelet transform. Simulation is done on MATLAB platform. This project investigates the use of wavelet transform for de-noising speech signals contaminated with white Gaussian noise. The performance of the wavelets is evaluated in terms of Perceptual Evaluation of Speech Quality (PESQ) and Peak Signal to Noise Ratio (PSNR).

Sl. No.	Roll No.	Name of the Student	Project Title
2	14A51A0485	LANKAPU ARAVIND	ENEMY DETECTION AND MANUAL CONTROL LASER SYSTEM
	14A51A0463	KANDAVILLI GOWRIPRASANNA	
	14A51A0482	KUNA SURYA REKHA	
	15A55A0410	GURIBILLI MAHALAKSHMI	

Now a day's security plays a vital role in development of a country. Hence we developed a system which will help in protection. In our project it consists of arduino UNO, infrared sensor, servomotor, joystick, laser diode ,IC 7805 ,buzzer. The infrared sensor which is used in order to detect an object and three servo motors are used in order to rotate, aiming the object. We are placing the infrared sensor on the top of the servo motor to rotate 0 to 180 and 180 to 0 degrees. When an obstacle is detected it makes a siren and sends command to servo motor2.This second servo motor is used to rotate in a particular angle. The third servo motor is used to aim the object and it can be controlled by joystick .

We wanted to built something new and appealing to a wide variety of people. We envisioned using what we learned over the past five semesters to built something. This project can be used in border security and also in some private sectors.

Sl. No.	Roll No.	Name of the Student	Project Title
3	14A51A0473	KILARI PRIYANKA	DETECTION OF ALCOHOL, DROWSINESS AND ALERTING THE DRIVER USING WAKE UP ALARM
	14A51A04B6	POTNURU YOGESH	
	14A51A0489	MADINA ROHIT	
	14A51A04B5	POTNURU VENKATESH	

ABSTRACT

Alcohol detection device is a system provides a unique method to curb drunken people. The system has an alcohol sensor embedded on the steering of the car. Whenever the driver starts ignition, the sensor measures the content of the alcohol in his breath and automatically switches off the car if he is drunken. In this system the sensor delivers a current with a linear relationship to the alcohol molecules from zero to very high concentration. The output of the sensor is fed to the microcontroller for comparison. If the measured value reaches the threshold, relay cut off automatically and the buzzer produces sound and car ignition doesn't starts. Drivers wake up alarm is a device for the night shift drivers, long journey drivers. This device helps in preventing accidents by alerting them with a buzzer when they fall sleep. This device consists of a micro controller, IR module, buzzer, power supply.IR rays targets the eye of a driver and as the drivers eyes are closed for few seconds mentioned in the program of a micro controller then the buzzer blows when that time exceed.

Sl. No.	Roll No.	Name of the Student	Project Title
4	14A51A04B8	RAGHUPATHRUNI YESWANTH HARINIVAS	
	14A51A0484	KUPPILI CHANDRA SEKHAR PATNAIK	
	14A51A0461	K MANISH RAO	
	14A51A04B4	POTNURU MANIKANTA	

Sl. No.	Roll No.	Name of the Student	Project Title
5	14A51A0494	MOGILIPURI SOWMYA	**Design of Digital Differentiators**
	14A51A0471	KASPA GNANA PRASOONA	
	14A51A0491	MANDALA SAI KUMAR	
	14A51A04B1	POLAKI SANDHYA RANI	

A differentiator is a circuit that is designed such that the output of the circuit is approximately directly proportional to the rate of change (the time derivate) of the input. Using S to Z transform it is digitalized. The conversion of S to Z transformation should satisfy two condition first one is, the left part of the S-plane should map to the interior of the circle in the Z-plane and second one is imaginary part of the S-plane should be mapped on the unit circle circumference in the Z-plane. Though there are various methods like **bilinear** and **al-alaoui** transforms to convert from S to Z but these have some drawbacks like wrapping effect. In order to reduce the drawbacks of the old methods a new method was proposed in a journal, we are working on to prove the method for k=0.875, the results will be closer to ideal characteristics.

Sl. No.	Roll No.	Name of the Student	Project Title
6	15A55A0415	NANDANA TEJESWARI	BRAIN TUMOUR EXTRACTION FROM MRI IMAGES USING MATLAB
	14A51A04A6	PATNANA VAISHNAVI	
	14A51A0498	P CHANDAN KUMAR	

Medical image processing is the most challenging and emerging field now a days. Processing of MRI images is one of the part of this field. This project describes the proposed strategy to detect and extraction of brain tumour from patient's MRI scan images of the brain. This method incorporates with some noise removal functions, segmentations and morphological

operations which are the basic concepts of image processing. Detection and extraction of tumour from MRI scan images of the brain is done by MATLAB software.

Magnetic Resonance Imaging(MRI) is an advanced medical imaging technique used produce high quality images of the parts contained in the human body MRI imaging is often used when treating brain tumours, ankle and foot. Now a days there are several methodology for classifying MR images, which are fuzzy methods, neural methods, atlas methods, knowledge based techniques, shaped methods, variations segmentation.

MRI images are magnetic resonance images which can be acquired on computer when a patient is scanned by MRI machine. We can acquire MRI images MRI images of the part of the body which is under test or desired. Generally when we see MRI images on computer they look like black and white images

Sl. No.	Roll No.	Name of the Student	Project Title
7	14A51A04B7	PUJARI KRISHNA KUMARI	PATIENTSVOICE GUIDER AND MEDICINE REMINDER
	15A55A0411	KOTTURU UMA SANKAR	
	14A51A04A3	PAPPALA NAGENDRA BABU	
	14A51A04A7	PEDDAPU LOKESH	

In this busy and competition world we cannot monitoring our elders (aged people) and patients continuously even though we have so much of love on them .By using advancements in present technologies we are developing this project to save time and user friendly system .

In general, most of the patients forget to take the appropriate medical course at appropriate times. There may be chances that they remember to take the pills at regular times but forget the pill which has to be taken at that particular time. This is a big problem and it is also difficult to doctors to monitor patients always. And also, mostly in the hospitals, it is not an easy and available service to employ a nurse to a single patient exclusively. To avoid these problems, we have implemented this project which can remind the patient about the intake of medicines at regular time intervals patients and old aged people.

This project aims at monitoring the patient's health conditions continuously. The project can be seen more clearly in two different modules- medicine intake informer and voice guider.

The medicine intake informer consists of RTC (DS1307), buzzer and 16X2 LCD display. The system continuously reads the time from RTC and compares this time with the already time and if these two times match, the system immediately alerts the buzzer for a predefined time and displays the name of the medicine, to be taken by the patient, on the LCD. The voice guider consists of voice playback APR9600, speaker and IR receiver. The user will be provided with an ordinary IR TV remote. If the user is unable to do the things by himself or requires any immediate help, he can press any of the predefined keys in the remote. The IR receiver receives the IR signals from the transmitter and passes this data to the voice playback. The message corresponding to the pressed number will be announced and can be heard through the speaker. If the patient or the old person is unable to ask the things like water, fruits etc directly, he can press the defined button in the remote. Then the controller receives this input from IR receiver and the message related to the number pressed will be heard in the form of voice from the speaker. Thus, the patient can get the required help immediately.

To control and process all the above modules, a controller is used and the microcontroller preferred in this project is AT89C51

Sl. No.	Roll No.	Name of the Student	Project Title
8	14A51A04A0	PALLI SRAVANI	**BLUETOOTH BASED HOME AUTOMATIC THROUGH VOICE COMMANDS**
	14A51A0488	MADDU AKHIL KUMAR	
	14A51A0467	KARIMILLI YUGANDHAR	
	14A51A04A5	PATNANA SUDARSHAN REDDY	

ABSTRACT:
In the past few years, technology has in a grown at high speed. Also human lives have become much more dependent on electronic devices and appliances. It has thus led to the idea of developing a home automation system. This project is about home automation system which would use a smart phone to enable any handicapped to operate all the appliances. The system has three components: an 8051 microcontroller for connecting the appliances, a Bluetooth module for signal transfer, and a smart phone running the Android application. The system also supports voice command for naïve users with command sensing. It decodes the user**'s** voice command and extracts the exact meaning of his command. The paper focuses on the features and design of the proposed system. The design is based on a standalone 8051 BT board and the appliances are connected to this board using relays.. The smart phone interacts with the 8051 via Bluetooth. The main aim of the system development is to be low cost and scalable according to the requirements. Password protection is being used for authentication

Sl. No.	Roll No.	Name of the Student	Project Title
9	14A51A0480	KORADA SUMA	A CONSTANT MULTIPLIER ARCHITECTURE WITH ERROR CORRECTION CODES
	14A51A0468	KARRA SANDHYA	
	14A51A0493	MENDA SAIKUMAR	
	14A51A04A4	PATNANA KRISHNAM RAJU	

ABSTRACT:
Filters are extensively use**d** in signal processing and communication systems in uses like channel equalization, noise reduction, radar, audio processing, video processing, biomedical signal processing, and study of commercial and business data. SDR (Software Defined Radio) needs reconfigurable FIR (Finite Impulse Response)filter with animatedly programmable filter coefficient. In FIR filter, the multiplication is done between one specific variable (the input) and several constants (the coefficients) and identified as multiple constant multiplications (MCM). An effectual VHBCSE (Vertical Horizontal Binary Common Sub-Expression) algorithm for FIR filter is employed for 4 bit in addition to 8 bit common sub-expression elimination.4 bit BCSE is applied perpendicularly across neighbouring coefficients of the coefficient matrix in the starting and variable-bit BCSE algorithm horizontally within each coefficient. Key goal of this algorithm are, to decrease the normal switching activity of the multiplier and adder blocks. The next goal is to minimize the power consumption with development in the Area Power Product (APP). In some cases, the reliability of filters is critical, and fault tolerant filter implementations are required. Various techniques to achieve fault tolerance were proposed. In complex systems, it is common that some of the filters function in parallel. The parallel filters can be secured using error correction codes (ECCs). In this technique each filter output remains the same of a bit in a traditional ECC. This novel scheme allows additional efficient security when the amount of parallel filters remains enormous.

