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ADITYA

Institute of Technology and Management

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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	12A51A0438	GUDLA LAKSHMI PRASANNA	Performance evaluation of image enhancement techniques.
	13A55A0404	BANDAPU ADI LAKSHMI	
	12A51A0433	G. SURYA PRAKASH	
	12A51A0436	GONDU MANOJ KUMAR	
	12A51A0437	GORAKALA ASHOK	

ABSTRACT

Image enhancement basically deals with improving the image quality for better vision. Contrast enhancement is considered to be one of the important issues in image processing. During image acquisition, poor contrast may be due to poor illumination of light, lack of dynamic range in image sensor, wrong setting of lens aperture. The idea behind the contrast enhancement is to improve the dynamic range of the image pixels and thereby improving the visual quality of the image. In this project, the techniques Adaptive Histogram Equalization, Bi Histogram Equalization, Recursive Mean Separate Histogram Equalization and Homomorphic Filter. The performance is analyzed by using MATLAB 7.0

Sl. No.	Roll No.	Name of the Student	Project Title
2	12A51A0420	BORIGI SWETHA	Performance analysis and comparative study of different feeding techniques of rectangular micro-strip antenna.
	12A51A0404	A. DURGA TRINADH REDDY	
	12A51A0429	DUSI LAKSHMI PRASANNA	
	12A51A0442	GURALA PRAVEEN KUMAR	
	12A51A0451	JARAJAPU PADMA RAJU	

ABSTRACT

This project describes the comparative analysis of different feeding technique for Rectangular micro strip patch antenna i.e. for wireless applications. In this project three types of feeding techniques (Micro strip line feed, coaxial probe feed and Inset feed) are used at fixed frequency. From these three feeding techniques, micro strip line and coaxial probe feeds are contacting scheme, in which RF power is fed directly to the radiating patch using a connecting element such as a micro strip line. This project describes the three feeding techniques and gives a better understanding of design parameters of an antenna and their effect on return losses, bandwidth, VSWR and resonant frequency.

The proposed antenna simulation is going to be carried out through simulation software called Ansoft HFSS by using different feeding technique. The parameters that are focused here is resonant frequency, return loss, VSWR, Gain and Percentage Bandwidth.

Sl. No.	Roll No.	Name of the Student	Project Title
3	13A55A0403	BAGGU VENUGOPALA RAO	Efficient design of the add-multiply operator by using modified booth recorder.
	12A51A0435	GODDU NEELIMA	
	12A51A0453	JEERU GAYATRI	
	12A51A0418	BONDI PRAVEEN KUMAR	

ABSTRACT

Digital signal processing (DSP) is widely used in many real time applications. The architecture of DSP system can optimized by designing it, using specialized hardware units such as Multiply accumulator (MAC) units. The MAC or Fused add multiply (FAM) unit consists of an adder and a multiplier and the performance depends mainly on the speed of the multiplier. The ability of distributed arithmetic is to reduce a multiply operation into a series of shifts and additions yields great potential for implementing various DSP systems at a significantly reduced area. However, this reduction in area comes at the cost of increased power and decreased throughput. To overcome this problem Modified booth algorithm can be used in the architecture of MAC unit is to reduce critical delay and power consumption and also partial products can be halved as compared to booth algorithm. Here, the proposed algorithm is implemented in the direct recoding of the multiplier. It is structured, simple and can be easily modified in order to apply either in signed or unsigned numbers. In this project carry look ahead adder is used for high speed of accumulation.

The functionality of these circuits is checked in terms of performance parameters like propagation delay and dynamic power consumption and silicon-area. The design is implemented and verified using Xilinx ISE Simulator.

Sl. No.	Roll No.	Name of the Student	Project Title
4	12A51A0426	DHARMANA RAJESWARI	Target tracking by using kalman filter.
	12A51A0450	JAMI SRAVANI	
	12A51A0408	BALIVADA SAIKIRAN	
	12A51A0454	JOGULA SOMASHEKARA RAO	

ABSTRACT

It is now quite common in the recursive approaches for motion estimation to find applications of the kalman filtering technique both in the time and frequency domains. In the block-based approach, very few approaches are available of this technique to refine the estimation of motion vectors resulting from fast algorithms. This paper proposes an object motion estimation which uses the kalman filtering technique to improve the motion estimates resulting from both the three step algorithm and kalman application. The Kalman filter has been successfully applied to target tracking. However, the Kalman filter is computationally demanding if the input measurement rate is high and or if the state dimensions is large. Furthermore, noisy measurements may decrease Kalman filter tracking accuracy. One way to possibly reduce the computational rate and sensitivity to noisy measurements is to partition the input spectrum into sub bands, down sample, and employ Kalman filters in each sub band.

Sl. No.	Roll No.	Name of the Student	Project Title
5	12A51A0432	GANTA DEEPTHI	A novel biometric system with face recognition and finger print recognition.
	13A55A0405	BARATAM VENKATA VINAY KUMAR	
	13A55A0406	BATHALA HARISH KUMAR	
	12A51A0409	BANKI GOWTHAM KUMAR	

ABSTRACT

A biometric system is a computer system, which is used to identify the person on their

behavioral and physiological characteristic (for example fingerprint, face, iris, key-stroke, signature, voice, etc.). A typical biometric system consists of sensing, feature extraction, and matching modules. But now a day's biometric systems are attacked by using fake biometrics. This project introduces two biometric techniques namely face recognition and fingerprint recognition (Multi Biometric System) and also introduces the attacks on that system. The multi biometric system is secure over uni-biometric system in terms of image quality assessment for liveness detection to protect the system from fake biometrics.

Recently, Histograms of Oriented Gradients (HOGs) have proven to be an effective descriptor for object recognition in general and face, fingerprint recognition in particular. In this project, we investigate a simple but powerful approach to make robust use of HOG features for face recognition and fingerprint recognition.

Sl. No.	Roll No.	Name of the Student	Project Title
6	12A51A0448	JAMI BHAVYA SRI	Under water passive target tracking using extended kalman filter.
	12A51A0416	BODDEPALLI SATEESH	
	12A51A0422	YENDUVA CHANDRIKA	
	12A51A0434	GODDU NAGARAJU	

ABSTRACT

Target tracking system basically produces stream of data related to the position of the target. The obtained values from the target will have some noise due to environmental effects. This noise to be minimized to the extent possible, while estimating the next position of the target. Several algorithms were proposed earlier for extracting signal from noise, like LMS and WLMS and digital filter like IIR, FIR. However there are some limitations in these algorithms which could not enable to predict the future position of target. In 1960 Kalman proposed a new algorithm which is linear estimator algorithm. In our project, we implement extended Kalman adaptive filter for passive target tracking applicable for both linear and non-linear applications also.

Sl. No.	Roll No.	Name of the Student	Project Title
7	12A51A0427	DHAVALA ANUSHA	Design of fir filter for fractional order systems using using shifted modified Butterworth and Chebyshev filter.
	13A55A0407	BURLI CHANDRA SEKHARA RAO	
	12A51A0445	INDUGU SRIVANI	
	12A51A0460	KALLEPALLI SARATH	

ABSTRACT

We propose the design of fractional order Butterworth and Chebyshev filters in complex S-plane considering the presence of under-damped, hyper-damped, ultra-damped poles. This is the first attempt to design such fractional Butterworth and Chebyshev filters in complex s-plane as conventionally done for integer order filters. Firstly the concept of fractional derivatives and w-plane stability of linear fractional order systems are discussed. Detailed mathematical formulation for the design of fractional Butterworth and Chebyshev filters in w-plane is then presented. Simulation examples are given along with a practical example to design the FO Butterworth and Chebyshev filters with given specifications in frequency domain to show the practicability of the proposed formulation. Along with that a new type of filter approximation

method that utilizes shifted-modified Chebyshev filters. This concept extends to implement shifted-modified Chebyshev and Butterworth filters. Finally, an attempt is made to implement fractional order FIR filters by convolving different window functions with the obtained FO Butterworth and Chebyshev filters.