Sl. No.	Roll No.	Name of the Student	Project Title
10	14A51A04B0	KILLI ARUNA SRI	**LED display using the GSM module**
	14A51A0481	KUMILI SRILAKSHMI	
	14A51A0492	MEDABOYINA AKHIL	
	14A51A0499	PADALA ESWARA RAO	

Now-a-days wearer watching LED boards to give announcements in railwaystations,busstation,schoolsandcolleges.Inordertomakethisprocess,we
Have to connect our computer local server to LED display board. Then, data will transmit from computer system tolled display board & It displays the information. So, one person isrequiredtooperatethesystem.Itistotallywiredsystem.Powerconsumptionismore &circuit is complex.

To overcome these demerits, we came up with a solution. Instead of sending the data from computer to LED display, we use GSM [Global System Mobile Network] module. By using the GSM module, we can send the data as the text message from our mobile using the GSM module to the LED display. When mobile is used instead of computer less power is consumed & also circuit design is easy. Wearer doing this project by interfacing with Arduino software.

Sl. No.	Roll No.	Name of the Student	Project Title
11	14A51A04B2	POLAKI VEENA MADHURI	Garbage Monitoring System
	14A51A04A1	PANCHIREDDI RAJITHA	
	15A55A0413	MAMIDI SANYASI NAIDU	
	14A51A0497	NARLA DILEEP KUMAR	

The project IOT Garbage Monitoring system is a very innovative system which will help to keep the cities clean. This system monitors the garbage bins and informs about the level of garbage collected in the garbage bins via a web page. For this the system uses ultrasonic sensors placed over the bins to detect the garbage level and compare it with the garbage bins depth. The system makes use of AVR family microcontroller, LCD screen, Wifi modem for sending data and a buzzer. The system is powered by a 12V transformer. The LCD screen is used to display the status of the level of garbage collected in the bins. Whereas a web page is built to show the status to the user monitoring it. The web page gives a graphical view of the garbage bins and highlights the garbage collected in color in order to show the level of garbage collected. The LCD screen shows the status of the garbage level. The system puts on the buzzer when the level of garbage collected crosses the set limit. Thus this system helps to keep the city clean by informing about the garbage levels of the bins by providing graphical image of the bins via IOT web development platform

Sl. No.	Roll No.	Name of the Student	Project Title
12	14A51A0475	KINTALI RAKESH	**MULTIMODAL IMAGE FUSION BY USING NON-SUBSAMPLED CONTOURLET TRANSFORM**
	14A51A0495	MUPPANA HARIKA	
	14A51A0462	KANCHARAPU TRIVENI	
	14A51A0496	NAGIRIPENTA LAXMANA RAO	

Multimodal image fusion is the process of combining two different modality images into single image. This resultant image is helpful in medical field for efficient and better disease diagnoses. Retrieval of images, undergo surgery treatment, tumor identification, disease

abnormalities and also in defense and military operations which include ocean surveillance, air-to-air defense, battle field intelligence, surveillance and target acquisition and strategic warning and defense. Each of these military applications involves a particular focus.

In medical image fusion, fused image features cannot be obtained from the single modality medical images and it can be resolved by image fusion of different modal images.

In this project a new hybrid algorithm and code will be developed based on non-sub sampled contour let transform for ddirective contrast based multimodal medical Image Fusion. By using proposed techniques, Magnetic Resonance Image (MRI) and Positron-emission tomography (PET)images will be fused and it will be compared with existing techniques like wavelet transform(DWT), generalized IHS transform(GIHS) using quantitative and qualitative measures. The validation of the algorithms will be done by using quantitative measures such as Entropy (EN), Normalized Correlation Coefficient (NCC) and Structural Similarity Index (SSIM).

Sl. No.	Roll No.	Name of the Student	Project Title
13	14A51A0478	KORADA LAVANYA	**Vehicle theft control and accident location intimation through SMS**
	14A51A04B9	RAJESH KUMAR BISAI	
	14A51A0466	KARIMELLI NEEHARIKA	

Abstract:

Human life is more valuable than anything else, timely help is more important than lending a helping hand. This project is one among those which is designed in a way to save human lives in a timely manner. In modern day vehicles, vehicle anti-theft system is of prime importance and traffic accidents are one of the leading causes of fatalities. An important indicator of survival rates after an accident is the time between the accident and when emergency medical personnel are dispatched to the accident location. By eliminating the time between when an accident occurs and when the first responders are dispatched to the scene decreases mortality rates, we can save lives. There are two main modules discussed in the project. In this project the first module is password based security system to access the vehicle. And the second one is accident location intimation through SMS by using GSM module.

The main aim of this project is to provide security to the two wheelers. The system automatically locks the vehicle as soon as it receives a predefined message from the user.

This project uses the wireless communication, GSM. To receive the messages from the user mobile, we need a GSM modem. This modem will be interfaced to the microcontroller through serial interface. The modem provides the communication interface.

If the user is somewhere far from the vehicle and he wants to lock the vehicle right from the place he is standing, he has to send a predefined message to the modem. The controlling unit will be fixed to the vehicle. The controlling unit contains the microcontroller and the GSM modem interfaced to it. The microcontroller continuously checks whether it has received any message from the modem.

When the user sends the predefined message to the modem, the modem receives the message and intimates the same to the microcontroller. The microcontroller retrieves this message from the modem by issuing certain AT and T commands to the modem. Thus, after receiving the message from the modem, the microcontroller automatically locks the vehicle. This will be done perfectly without the involvement of any human.

Whenever anyone tries to unlock or take away the vehicle, immediately a message will be sent to the user mobile. The user, after checking the message, can respond immediately to save his vehicle. Even when the user tries to unlock or lock the vehicle, a message will be sent to his mobile. Thus, he may ignore the message in this case.
A piezo electric material placed on the chassis of the vehicle to sense the vibration produced during an accident. Accidents produce vibrations which are very huge and abnormal and are nearly equal to 9 G (G-Force against gravity). Once the threshold is crossed the sensor sends a signal to the microcontroller which in turn triggers the GSM modem to shoot a sms containing the vehicle number and location (GPS Coordinates) to the nearby hospitals/ambulance services.
Thus our project Intelligent vehicle Safety System intimates the authorized person about the current status of the vehicle and if it is being introduced by a third person or an accident using a GSM and GPS based technology.

Sl. No.	Roll No.	Name of the Student	Project Title
14	14A51A0465	KANUGULA DHINESH	SYMMETRICAL U, RECTANGULAR SLOT AND PAIR OF L-SHAPED WIDEBAND ANTENNA FOR WLAN APPPLICATIONS
	14A51A04A8	PEDIREDLA RAMYA	
	15A55A0416	PANGA KOTESWARA RAO	
	14A51A0487	MADAPATI TANUJA	
	14A51A0465	KANUGULA DHINESH	

ABSTARCT

A compact shape and size wideband microstrip feed planner antenna is proposed for Wireless Local Area Network (WLAN) The designed antenna has a rectangular slot with a pair of inverted L, symmetrical U, and two rectangular shaped slots. The proposed antenna has frequencies for 3 WLAN (5.2/5.8 GHz) .The antenna size is reduced to (15 x 15 x 1.6mm) for wideband. The designed and simulated antenna covered frequency band of 3.19- 8.0 GHz, while rejecting all frequencies which are not desired. Omni-directional radiation pattern and desired gain are obtained in the operating range of frequency.
Keywords: Microstrip-Feed, Symmetrical Rectangular Slot, Wideband Antennas.