Sl. No.	Roll No.	Name of the Student	Project Title
8	12A51A0457	KADAMBARI SASHIDHAR	Feature extraction of earthquake signals using fractional domain.
	12A51A0440	GUNTA ARUNA SREE	
	12A51A0406	BALAGA KIRAN	
	12A51A0405	ANUPOJU JAGAPATHI BABU	

ABSTRACT

Earthquake is one of the natural disasters that results in major destruction. Seismic waves can be categorized into two types. The categorization is based upon the way the seismic waves travel through the medium. The types of seismic waves are body waves and surface waves. Earthquakes usually radiate both body and surface waves. Surface waves are always responsible for most of the damage in the event of an earthquake. There are two important stages in the earthquake prediction, one is feature extraction and another is pattern matching. In this project we have proposed the feature extraction technique of an Earthquake signal using the fractional domain.

In our project, we have analyzed the Earthquake Signal and calculated the Signal to Noise Ratio (SNR) and compared the output values between Integer order and fractional order. We have observed that the fractional order is better than the integer order.

Sl. No.	Roll No.	Name of the Student	Project Title
9	12A51A0414	BHOGI VANI VIDYA	An efficient approach for cognitive radio networks via smart antenna.
	12A51A0401	A VENKATA SESHA SAI	
	12A51A0417	BOKARA SRUJANA	
	12A51A0421	BUNGA VENKATA GIRI	

ABSTRACT

Wireless communication is one of the most rapidly growing industries. It is due to the high demand for it and it leads to an increase in the system capacity. As there is no other alternative; the elementary solution would to be to increase the bandwidth. But it is very complicated because the electromagnetic spectrum is becoming increasingly congested. But the space selectivity has exploited due to the demand of increasing capacity in wireless communication systems. This is done through smart antenna arrays and the associated adaptive beam forming algorithms. Smart antennas provide opportunities for high system capacity and improved Quality of service. In this project: Least Mean Square (LMS) and Normalized Least Mean Square (NLMS) algorithms will be analyzed for robust smart antenna system. Analysis of above said algorithms will be simulated using MATLAB.

Sl. No.	Roll No.	Name of the Student	Project Title
10	12A51A0410	BARATAM HARISHA	Design and realization of fir low pass filter using hybrid window and CSD algorithm.
	12A51A0424	DASUPURAM PRADEEP	
	12A51A0419	BONGU SHANMUKHA RAO	
	12A51A0428	DURGASI GOUTHAMI	

ABSTRACT

FIR digital filter find extensive applications to mobile communication system for applications such as channelization, channel equalization, matched filtering and pulse shaping, due to their absolute stability and linear phase properties. Here FIR low pass filter will be designed using single and hybrid windows for various mathematical operations. After designing a filter, the results will be verified and compared in terms of side lobe attenuation and peak amplitude of side lobe using MATLAB tool. More over the FIR filter which is having low SLA and peak amplitude of side lobe will be designed and analyzed based on canonical sign digit representation of coefficients in order to minimize the power consumption. The functionality of FIR filter is checked in terms of propagation delay and power consumption. Finally the design is implemented and verified using Xilinx ISE simulator.