Sl. No.	Roll No.	Name of the Student	Project Title
15	14A51A04A2	PANDI SPANDANA	Design of Miniaturized Microstrip Patch Antenna with Defected Ground Structure (DGS) for Wireless Applications
	14A51A0469	KARUKOLA YAMINI	
	14A51A0472	KELLA SRINIVAS	
	14A51A0486	LAVETI RAJESH NAIDU	
	14A51A04A2	PANDI SPANDANA	

Applications

ABSTRACT

Microstrip patch antennas have been a topic of intense investigation over the last two decades, due to their several advantages and better prospects. Among these advantages we distinguish for instance: lighter weight, lower cost and smaller dimensions. Moreover, microstrip patch antennas can be easily designed to operate in dual-band and multi-band applications, for dual or circular polarization .Thus, they are widely used in many practical

applications such as medical applications, satellites and military systems.
With the rapid development in wireless communications, much effort has been devoted to reduce the size of microstrip antennas. In this way, several methods have been proposed recently, such as using a dielectric substrate of high permittivity , Defected Microstrip Structure (DMS) , Defected Ground Structure (DGS) at the ground plane or a combination of them.
In this project the defected ground structure (DGS) has been employed to miniaturize a microstrip patch antenna and to shift the resonance frequency from an initial value of 5 GHz to a final value at 8GHz, without any change in the dimensions of the original microstrip patch antenna. This antenna is designed on a FR-4 substrate with dielectric constant 4.4 and thickness 1.6 mm . The antenna is designed, optimized, and miniaturized by using Ansoft HFSS.

Sl. No.	Roll No.	Name of the Student	Project Title
16	14A51A04C0	RATHANALA SRAVYA	**Multi electronic notice boards**
	14A51A0474	KILLARI HYMA	
	14A51A0476	KONGARAPU VIJAYA KUMAR	
	14A51A0477	KONKENA MURALI	

Abstract:
Notice boards play a vital role mostly in educational institutions. The events, occasions or any news, which has to be passed to the students, will be written on the notice boards present in every floor in the colleges or schools. The present system is like, a person will be told the news and he has to update this news on all the notice boards present in the college or school. This will be seen mostly during the examination seasons.

The time table or the schedule of the exams has to be given to the students. This will be done by writing the details on the notice boards. But this process consumes a lot time to update the news on all the notice boards and there may be chances that the person responsible may commit some mistakes or he may be absent sometimes. So, this may create disturbances and the entire schedule may be disturbed. To avoid all these, electronic Notice Board have been designed which completely eliminates the manual work.

Here we are using RS232 it operates for 150m.To interface the pc and microcontroller we are using MAX232.The MAX232 converts the input signal given by pc to TTL logic which is understand by the controller.

PC is interfaced to the transmitter section to type the data and transmit. The message can be transmitted to multi point receivers. At any time, the user can add or change the message according to his requirement. At the receiver side, the message will be displayed on the LCD display unit.

Sl. No.	Roll No.	Name of the Student	Project Title
17	14A51A04C1	RATNALA GEETANJALI	**STUDENTS'ATTENDANCE** MONITORING SYSTEM IN CLASSROOM USING RADIO FREQUENCY
	14A51A04E3	SURAPU RAMACHANDRARAO	
	14A51A04C7	SAHUKARU SRIKANTH	
	15A55A0429	THALARI MANOJU	

	15A55A0431	TUNGANA DHANA LAKSHMI	IDENTIFICATION (RFID) TAG

The main objective of this project is to record the attendance of students using RFID tags. Each student is provided with his or her authorized tag to swipe over the reader to record their attendance. In classrooms, time is wasted in roll calls as it is done manually. In this proposed system, authorized student is given an RFID tag. This tag contains an integrated in built circuit that is used for storing, processing information through modulating and demodulating of the radio frequency signal that is being transmitted. Thus, the data stored in this card is referred as the identification or attendance of the person. Once the student places the card in front of the RFID card reader, it reads the data and verifies it with the data stored in the microcontroller from 8051 family. If the data matches, then it displays a message on the LCD confirming the entry of that student else displays a message denying the attendance. The status of a student's attendance can be retrieved from this system by pressing the status button interfaced to the microcontroller. Hence, a lot of time is saved as all the students attendance is directly stored in the data base.

Sl. No.	Roll No.	Name of the Student	Project Title
18	14A51A04D7	SIMHABHATLA AKHIL PRATYUSH	SOLAR POWERED LED STREET LIGHT WITH AUTO INTENSITY CONTROL
	14A51A04C3	RUPPA KALYANI	
	14A51A04D1	SAMPATHIRAO VINOD	
	15A55A0427	TADDI CHAKRAPANI	

ABSTRACT

The project is designed for Light Emitting Diode (LED) based street lights with an auto intensity controlled power from Photovoltaic cells. Photovoltaic panels are used for charging batteries and thereby converting the sunlight into electricity and thereby making the lights self reliant. A charge controller circuit is used to control the charging, and a Light Dependent Resistor (LDR) is used whose resistance reduces drastically in day light for sensing the ambient light on day time. The intensity of the street lights is required to be kept high during the peak hours. As the traffic on the road tends to decrease slowly at late nights, the intensity also gets reduced progressively till morning to save energy. Besides the same street lights are switched on at the dusk and then switched off at the dawn automatically by using the LDR sensing device. The process repeats every day. LED lights are the future of lighting, because of their low energy consumption and long life they are fast replacing conventional lights world over. White LED replaces the HID lamps where intensity control is possible by pulse width modulation. The intensity control helps in saving energy during late nights while traffic density on the street is low. A programmable microcontroller of the 8051 family is engaged to provide different intensities at different times of the night using PWM technique, for energy saving for solar based system, also using a charge controller for protecting the battery from over charging, overload and deep discharge protection. We use assembly language/ C programming to write the code and it is dumped into the microcontroller by using keil compiler.

Sl. No.	Roll No.	Name of the Student	Project Title
19	14A51A04D9	SINGISETTI SRIVIDYA	De-noising Computed Tomography Images using 2-D and 3-D wavelet transforms
	15A55A0419	PONDRETI VISWAS	
	14A51A04E0	SIRIGANTI MANIKANTA RAO	
	15A55A0425	SIMHADRI GOWRISANKAR	

Abstract— Image de-noising is one of the most significant tasks especially in medical image processing, where the original images are of poor quality due to noises and artifacts introduces by the image acquisition systems. De-noising techniques are used to remove the noise or distortion from images while preserving the original quality of the image. In this project, image de-noising scheme would be implemented by modifying the wavelet coefficients using various thresholding methods when the image is contaminated with Gaussian and impulsive noise. The de-nosing process would be employed by using different wavelet transforms like 2-Dimensional wavelet, Curve let and 3- Dimensional discrete wavelet transform (DWT). The performance is evaluated using Peak Signal-to-Noise Ratio (PSNR).), Root mean square error (RMSE), and Structural Similarity Index (SSIM).

Sl. No.	Roll No.	Name of the Student	Project Title
20	14A51A04G1	VAVILAPALLI AMRTUHA VARSHINI	IOT BASED CROP-FIELD MONITORING AND IRRIGATION AUTOMATION
	15A55A0420	RAPARTHI MEENAKSSHI	
	14A51A04G0	VATTIKULLA SRIDHAR	
	15A55A0424	SIGILIPELLI MANOJ	
	14A51A04G1	VAVILAPALLI AMRTUHA VARSHINI	

Internet of things (IOT) is a shared network of objects or things which can interact with each other provided the internet the connection.IOT plays an important role in agriculture industry which can feed 9.6 billion on the earth by 2050.Smart agriculture helps to reduce wastage effective usage of fertilizer and their by increase the crop field in this work. A system is developed to monitor crop field using sensors (soil moisture, temperature, humidity, light) and automatic Irrigation system. The data form sensors are sending to web server database using wireless transmission. The Irrigation is automated if the moisture and temperature of the field falls below the brink. The information regarding the conditions is assessed by using BLYNK APP. In greenhouses light intensity control can also be automated in addition to Irrigation. The automated filling of water tank is also done by using this app. The notifications are send to farmers mobile periodically. The farmers can able to monitor the field conditions from anywhere. This system will be more useful in areas where water is in scarce. This system is 92%more efficient than the conventional approach.

Sl. No.	Roll No.	Name of the Student	Project Title
21	15A55A0428	TAMMINANA VANAJAKSHI	REMOTE OPERATION OF DISH ANTENNA POSITIONING
	14A51A04F7	VADDADI ANUSHA	
	14A51A04H0	SURU VINEETH	
	15A55A0421	REBBAGONDLA SAIDU BABU	

ABSTRACT

In order to position the dish antenna to an exact angle such that it receives maximum signal of a particular frequency from the satellites and other broadcasting sources, the antenna needs to be adjusted manually at the antenna fixture. In order to overcome the difficulty of adjusting it manually there, this proposed system is developed to adjust the position of the dish remotely by a simple TV Remote.

This system consists of two motors that enable dish antenna to move in both azimuthally and elevation directions. The TV remote acts as a transmitter whose data is received by an IR receiver which is interfaced to a microcontroller of the 8051 family.

The TV remote which is used as transmitter is follows the standard RC5 code for recognize the input code

Sl. No.	Roll No.	Name of the Student	Project Title
22	14A51A04F0	TANKALA PAVAN KUMAR	**MICRO CONTROLLER BASED AUTOMATIC ENGINE LOCKING SYSTEM FOR DRUNKEN DRIVERS**
	14A51A04E2	SUNEETHA GANTAYAT	
	15A55A0418	PILLA SURYANARAYANA	
	14A51A04H1	ELLAPU SAI GANESH	

This project has GSM technology and alcohol detection system with vehicle controlling technique. Whenever alcohol percentage crosses a threshold level, project (microcontroller) sends SMS to the owner of the vehicle or to his/her family members using GSM modem. At the same time vehicle controlling done by stopping the vehicle engine. This tracking system is composed of a GPS receiver. Micro controller and a GSM modem, GPS receiver gets the locations information from the satellites in the form of latitude and longitude .Use of Embedded technology makes this closed loop feedback control system efficient and reliable. The hardware interfaces to micro controller are LCD display uses RS-232 protocol for serial communication between the modem and the micro controller .A serial driver IC is used for converting TTL, voltage levels to RS232 voltage levels .when the request by user is Sent to the number at the modem. The system automatically sends a return to that mobile indicating the position of the vehicle in terms of latitude and longitude. Single pole double throw (SPDT) relays are connected to the micro controller through a ULN driver circuit. The relays require 12 volts at a current of around 50mA, which cannot provide by the micro controller. So the ULN driver circuit is added .The relays are used to operate the electrical fan or for operating any other electrical device. Normally the relays remain off. As soon as pin of the micro controller goes high, the relays operate. This project uses regulated 5V, 500mA &12, 500mA power supply.7808 and 7812 Three terminal voltage regulators are used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac out \put of secondary of 230/12V step down transformer.

Sl. No.	Roll No.	Name of the Student	Project Title
23	15A55A0422	ROUTU SIVA KUMAR	**A ROBUST METHOD OF CARRIER FREQUENCY OFFSET ESTIMATION IN WIRELESS COMMUNICATIONS**
	14A51A04C6	SAHINI SAI KRISHNA	
	14A51A04E1	SUGGU SREEMANTH	

Carrier allocation in digital communications plays a very major role. Several Carrier

frequency Offset estimators are available in spatial and frequency domain. This paper discusses about various carrier frequency offsets estimators like fusco's multiuser method, maximum likelihood methods and other frequency estimator's methods which uses periodical sequence training methods.

A comparison of various Methods are studied for a multiuser QAM Filter bank with less complexity is proposed for staggered modulated multi one multiple access systems the proposed algorithm prove to be more efficient. The carrier offset difference at the receiver relative to the transmitter shall range should be as low as possible.

Sl. No.	Roll No.	Name of the Student	Project Title
24	14A51A04F8	VANDANA LAVANYA	SMART ENERGY METER USING GSM TECHNOLOGY
	14A51A04E4	SURI VENKATA SAI	
	14A51A04C4	SADAGANA LAKSHMI PRASANNA	
	14A51A04G7	SEEPANA VINAY KUMAR	

This project proposes smart energy meter using GSM technology. It is developed to decrease the electricity consumption bill by providing the reading update to the consumer with an alert message before increasing the unit charge. The 8051 micro controller is the heart of this project. This project is designed for seven power grids. A GSM modem is interfaced with the micro controller that receives messages from the control mobile and sends as input to the micro controller. According to the provided information microcontroller can be used to monitor and to record the meter readings. Live meter readings from the GSM enabled in the microcontroller sends the billing information periodically. A mobile with a GSM receiver will act as a billing point. The consumer can check the electricity bill from anywhere and anytime.

Sl. No.	Roll No.	Name of the Student	Project Title
25	15A55A0430	TULUGU VARAM	Design and Implementation of Solar Tracking System Using Microcontroller
	14A51A04F6	URLANA SONIYA	
	14A51A04E5	TAMADA JAYADEEP VARMA	
	14A51A04G5	YELURI HEMALATHA	

Abstract:
Solar energy is rapidly advancing as an important means of renewable energy resource. Solar panel has been used increasingly in recent years to convert solar energy to electrical energy. In order to Maximize the conversion from solar electrical energy, solar panel Have to be positioned perpendicular to the sun. Thus tracking of the sun's location and positioning of the solar panel are important. A solar tracker is a device for orienting a Photo voltaic array solar photovoltaic panel or concentrating solar reflector lens toward the sun. A microcontroller based design methodology of an automatic solar tracker is presented in this project. Light dependent resistors are used as the sensors of the solar tracker. The control circuit for the solar tracker is based on an AT89C51 microcontroller. The tracking system will move the solar panel so that it is positioned perpendicular to the sun for maximum energy conversion at all

time. This is programmed to detect the sunlight through the LDR sand then actuate the stepper motor to position the solar panel where it can receive maximum sunlight. The results have been shown in this project to advocate that the designed system realized precise automatic tracking of the sun and can greatly improve the utilization of solar energy.

Sl. No.	Roll No.	Name of the Student	Project Title
26	14A51A04E7	TANGUDU HANSIKA	**IoT Heart Attack Detection &Heart Rate Monitor**
	14A51A04G3	VYSYARAJU VINAY	
	14A51A04C2	RUNKANA INDUMATHI	
	14A51A04G4	YALLA DHANUNJAYA NAIDU	
	14A51A04E7	TANGUDU HANSIKA	

These days we have an increased number of heart diseases including increased risk of heart attack and increase of heart beat whenever the person feels tensed or stressed. If the person is healthy then he can handle the situation otherwise a message or an E-mail or a call to the particular person to whom we want to send the information.

The sensor is then interfaced to a microcontroller that allows checking heart rate readings and transmitting them over internet. The user may set the high as well as low levels of heart beat limit. After setting these limits, the system starts monitoring and as soon as patient heart beat goes above a certain limit, the system sends an alert to the controller which then transmits this over the internet and alerts the doctors as well as concerned users. Also the system alerts for lower heartbeats. Whenever the user logs on for monitoring, the system also displays the live heart rate of the patient. Thus concerned ones may monitor heart rate as well get an alert of heart attack to the patient immediately from anywhere and the person can be saved on time. Our proposed system uses sensors that allow to detect heart rate of a person using heartbeat sensing even if the person is at home.

Sl. No.	Roll No.	Name of the Student	Project Title
27	15A55A0426	SUTARI YADAGIRI	MOBILE PHONE CHARGING BY USING BODYMOVEMENT
	14A51A04E8	TANGUDU KIRAN KUMAR	
	14A51A04C9	SAKALABATTULA SANTHOSH KRISHNA	
	14A51A04G2	VYSYARAJU VENKATESH	

This project represents an idea of walking based wearable piezoelectric device that produces an alternate means for powering mobile phone batteries since the mechanism of the device is based on walking. The device promotes human metabolism as well as physical fitness. Hence it can be seen as an e-health gadget that encourages walking exercise as means to charge mobile phone batteries. Walking is the best and common activity in day to day life. As per the study of biomechanics, we came to realize that Ground Reflection Force (GRF) exerted from the foot is converted into voltage which gives enough power supply to run a device. While walking, the person loses some energy from foot in the form of vibrations which are sensed and converted into electric form. Piezoelectric crystal does the work of generating output out of foot movement. Piezoelectric materials have the capability of absorbing mechanical energy from surroundings especially vibrations and transform it into electrical energy. This project enables portable charging solution for mobile devices like power banks, mobile phones, laptops etc by employing low cost equipment. The major

components are piezoelectric disc, DC conversion circuit, Energy harvester, Alternate energy source.

Sl. No.	Roll No.	Name of the Student	Project Title
28	14A51A04D0	SALAGRAMAM ARUNA KUMARI	HYBRID FILTER BANK APPROACH FOR ECG ENHANCEMENT USING CASCADDED ARRANGEMENT METHOD
	14A51A04H2	MONINGI PRIYANKA	
	14A51A04D3	SANTHI SWARUPA BEHRA	
	14A51A04F9	VANTHARAM SAILATHA	

Electrocardiogram(ECG) is a biomedical signal which reflects the electrical activity of the heart.ECG measurement may be corrupted by many sorts of noise like power line interference and base line wander .As a result it becomes important to separate the noise from the signal otherwise it leads to false treatment by physician as noise disturbs the regular pattern of ECG. Many de noising techniques exist today which do eliminate noise, still evaluating parameter values can still be improved. In our approach we apply noisy ECG to filter bank where each filter in the filter bank is designed with different methods, where evaluating parameters like SNR can be improved compared to individual filtering approach for de noising.
Tool: MATLAB

Sl. No.	Roll No.	Name of the Student	Project Title
29	14A51A04D2	SANA DHARANI	GSM based Greenhouse Monitoring and Controlling
	15A55A0423	RUPPA SRAVANI	
	14A51A04D4	SASANAPURI SAI KUMAR	
	14A51A04F5	TULUGU AKHIL	

The greenhouse based modern agriculture industries are the recent requirement in every part of agriculture in India .In this project we are going to measure the various parameters like Temperature, Humidity, Soil moisture and Light intensity. Values of these parameters will be displayed on a LCD. These parameters will be sensed by respective sensors and sensor output will be amplified and given to ADC. Microcontroller controls these parameters and keeps them at some predefined levels using relay interface. These relays can be connected to Fan, Heater and motors. At the same time these values of all parameters are sent through SMS using a GSM modem. We can reduce soil erosion by these applications. We are implementing this project by using IOT.