Sl. No.	Roll No.	Name of the Student	Project Title
11	12A51A0439	GUDLA SUNIL KUMAR	Enhancement of ECG using advanced window wing techniques with fractional Fourier transform for removal of power line interference.
	12A51A0459	K. VENKATA ANUSHA DEVI	
	12A51A0446	INTI PRATHYUSHA	
	12A51A0431	G. PRABHAKARA RAO	

ABSTRACT

Electrocardiogram (ECG) is a weak time domain signal used for recording the electrical activity of the heart over a period of time. An ECO conveys a large amount of information about the structure of the heart and the function of its electrical conduction system. In general, while measuring ECG, the power line noise (60hz) will interfere with information in the signal there by effecting the pattern leading to wrong diagnosis. Here an attempt is made where the power line interference can be eliminated with the help of FIR filters. As FIR filters designed with conventional windows have low RSA (Relative side lobe attenuation). Rejection of noise from signal effected with noise, from these filters is poor. In this attempt combination of higher order polynomial windows with conventional windows using fractional Fourier transform are used which are simulated to analyze RSA.

Sl. No.	Roll No.	Name of the Student	Project Title
12	12A51A0412	B. JYOSHNA MAYEE	Digital image re trieieval by using singular value decomposition
	12A51A0447	IPPILI GIRI BABU	
	13A55A0408	C. D. BHAVANI SIREESHA	
	12A51A0441	GUNTA JAGADEESH	

ABSTRACT

The singular value decomposition based image retrieval (SVD) is one of the most popular, rising research areas of the digital image processing Most of the available image search tools, such as Google Images and Yahoo Image search, are bade on textual annotation of images

In these tools images are manually annotated with keywords and then retrieved using text based search methods. The performances of these systems are not satisfactory. The goal of SVD is to extract visual SVD of an image automatically, like color, texture, or shape. This paper aims to introduce the problems and challenges concerned with the design and the creation of SVD systems, which is based on a free hand sketch (SVD based image retrieval SBIR). With the help of the existing methods, describe a possible solution how to design and implement a task specific descriptor, which can handle the informational gap between a sketch and colored image, making an opportunity for the efficient search hereby. The used descriptor is constructed after such special sequence of preprocessing steps that the transformed full color image and the sketch can be compared.

Overall, the results show that the sketch based system allow users an intuitive access to search-tools. The SBIR technology can be used in several applications such as digital libraries, crime prevention, and photo sharing sites. Such a system has great value in apprehending suspects and identifying victims in forensics and law enforcement. A possible application is matching a forensic sketch to a gallery of mug shot images. The area of retrieve images on the visual SVD of the query picture intensified recently, which demands on the quite wide methodology spectrum on the area of the image processing.

Sl. No.	Roll No.	Name of the Student	Project Title
13	12A51A0449	JAMI LAKSHMI PRASAD	Development of a new hybrid algorithm to identify the targets in images obtained from sonar.
	12A51A0444	IMMIDICHETTY SOWJANYA	
	12A51A0413	BEVARA VAMSI SRI	
	12A51A0455	JONNA SUSHMITHA	

ABSTRACT

Underwater exploration is becoming more and more important for many applications involving physical, biological, geological, archaeological and industrial issues. In water, acoustic sensor known as Sound Navigation and Ranging (SONAR) has proved to be most popular choice. Unlike RADAR, which uses microwave frequency bands (1-100GHz), SONAR is an acoustic imaging system that explores the underwater environment using sound wave propagation. In general the SONARS are imaging SONARS which give time to time scanning information of the area in front of it in the form of images. These images contain noise along with the target information. In order to identify the objects present in the images received from the imaging sonar, a process called Segmentation is to be performed. In this project the segmentation methods are to be implemented. Even after segmentation of the real-time sonar images, it contains noise. In this project a new hybrid algorithm is to be developed in order to eliminate the noise from the segmented images. These segmented images are combined into a single image, which retains the important features of the individual images. The performance of the method is validated based on PSNR by comparing with segmentation methods. Key words: SONAR, RADAR, segmentation, PSNR.

Sl. No.	Roll No.	Name of the Student	Project Title
14	12A51A0411	BATCHU ASWINI	No reference image quality assessment using blur and noise.
	12A51A0402	A.P. SURAJ KUMAR	
	12A51A0456	K. KIRAN KUMAR	

	12A51A0403	ANGURU MOUNIKA	

ABSTRACT

The field of image processing focuses on automating the process of gathering and processing visual information. The process of receiving and analyzing visual information by digital computer is called digital image processing. It usually refers to the processing of a 2-dimensional (2-D) picture signal by a digital hardware. The 2-D image signal might be a photographic image, text image, graphic image (including synthetic image), biomedical image (X-ray, ultra sound, etc.), satellite image, etc. Assessment for image quality traditionally needs its original image as a reference. The conventional method for assessment like Mean Square Error (MSE) or Peak Signal to Noise Ratio (PSNR) is invalid when there is no reference. In this project, a new No-Reference (NR) assessment of image quality using blur and noise is implemented. The recent camera applications provide high quality images by help of digital Image Signal Processor (ISP). Since the images taken by the high performance of digital camera have few blocking and ringing artifacts, the blur and noise is focused for predicting the objective image quality. The project is implemented by using MATLAB 8.5.0 version and the parameters PSNR and Score are estimated.

Sl. No.	Roll No.	Name of the Student	Project Title
15	12A51A0458	KALEPU VENKATESH	Implementation of optimized 32bit carry select adder using variable order blocks.
	13A55A0401	ANNEPU RAJASWARI	
	12A51A0452	JARJAPU ROOPA KIRAN	
	12A51A0443	HANUMANTU HEMALATHA	

ABSTRACT

Adders are the basic digital blocks in many digital processor units. With the advent of new technology in the domain of new technology in the domain of VLSI, communication and signal processing, there is a new for high speed processing and low power consumption. Many conventional adders provide optimization for delay or area consumption but not both at once. Conventional ripple carry adders provides low area designs but results in large delay for carry propagation where as carry look ahead adder provides the result in one clock cycle but consumes large silicon area. Carry select adder provides lower delay at moderate silicon area. In this project, the architecture of carry select adder can be optimized by designing it, using variable order blocks. The number of carry propagation delays can be reduced by reducing number of adder blocks using variable order blocks. The functionality of the proposed method ISW checked in terms of performance parameters like propagation delay and power consumption. The design is implemented and verified using Xilinx Spartan 3E FPGA AND ISE Simulator.

Sl. No.	Roll No.	Name of the Student	Project Title
16	12A51A0497	PADI SRINU	Genetically modified fir low pass filter for rich sound environment using adaptive approach.
	12A51A0463	K. RANI MADHURI DEVI	
	12A51A04A5	PAPPULA MEENAKSHI	
	12A51A0478	KUNA DIVYA	
	12A51A04B1	SURAPU CHETAN KUMAR	

ABSTRACT

This Abstract presents a design of digital filter for digital hearing aids application. The

method here applied is to design filter to remove background noise. The structure of filter consists of a combination in parallel form of FIR (Finite Impulse Response) Low Pass Filter. This Study shows an advantage of FIR filter can give a good result in the low Complexity digital hearing aids which leads to low hardware resources requirement and low power consumption for VLSI design. The filter coefficients of these FIR filter will be obtained from the optimization procedure by Genetic Algorithm (GA.) The error between desired magnitude response and actual magnitude response will be minimized by GA. Now Adaptive Algorithm is applied to filter so that filter will be dynamic and respond to the changes in the noise in the speech signal.