Sl. No.	Roll No.	Name of the Student	Project Title
30	14A51A04F3	TELUGU BHAVANI	Estimation on difference of arrival times using wavelet based de-noising
	14A51A04G6	YERUKOLA MALLIKA	
	14A51A04D5	SAVU PRAVEEN KUMAR	

The localization of mobile wireless communication units is studied. The most important method of localization is the Time Difference Of Arrival (TDOA) method. The wavelet transform is used to increase the accuracy of TDOA estimation. Several de-noising techniques based on the wavelet transform are processed in this project. These techniques are applied to different types of test signals as well as the GSM signal. The results of the de-

noising techniques are compared to the ones obtained using no de-noising. The de-noising technique allows 28 to 81% improvement in the TDOA estimation.

Sl. No.	Roll No.	Name of the Student	Project Title
31	14A51A04F2	TARRA BHAVANI	Noise Removal from ECG Signal and Performance Analysis Using Different Windows
	15A55A0417	PASUMARTHI PRADEEPKUMAR	
	14A51A04D6	SHYAM KUMAR SUVVARI	
	14A51A04F1	TARLADA SHARATH	

Abstract— ECG signal is widely used for detection and diagnosis of various heart related diseases. ECG's Feature extraction is an application that is rapidly growing. While acquiring ECG signal, it gets contaminated to a number of sources with various types of artifacts such as baseline wander interference, motion artifact, instrumentation noise, electrode contact noise, EMG noise etc. In this project work, different windowing techniques to remove noise in corrupted ECG signal will be analyzed through system model. The windows used will be Kaiser, Rectangle, Hamming and Hanning windows. The output will be analyzed and compared using MSE, SNR and PSD for power line interference, muscle noise and EMG noise. This Project work gives an optimal ECG noise removal windowing system that concludes which particular window should be applied for a particular type of noise.

Sl. No.	Roll No.	Name of the Student	Project Title
32	14A51A04G8	DASARI TIRUPATAMMA	MULTI STAGE REAL TIME ENVIRONMENT MONITORING USING ZIGBEE IN SMART HOMES/INDUSTRIES
	14A51A04C5	SADEM DHARANI	
	14A51A04D8	SIMMA HEMANTH	
	14A51A04E9	TANGUDU SNEHA	

This project deals with the design and development of hardware and software for real time environment monitoring system. The environment monitoring system is an electronic device that records data over time. One of the primary advantages of using these systems is the ability to automatically and continuously collect data on a 24-hour basis. The data which are recorded continuously in this project are Temperature, light and humidity. These analog quantities are taken and converted into corresponding digital values using a channel ADC. These converted digital values are transmitted from the microcontroller using Zigbee module. These same values are received at the receiver end using Zigbee Receiver. At the transmitter, the processed data from ADC is sent to microcontroller. The microcontroller passes this data to the transmitter. The transmitter transmits the data and at the receiving end, the receiver receives this data, gives it to the microcontroller. Now, it is the job of the controller to read the data and display the same data on LCD. The controlling units at either side continuously check for the data and process the data after that perform the required task as per the application program.

Sl. No.	Roll No.	Name of the Student	Project Title
33	14A51A0419	BARATAM VASAVI DURGA	**Design And Implementation of Spiral Shape Micro strip Patch Antenna for LTE Applications**
	14A51A0403	AKULA TANUJA	
	14A51A0413	BADAGALA SRISUJA	
	15A55A0402	BADADA NAVEEN	
	15A55A0404	BEHARA SRUJAN RAJ	

ABSTRACT

Modern wireless Communication is using printed antenna technology, which is replacing almost all the wire antenna systems available so far. First generation mobile handsets used small monopole type antenna that produced from the device cabinets. But today the industry prefers to use compact internal antennas for mobile communication.

The present work describe about the development and analysis of compact dual band coplanar antenna. Mobile handset antenna design techniques are going to be referred. Multiband and broad banding techniques in antennas are then going to be studied. The objective of this work is to present an analysis of antennas, which are applicable to wireless sensor networks and, in particular, to the requirements of the compact antennas. This is going to be done through a review of the scientific literature on the subject, and the design, computer simulation, and experimental verification, of suitable design of antenna The CPW feed technique is going to be considered. The fundamental antenna parameters like resonant frequency, Return loss, VSWR, S-parameters, gain and band width of the antennas are going to be discussed. The simulation is going to be carried out through 3D electromagnetic simulation software HFSS.

Sl. No.	Roll No.	Name of the Student	Project Title
34	14A51A0426	B SWETHA	**PAPR Reduction Technique for OFDM Systems**
	14A51A0423	BOINA SAI MANEESHA	
	14A51A0454	GUNTUKU HARISH	
	15A55A0401	ANNEPU MAMATHA	
	15A55A0406	GOLLURU CHIRANJEEVI	

ABSTRACT:

Rapid developments in telecommunications and electronics have increased the demand for wireless broadband services multi fold since 2010 (e.g. in India, the growth rate of wireless subscribers is approximately 11% during the period of September 2016 to March 2017). To meet this ever increasing demand, standard of 4G systems have evolved to provide high data transmission rates, high portability, low latency and improved Quality of Service (QoS) based on Orthogonal Frequency Division Multiplexing (OFDM) technology. Despite of its many advantages, OFDM system suffers from high Peak to Mean Power Ratio (PMPR) which is a major concern in the hardware designing process due to the appearance of large envelope fluctuations in the signal. To accommodate these large envelope fluctuations of the OFDM signal, High Power Amplifiers (HPAs), Digital to Analog Converter (DAC), and Analog to Digital Converter (ADC) are required to have a wide dynamic range, which increases complexity of the OFDM system. Otherwise, the signal peaks enter into non-linear region of the HPA leading to undesired distortions and increase in Bit Error Rate (BER). Therefore, it is necessary to develop new techniques that reduce PMPR as well as BER which leads to improvement of the efficiency of the OFDM and beyond 4G (B4G) systems. This project will begin with investigation of various emerging technologies such as, sectorization, voice activity factor and power control techniques to enhance the capacity of existing cellular systems, particularly the 3G systems. Further, the main focus of the work is on implementation and development of various signal

distortion based techniques that suit OFDM and B4G systems for efficient reduction of PMPR.

Sl. No.	Roll No.	Name of the Student	Project Title
35	14A51A0406	ANDAVARAPU NAGAJYOTHI	PENDRIVE TO PENDRIVE DATA TRANSFER USING RASPBERRY PI
	14A51A0427	CHALLA SAI LAKSHMI PRASANTHI	
	14A51A0440	DUVVAKI VANITHA	
	14A51A0459	JAYI ANUPAMA	
	15A55A0407	GORJANA MANMADHA RAO	

ABSTRACT

Now a day's portability is most important so to achieve this, we are designing such a system which can carry anywhere. Using this system we can not only transfer the data but also we can see the transfer of the particular file which we want to send by using LCD display. Now a days to transfer a data between two pen drives we use PC or laptop, but it is not always possible to carry such a large device only for the data transfer. So to overcome this problem we design a system which is more compact. In our project we are transferring the data between two pen drives without using any computers or laptops. Whenever we insert two pen drives in to the USB port of Raspberry Pi, this can be done by giving the command to the processor. The processor indicates that the pen drive is inserted successfully till the user can not send any command to processor, the operation cannot start.

Sl. No.	Roll No.	Name of the Student	Project Title
36	14A51A0457	JAMI PRASANTHI	**DESIGN AND ANALYSIS OF MULTIBAND MICROSTRIP FOR 4G MOBILE APPLICATIONS**
	14A51A0424	BOMMANA MADHURI	
	14A51A0451	GUDLA NARASIMHA MURTHY	
	14A51A0455	IPPILI BHARATH KUMAR	

ABSTRACT

Multiband Micro strip antenna can be analyze and design on HFSS tools, we are proposing different types of slots like L-slot, Z-slot, U-slot and desired frequency that is for 4G application at 2300MHz.The VSWR, Return loss, Bandwidth, Directivity, Gain is acceptable for this wireless communication application. For this design we use FR-4(or FR4) is a grade designation assigned to glass –reinforced epoxy laminate sheets, tubes, rods and printed circuit boards (PCB's). FR-4 is a composite material composed of woven fiber glass cloth with di electrical constant permittivity, 4.70 max, 4.35@500MHz,4.34@1GHz.These characteristics make the designed antenna suitable for 4G applications. Antenna compactness was our target during the design process to fix the antenna in the new 4G communication mobile equipments. The proposed antenna is suitable for wireless communication applications requiring a small antenna.