Sl. No.	Roll No.	Name of the Student	Project Title
17	12A51A04B7	PONNADA MAYURI	Design and power optimization of mt-cmos circuits using power gating techniques.
	12A51A0486	MARAM KRISHNA SWETHA	
	13A55A0417	M. SWAGAT KUMAR PATRO	
	12A51A0481	LIYACITTI VENKATESH	
	12A51A04B4	PIRIYA PRUDVI	

ABSTRACT

Now-a-days Power consumption (or) power dissipation has becomes the most important criteria for implementing anyone of the digital circuits. While calculating the efficient value of the output of that particular digital circuit, the concept of scaling is used. But, while increasing the scaling process there may be a loss of leakage current. Due to the leakage current the usage of power (power dissipation) is increased. For removing these kinds of leakage currents “power gating techniques” are used. By using the power gating techniques the power efficiency also increases. In this project, the digital circuits using different types of power gated circuits with the help of low power VLSI design techniques are analyzed. By using the nanometer technology different results are obtained from different digital power gating circuits. The entire procedure can be implemented and simulated using MICROWIND layout editor and D.Sch (digital schematic).

Sl. No.	Roll No.	Name of the Student	Project Title
18	12A51A0469	KHANDYANA SRAVANI	Design of compact s- shape antenna for multiband applications.
	13A55A0409	GEMBALI RAMYA	
	12A51A0487	MATURU HEMANTH KUMAR	
	12A51A0474	KONDADADI KRISHNA TEJA	
	12A51A0466	KANITI NARESH	

ABSTRACT

A novel micro strip patch antenna is designed for wide beam, and low profile applications. In this project a micro strip patch antenna is utilized as to compose S-shaped cut on rectangular patch. Generally micro strip patch antenna contains radiating patch on one side of dielectric substrate and ground plane on other side. By varying the substrate material, the properties of micro strip patch antenna changes. In this project different substrates like Ragers RT/durad6002(tm)(ε_r=2.2) and FR4epoxy(ε_r=4.4) have been used for the design of S-Shape patch antenna and the change in properties were observed.

The proposed antenna simulation is designed and simulated by using 3D electromagnetic simulation software called An soft HFSS (High Frequency Simulator Structure) by using CPW feeding technique. The parameters that were focused here are Resonant frequency, Return loss, VSWR and Gain.

Sl. No.	Roll No.	Name of the Student	Project Title
19	12A51A0472	KOLLA SEEMA SINDURA	Performance analysis of image compression using different transformation techniques.
	12A51A0430	DUSI VUHA	
	12A51A0461	BALAKA SRIKANTH	
	12A51A0485	MANORANJAN BISWAL	

ABSTRACT

Image Compression addresses the problem of reducing the amount of data required to represent the digital image. Compression is achieved by the removal of one or more of three basic redundancies namely coding redundancy, psycho visual redundancy and inters pixel redundancy. Coding redundancy is present when less than optimal code words are used. Inter pixel redundancy results from correlations between the pixels of an image. Psycho visual redundancy is due to the data that is ignored by human visual system. The coding techniques combined with the image compression techniques such as Discrete Cosine Transform (DCT) and Discrete Wavelet Transform (DWT) and Fractal coding are used to compress the image. Image compression is implemented by using DCT , wavelet transforms such as Haar wavelet techniques, and fractal transform such as Quadrature techniques. In this project, different input images are considered. Performance analysis is done in terms of Peak Signal to Noise Ratio (PSNR) and Compression ratio (CR). This project is implemented on MATLAB 7.0.1.Results shows that Fractal transform is superior over DCT and DWT Techniques interms of PSNR.

Sl. No.	Roll No.	Name of the Student	Project Title
20	12A51A0493	MUKALLA NEELIMA	Shadow filters for signal processing -IIR filter for better spectral characteristics.
	12A51A0498	PAGOTI URMILA	
	12A51A0488	MATURU NAVEEN KUMAR	
	12A51A04A6	PATHINA RAVI TEJA	

ABSTRACT

Filter is a linear time invariant system used to remove the unwanted signal from the desired signal. These are characterized based on their ability to transmit different frequency ranges. We have low pass, high pass, band pass and band stop filters. Here an attempt is made to improve the spectral characteristics of the filter i.e. RSA (Relative side lobe attenuation) by introducing shadow concept. Shadow concept means using feedback concept. We use this concept for combinations such as low pass in main path and high pass, low pass, band pass, band reject in feedback path. The second one is High pass filter in main path where as the high pass. Low pass, band pass, band reject in feedback path. Same process is repeated for band pass and band reject filters. In this the impulse response of a filter is given as feedback to another filter. The proposed shadow filter responses are analyzed and compared with individual responses of low pass, high pass, band pass and band reject IIR filters using MATLAB. So that we improve the RSA (relative side lobe attenuation).