Sl. No.	Roll No.	Name of the Student	Project Title
37	15A55A0408	GOVALA SRAVANI	APPLICATION OF ADAPTIVE SAVITZKY GOLAY FILTER FOR ECG SIGNAL PROCESSING
	14A51A0402	GORLE MADHURIMA	
	14A51A0448	GOLIVI TEJASWINI	
	14A51A0453	GUNNA VIDYA SAGAR	

Electrocardiogram (ECG), a non invasive technique is used as a primary diagnostic tool for cardiovascular diseases. A cleaned ECG signal provides necessary information about the electrophysiology of the heart diseases & schematic changes that may occur. It provides valuable information about the functional aspects of the heart & cardiovascular system. ECG has been used extensively for detection of

heart disease. ECG is non-stationary bioelectrical signal including valuable clinical information, but frequency it is corrupted by various kinds of noise. After a detailed comparative study about different filters we selected an appropriate one. Our project is basically concentrated on noise removal from the ECG signal using a special technique using adaptive & S-G filter.

Sl. No.	Roll No.	Name of the Student	Project Title
38	14A51A0401	ADDA VENKATA BHAGAVAN TANOJ	IMPLEMENTATION OF BIST TECHNIQUE IN UART SERIAL COMMUNICATION
	14A51A0425	BOYINA SURESH	
	14A51A0442	GANDEPALLI AKHIL	

This project describes a design and implementation of BIST technique in UART serial communication. Asynchronous serial communication is usually implemented by UART which is mostly used for less distance, low speed, low cost data to exchange between processor and peripherals. But due to the errors produced in the output of the data received, the circuits are not being performed well in the functions. In order to reduce the possibility of product failures and missed market opportunities the data to be transferred in error free. So with the proposed architecture of BIST in UART we can reduce expensive tester requirements and testing procedures in circuits and it also eliminates the need to acquire high-end testers. The implementation of BIST technique in UART serial communication is simulated and synthesized using Xilinx 12.1version and realized on FPGA.

Sl. No.	Roll No.	Name of the Student	Project Title
39	14A51A0411	ATREYAPURAPU VENKATA SURYA MANISHA	**RASH DRIVING DETECTION USING AT89S52 MICROCONTROLLER**
	14A51A0458	JAYANTHI RADHA KAMESWARI	
	14A51A0422	BODDU ANUSHA	
	14A51A0445	GAVARA SAI PAVAN KUMAR	

The aim of this project is to develop a device to detect rash driving on highways and to alert the traffic authorities wirelessly the speed details and any speed violation. Accidents due to rash driving on highways are on the rise and people are losing their lives because of others mistakes. In the present system, to detect rash driving the police has to use a handheld radar gun and then aim at the vehicle to record its speed. If the speed of the vehicle exceeds the speed limit, nearest police station is informed to stop the speeding vehicle. This is an ineffective process as after detecting one has to inform the same and a lot of time is wasted.

The proposed system will check on rash driving by calculating the speed of a vehicle using the time taken to travel between the two set points at a fixed distance and then transmit the data over 2.4GHz to the central control room. A set point consists of a pair of sensors comprising of an IR transmitter and an IR receiver, each of which are installed on either sides of the road. The speed limit set by the device is kept at the very location depending upon the traffic. The time taken by the vehicle to travel from one set point to the

other is calculated by a microcontroller program. Based on that time it then calculates the speed and displays that on an LCD and also transmits the same. Moreover if the vehicle crosses the speed limit, a buzzer sounds alerting the police both at the location and wirelessly at the control room.

Sl. No.	Roll No.	Name of the Student	Project Title
40	14A51A0450	GUDLA GOWTHAMKUMAR	**FACE RECOGNITION USING PRINCIPAL COMPONENT ANALYSIS(PCA)**
	14A51A0439	DURGASA TANUJA	
	14A51A0409	ARANGI TRIVENI	
	14A51A0438	DUPPALA VENKATA RAMANA	

Face recognition has emerged as an attractive solution to address many contemporary needs for identification and verification of identity claims. Our approach treats face recognition as a two dimensional recognition problem. Face recognition is mostly achieved by Principal component analysis (PCA).This method applies Linear Projection to the original image to achieve dimensionality reduction. The system functions by projecting face images on to a feature space that spans significant variations among known face images. It can be defined by Eigen face which is Eigen vectors of set of faces. It provides for the ability to learn and later recognize new faces in an unsupervised manner. This method is found to be fast, relatively simple and works well in a constrained environment.

Sl. No.	Roll No.	Name of the Student	Project Title
41	14A51A0436	DHARMANA NEELIMA	Channel Modeling of LTE-OFDM
	14A51A0444	GANGU GIRIJA RANI	
	14A51A0460	JAYI SOWJANYA	
	14A51A0437	DUMPALA SATEESH KUMAR	

LTE-OFDM (Long Term Evaluation-Orthogonal Frequency Division Multiplexing) is a digital multi-carrier modulation method where a large number of closely spaced orthogonal subcarriers are used to carry data. It is more efficient and less complex due to effective usage of cyclic prefix which combating multipath effects by reducing Inter Carrier Interference (ICI) and Inter Symbol Interference (ISI). Further, the performance of the LTE-OFDM system is improved by estimating the channel effects and compensated at the receiver.

The 4 G/LTE-OFDM systems provide high spectral efficiency, low implementation complexity, robustness to channel fading, immunity to impulse interferences, flexibility. Due to these advantages it is vastly used in various communication systems. However, it suffers from problems like high Peak-to-Mean Power Ratio (PMPR), sensitivity to time and frequency synchronization errors. These systems are highly sensitive to Doppler shifts which affect the carrier frequency offsets, resulting in ICI.

In this project, two channel estimation algorithms have to be implemented based on training sequence and gradient. TS (Training Sequence) channel estimation algorithm and gradient based channel estimation algorithm are to be implemented and analyzed.

Sl. No.	Roll No.	Name of the Student	Project Title
42	14A51A0415	BALAKA SWATHI	**Low power encoder and comparator design of 5-bit Flash ADC**
	14A51A0414	BAIPOTU YAMINI	
	15A55A0409	JALLU DURGABHAVANI	
	14A51A0434	DAS JAYALAKSHMI	

The present investigation process is an efficient low power encoding scheme intended for a

5GS/s 5-bit flash analog to digital converter. The designing of a thermometer code to binary code is one of the challenging issues in the design of a high speed low power flash ADC. An encoder circuit in this paper translates the thermometer code into the intermediate gray code to reduce the effect of bubble errors. To maintain the high speed of low power dissipation, the implementation of the encoder through pseudo NMOS logic is presented. The present work of the project is divided in to two parts, first is design of a low power encoder and second is low power latched comparator design. to decrease the power consumption of flash ADC, the implementation of encoder and comparator is done using dynamic C-MOS logic dynamic latch comparator has been design in order to power dissipation, delay etc. this project will be done by using mentor graphics.

Sl. No.	Roll No.	Name of the Student	Project Title
43	14A51A0456	IPPILI KALKI DEV	**Smart Billing Trolley using RFID**
	14A51A0443	GANDI SATEESH KUMAR	
	15A55A0405	BYRI BHARATHI	
	14A51A0432	DANETI SUNEEL KUMAR	

Generally, In shopping Malls we are waiting more time for paying money at counter rather than our Shopping. To overcome this problem we are introducing a
'Smart Trolley 'which can calculate the total price manually. For the manufacturing of this type of Trolley, we are using RFID Tags in the place of general Barcode which helps us to calculate the total price automatically. The costs of the products which are placed in Trolley is displayed on the display and if any product is removed from the Trolley than it automatically deduct that amount and the resultant amount will be displayed on the display as usually. In this case we are using a basic trolley, Arduino board, RFID Tags, Fingerprint Module, Motors etc.,. After completion of purchase of the items, the customer should click 'BILLING' button and at that time the doors of the Trolley will automatically close and bill will generate. Here, We can pay our bill in two ways i.e., either giving cash directly at the counter or we can pay the money by Mobile Banking. The paid receipt will be shown at security to open the doors of Trolley. The security can open the doors by placing his/her Fingerprint on the Trolley.

Sl. No.	Roll No.	Name of the Student	Project Title
44	14A51A0410	ARAVALA SRUTHI	IOT BASED HOME AUTOMATION OVER THE CLOUD TECHNOLOGIES
	14A51A0408	APPIKONDA VINEELA	
	15A55A0403	BAGADI UMAMAHESWARA RAO	
	14A51A0431	DANDA HARSHA VARDHAN	
	14A51A0410	ARAVALA SRUTHI	

The main purpose of this project is to control any load through the Internet network over cloud remotely on the basic principle of the Internet of things (IOT). For this real-time scenario we use webpage with user configurable front end to control and monitor the load. The data sent from a password protected webpage returns commands through allotted IP fed to it. A Wi-Fi Module is configured with any nearby wireless modem to access internet. The received internet commands are fed to the Wi-Fi module. The program within the Wi-Fi Module executes the received commands based on which the load gets activated through TRIAC and Opto-coupler interfaced to Wi-Fi Module. The status of the load also will be displayed on the webpage. Here in this project program

in written within the Wi-Fi module, No extra microcontroller has been used to drive the load. The power supply consists of 5V SMPS board and 3.3V voltage regulator for a Wi-Fi module. 5V SMPS board will give 5V DC out from 230V AC, this we fed to 3.3V voltage regulator which supplies power to Wi-Fi module and remaining circuit.

Sl. No.	Roll No.	Name of the Student	Project Title
45	14A51A0416	BANDI DILLESWARI	DESIGN OF SLOTTED SQUARE PATCH ANTENNA FOR 3G&4G WIRELESS APPLICATIONS
	14A51A0404	ALLU LAXMI PRASANNA	
	14A51A0452	GUNNA SAICHANDANA	
	14A51A0428	CHANDAKA SAI PRASAD	

An antenna is a basic component of telecommunication device required for both transmitting and receiving of the signal. Starting from radio television transmission to satellite communication, Wi-Fi or Bluetooth or mobile phone network; all these technologies would not be possible without development of antennas. In government and commercial applications like mobile or wireless communications, high performance aircrafts, satellites and missile applications; where size, cost, weight, performance etc…are the constraints, low profile antennas such as micro strip antenna (MSA) can be used. MSA has many attractive features like low profile, light weight, small volume and low production cost. In today's scenario where technology is merging, reconfigurable antennas for 3g and 4g technologies are needed. The proposed antenna consists of a slot and metal strips for switching operation. The proposed design is unique and attractive since it supports 3G and 4G technologies for mobile phones where multiband operation is essentially required. The presented antenna operates in the ranges 2.25-3 GHz without metal strips (off-off state) and 1.96-2.76 GHz with metal strips (on-on state).

Sl. No.	Roll No.	Name of the Student	Project Title
46	14A51A0446	GEDELA AMANI	ENCRYPTION AND DECRYPTION OF IMAGES IN STILL IMAGES BY USING DISCRETE COSINE TRANSFORM TECHNIQUE
	14A51A0430	CHOWDARI ANUSHA	
	14A51A0412	ATTADA INDUKIRAN	
	14A51A0420	BENDI MANOJ KUMAR	

ABSTRACT

Steganography is the art and science of writing hidden messages in such a way that no one, apart from the sender and intended recipient, suspects the existence of the message, a form of security through obscurity. Steganography works by replacing bits of useless or unused data in regular computer files (such as graphics, sound, text, HTML, or even video) with bits of different, invisible information. This hidden information can be plain text, cipher text, or even images. Most of the steganographic techniques use sequential encoding and decoding for hiding text or image in a canvas image file. This project report intends to give an overview of Encryption of text and image in still images using discrete cosine transform (DCT) and also attempts to identify the requirements of a good steganography algorithm by using MATLAB.

Sl. No.	Roll No.	Name of the Student	Project Title
47	14A51A0447	GEMBALI SANTOSHI	LINEAR PHASE IIR FILTERS DESIGNING
	14A51A0407	ANDHAVARAPU HARIKA	
	14A51A0417	BANISETTY JAGADEESH	
	14A51A0418	BARATAM MANOJ KUMAR	

The new concept has been introduced to design linear phase IIR filters using FIR filters. By using this concept we can achieve linear phase in IIR filters, compared to remaining techniques. In this context made to use hamming window, boxcar window, and Kaiser window functions etc. In this proposed filter, it eliminates the tedious work to calculate the order of conventional IIR filters design. The obtained filter achieves the properties of stability, variable in its frequency characteristics. This IIR filter design also implemented in field programmable gate array method (FPGA). The advantages of the FPGA approach to digital filter implementation includes higher sampling rates than are available from traditional DSP chips, lower costs than an ASIC for moderate volume applications and more flexibility than the alternate approaches. Since many current FPGA architectures are in-system programmable, the configuration of the device may be changed to implement different functionality if required.

Sl. No.	Roll No.	Name of the Student	Project Title
48	**15A55A0430**	**T. VARAM**	**DESIGN AND IMPLEMENTATION OFA SOLARTRACKING POWER GENERATING SYSTEM**
	14A51A04E5	**T. JAYADEEP VARMA**	
	14A51A04F6	**U. SONIYA**	
	14A51A04G5	**Y.HEMALATHA**	

ABSTRACT

Solar energy is rapidly advancing as an important means of renewable energy resource. Solar panel has been used increasingly in recent years to convert solar energy to electrical energy. To Maximize the conversion from solar electrical energy, solar panel Have to be positioned perpendicular to the sun. Thus, tracking of the sun's location and positioning of the solar panel are important. A solar trackers device for orienting Photovoltaic array solar photovoltaic panel or concentrating solar reflector lens toward the sun. A microcontroller based design methodology of an automatic solar tracker is presented in this project. Light dependent resistors are used as the sensors of the solar tracker. The control circuit for the solar tracker is based onanATMEGA328microcontroller. The tracking system will move the solar panel so that it is positioned perpendicular to the sun for maximum energy conversion at all time. This is programmed to detect the sunlight through the LDR sand then actuate the D.C motor to position the solar panel where it can receive maximum sunlight. The results have been shown in this project to advocate that the designed system realized precise automatic tracking of the sun and can greatly improve the utilization of solar energy.

Faculty publications

GPS Position Estimation Using Integer Ambiguity Free Carrier Phase Measurements

G Sateesh Kumar , M N V S S Kumar Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract— The GPS receiver position can be estimated either by using code or carrier phase pseudorange measurements. The navigation solution obtained using the carrier phase based measurements is more accurate than the code based pseudoranges. It is mainly due to the carrier phase wavelength of the GPS satellite transmitted on L-band signal is very small (i.e. 19cm for L1) compared to the code wavelength (i.e. 293m for C/A code). The receiver cannot accurately determine the integer number of wavelengths. Therefore, the carrier phase measurements observed at the receiver have some ambiguity in its estimation called integer ambiguity (integer number of carrier phase cycles). The key to precise carrier phase based positioning is to resolve these integer ambiguities which is extremely challenging when more noise or jamming is present. In this paper, a precise navigation solution algorithm based on integer ambiguity free carrier phase measurements is presented. This algorithm uses ambiguity free carrier phase measurements as well as least squares method. Keyword- GPS, Pseudorange, Carrier phase measurements

DE-Noising of EEG Signal Using Hybrid Adaptive Filters

P. Kameswra Rao, B. Anil Kumar Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract: Electroencephalograph (EEG), which is the measure of the brain activity, the shape of this signal tells much about the condition of the heart of the patient. Naturally the EEG signal gets distorted by different artifacts which must be removed otherwise it will convey an incorrect information regarding the patient's heart condition. Several simple and efficient LMS and Normalized LMS adaptive filters, which are computationally superior having multiplier free weight update loops are used for cancellation of noise in EEG signals. Implementing Hybrid algorithm on ANC provides better performance than adaptive technique used to enhance the EEG signal. In this work, fidelity parameters like signal to noise ratio (SNR), MSE and LSE have to be computed. Keywords: Adaptive filters, Electroencephalograph, Hybrid Algorithm

Hybrid Gravitational Search Algorithm and Pattern Search based Evolutionary Image Thresholding for Image Segmentation

M.S.R. Naidu, Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract

This paper proposes for the first time the multilevel image thresholding for image segmentation by using Shannon entropy and Fuzzy entropy maximized by naturally inspired hybrid gravitational search and pattern search algorithm (hGSAPS). As ordinary thresholding method of image segmentation is computationally expensive while extending for multilevel

image thresholding, the need for usage of optimization techniques is highly recommended. In general the Gravitational search algorithm (GSA) is used for global exploration and Pattern search algorithm (PS) is employed for local search, hence hybridization of these techniques yields better segmentation. Optimization techniques such as Particle swarm optimization and bat algorithm undergo instability when the particle velocity is maximum so as stagnation stage is attributable to quick exploration. Unlike PSO, GSA being a memory less algorithm, updates solutions based on the fitness function and the force is inversely proportional to the distance between solutions. hGSAPS based multilevel image thresholding is established by maximizing Shannon entropy and Fuzzy entropy where the results are proved better in misclassification, standard deviation, Structural Similarity Index and segmented image quality while comparing with differential evolution, Particle swarm optimization and bat algorithm. As an adjacent observation, among the performances of objective functions of proposed algorithm such as fuzzy entropy and Shannon entropy, it is found that fuzzy entropy performs better.

Adaptive Cuckoo Search based Image Segmentation

M.S.R. Naidu, Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract. Image segmentation is a method of segregating the image into required segments/regions. Image thresholding being a simple and effective technique, mostly used for image segmentation and these thresholds are optimized by optimization techniques by maximizing the Shannon and Fuzzyentropy. However, as the two level thresholding is extends to multi-level thresholding, the computational complexity of the algorithm is further increased. So there is need of evolutionary and swarm optimization techniques. In this paper, first time optimal thresholds are obtained by maximizing the Shannon and Fuzzyentropy by using novel adaptive cuckoo search algorithm (ACS). The proposed ACS algorithm performance of image segmentation is tested using natural and standard images. Experiments shows that proposed ACS is better than firefly algorithm (FA) and cuckoo search (CS).

Shannon and Fuzzy Entropy based Evolutionary Image Thresholding for Image Segmentation

M.S.R. Naidu Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract

In this paper, first time we proposed multilevel image thresholding for image segmentation using Shannon entropy and Fuzzy entropy which are maximized by the natural inspired firefly algorithm. The main aim of image segmentation is to segment the foreground from background. Ordinary thresholding methods are computationally expensive while extending for multilevel image thresholding, so there is a need of optimization techniques. Particle swarm optimization and bat algorithm undergoes instability when particle velocity is maximum and stagnation stage due to quick exploration. So we proposed a firefly based nmultilevel image thresholding by maximizing Shannon entropy and Fuzzy entropy and the results compared with differential evolution, Particle swarm optimization and bat algorithm

and proved better in misclassification, standard deviation, Structural Similarity Index and segmented image quality. The performance of proposed algorithm is found better with fuzzy entropy compared to Shannon entropy.

Multilevel Image Thresholding for Image Segmentation by Optimizing Fuzzy Entropy using Firefly Algorithm

M.S.R. Naidu, Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract

Image thresholding is the process of extracting objects in a scene from the background accompanies for the analysis and interpretation of image which is mostly employed for its advanced simplicity, robustness, less convergence time and accuracy. The main intend of image segmentation is to segregate the foreground from background. As ordinary thresholding method of image segmentation is computationally expensive while extending for multilevel image thresholding, the need for optimization techniques is highly recommended. The so called optimization techniques such as Particle swarm optimization and bat algorithm undergo instability when the particle velocity is maximum and stagnation stage attributable to quick exploration. This paper proposes for the first time the multilevel image thresholding for image segmentation by using Fuzzy entropy maximized by naturally inspired firefly algorithm. A firefly based multilevel image thresholding is established by maximizing Fuzzy entropy where the results are proved better in misclassification, standard deviation, Structural Similarity Index and segmented image quality while comparing with differential evolution, Particle swarm optimization and bat algorithm..

Multiple Image Signature Scheme Based on DWT-SVD in YCbCr Color Space

G Sateesh Kumar, D.V.L.N Sastry Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract

The digital data on the internet is not secure, because the digital data is easily modified and copied. So that one system is need to prevent this unauthorized access of digital data for owner authentication. There are many systems available in the literature and one popular system is image signature. The DWT-based image signature algorithms have multi-resolution description characteristics are achieving imperceptibility. The SVD based image signature algorithms add the signature information to the singular values of the diagonal matrix achieving robustness requirements. An approach to a robust multiple-image signature method based on Discrete Wavelet Transform and Singular Value Decomposition in YCbCr color space is proposed to get good imperceptibility and robustness. The cover image is a signature with multiple images to meet better security from unauthorized persons. The proposed algorithm provides good robustness against various attacks.

Design and simulation of a back fire bifilar helix antenna for UHF lower earth orbit satellite communication

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Abstract:
Submarine based antenna technology was used in World War I and World War II. From the Second World War, the Submarine antenna technology has become increasingly important in our Country. For the combined operations and Network Centric Warfare concepts, the Submarines are required to communicate with Satellites. To communicate with Satellites, the Submarine based antenna design is a challenging issue and it should take care of variations in the Doppler shift and Faraday's effect. Moreover the look angles, tilt of the main beam and gain are the important parameters in the consideration of an antenna design. It should meet these parameters to communicate with Satellites. The backfire bifilar helix antenna is simple and the compact antenna which is well suited to this need. In this paper the backfire bifilar helix antenna is proposed and designed for Ultra high frequency (UHF) Lower Earth Orbit Satellite Communication. The designed antenna will be simulated and analyzed for various characteristics such as VSWR, Axial ratio, Gain and Radiation patterns at the downlink and uplink frequencies of the UHF LEO Satellite Communication.

A Novel Segmentation Algorithm for Feature Extraction of Brain MRI Tumor

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Abstract: A new algorithm is projected in this paper for the identification and classification of tumors. For this, a set of MRI slices is considered from the database. As the images from electronic equipment contain noise, first the denoising of images is done using wavelets. Now, the identification of tumor is done by segmentation. Initially, the existing methods like expectation–maximization, histogram, and object-based thresholding are analyzed and implemented. But some of the features are missing in all these methods. So a new algorithm is proposed in which all the features from above methods are fused. The total analysis is done for 2D images, and the results obtained are in 2D. The performance analysis of the existing and proposed algorithms is compared in terms of size of the resultant tumor.

Medical image processing by hybrid image fusion Technique

Anilkumar Bethapudi, 2 Kameshswara Rao Pedada, 3 D.V.L.N Sastry

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Abstract
Medical image fusion techniques are extensively used to aid medical diagnosis by combining features of two or more images of various modalities such as Computed Tomography (CT) , Magnetic Resonance Image (MRI) ,and positron emission tomography (PET) into a single output image that contains salient features from all inputs. This paper proposes a hybrid fusion algorithm is applied on a CT and MRI images. The largest Eigen value of the covariance matrices of each image are used to obtain weights for next stage image by Principal component analysis (PCA) and different frequency components of input image are separated by Discrete Cosine Transform (DCT), noise in output images from first two stages. Performance evaluation of CT-MRI image fusion with hybrid algorithm BY Discrete Wavelet Transform (DWT) improves the image quality compared to established methods. Overall, the non-linear fusion rule holds strong potential to help improve image fusion applications in medicine and indeed other fields.

A New modified Threshold Sensitive Distributed Energy Efficient Clustering Routing Protocol Heterogeneous for Wireless-Sensor Networks

Gudla Sateesh Kumar2 , Sanapala Umamaheswararao
ECE Department, AITAM, Tekkali, India

Abstract— Wireless Sensor Network (WSN) is a wireless network consisting of small nodes with sensing, computation, and wireless communications capabilities. Each sensor collects data from the monitored area (such as temperature, sound, vibration, pressure, motion or pollutants). Then it routs data back to the base station BS. Data transmission is usually a multi-hop, from node to node toward the base station. As wireless sensor networks consist of hundreds of thousands of low-power multi functioning sensor nodes, operating in an unattended environment, with limited computational and sensing capabilities. Sensor nodes are equipped with small, often irreplaceable batteries with limited power capacity. WSN consist of hundreds or thousands of small, cheap, battery-driven, spread-out nodes bearing a wireless modem to accomplish a monitoring or control task jointly. An important concern is the network lifetime: as nodes run out of power, the connectivity decreases and the network can finally be partitioned and become functional several routing protocols have been proposed to improve the effective lifetime of a network with a limited energy supply. In TDEEC protocol for heterogeneous WSN most prominent technique compared to other state-of-art-techniques

DENOISING OF EEG SIGNAL USING FrFT BASED BARLETT WINDOW

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Abstract
Electroencephalography (EEG) is an electrophysiological monitoring method to record electrical activity of the brain. EEG recording is highly susceptible to various forms and sources of noise, which present significant difficulties and challenges in analysis and interpretation of EEG data. Noise sources may consist of power line interference, base line noise, random body movements or respiration. A number of strategies are available to deal with noise effectively both at the time of EEG recording as well as during pre-processing of recorded data [8]. In this work, the authors have proposed FrFT based Barlett window to enhance the quality of EEG signal and the fidelity parameters like Signal to Noise Ratio (SNR), MSE, LSE, and sensitivity have to be computed and analyzed in a Matlab environment.

De-Noising of ECG Signal Using Hybrid Adaptive Filters

D.V.L.N.Sastry,Laxmi.Vandana,J.Swathi Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract
Electrocardiography (ECG), which is the measure of the electrical activity of the heart, the shape of this signal tells much about the condition of the heart of the patient. Naturally, the ECG signal gets distorted by different artifacts which must be removed otherwise it will convey an incorrect information regarding the patient's heart condition. Several simple and efficient LMS and Normalized LMS adaptive filters that are computationally superior having multiplier free weight update loops are used for cancellation of noise in ECG signals. Implementing Hybrid algorithm on ANC provides better performance than adaptive

techniques used to enhance the ECG signal. In this work, fidelity parameters like Signal to Noise Ratio (SNR), MSE, and LSE have to be computed.

CONGESTIVE HEART FAILURE RECOGNITION BY ANALYZING THE ECG SIGNALS USING WAVELET COEFFICIENTS

P. Sirish Kumar Sanapala Umamaheshwararao, M. Bala Krishna, L.Rambabu Dept. of ECE, AITAM, Tekkali, Andhra Pradesh, India

Abstract - In this paper we have analyzed the digital data collected using the electrocardiogram for finding the heart disease considering data sets of twenty different disease cases using mat lab. Firstly we have filtered the ecg data for hum noise and muscle noise, using a series of filters and applied the zero cross algorithm for finding the no of zero crossings and the heart rate of each disease case. We have applied wavelet transform and found the wavelet 3D plot which is the representation of the wavelet coefficients, which helps for estimating the cardiac disease from the wavelet 3D plot of the patient's electrocardiogram.