Sl. No.	Roll No.	Name of the Student	Project Title
21	12A51A0499	PAIDI GIRIJA KALYANI	Design and realization of fir filter using fractional Fourier transform and CSD algorithm.
	13A55A0414	LOLUGU NAGAMANI	
	12A51A0496	PADHY RABINDRA	
	12A51A0465	KANCHARANA VAMSI MITHRA	

ABSTRACT

In this project the practical FIR low pass filter is designed using Fourier Transform (FT) and Fractional Fourier transform FrFT). With the advancement in VLSI Technology, as the DSP has become increasingly popular over the years, the high speed realization of FIR Filters with less power consumption has become much more demanding. The filter is designed using FT and window techniques as to achieve low side lobe attenuation (LSA)

The fractional Fourier Transform based design of FIR low pass filter is realized in direct form architecture. After designing a filter using above two methods the results will be verified and compared in terms of side lobe attenuation (SLA) using MATLAB tool. This architecture is simulated and synthesized with and without CSD algorithm using Xilinx 13.1 ISE in order to reduce the power consumption by power estimator. The filter which is designed without using CSD algorithm will consume more power than the filter which is designed with CSD algorithm.

Sl. No.	Roll No.	Name of the Student	Project Title
22	12A51A0468	KASAM LAKSHMI PRAMEELA	Development of a new lossless visible watermarking algorithm for secure transfer of information.
	12A51A0491	M. MOHANA LALITHA KUMARI	
	12A51A0464	KANAGALA GOVINDA RAO	
	12A51A04B2	P. VENKATANATH PRAVEEN	

ABSTRACT

In this project a new visible watermarking algorithm is to be developed in which information can be recovered from image without any loss. In this algorithm a one-to-one compound mapping of image pixel values is to be done which produces a variety of visible watermarks of different sizes on cover images. As these mappings are reversible, produces a lossless recovery of original images from watermarked images. The mapping is to be adjusted in such a way that it must yield pixel values close to those of desired visible watermarks. The opaque monochrome and translucent full color ones are going to be used in this approach. The get distinctive visible watermarks in the watermarked image, a two-fold monotonically increasing compound mapping is to be used. To detect attackers from illicit image recoveries, security and mapping randomizations will be provided. The total work will be carried out in MATLAB.

Sl. No.	Roll No.	Name of the Student	Project Title
23	12A51A0470	KILARI DILLESWARI	Analysis of signal strength degradation and its improvement in 4G cellular system for MMSE
	12A51A0477	KOTNI JOSHAN	
	13A55A0415	M. PREETHI	

	12A51A04B0	PEDALI VENKATA TATAJI	receiver.

ABSTRACT

The growing demand of multimedia services and growth of internet related contents lead to increasing interest to high speed communication. The requirement for wide bandwidth and flexibility imposes the use of efficient transmission methods that would fit to the characteristics of wideband channels especially in wireless environment where the channel is very challenging. In wireless environment the signal is propagating from transmitter to the receiver along number of different paths, collectively referred as multipath. While propagating the signal power drops of due to three effects: path loss, microscopic fading and microscopic fading. Fading of the signal cam be mitigated by different diversity techniques. To obtain diversity, the signal is transmitted through multiple (ideally) independent fading paths e.g in time, the frequency of space and combined constructively at the receiver. Multiple input-multiple-output (MIMO) exploits spatial diversity by having several transmit and receive antennas. Orthogonal frequency division multiplexing (OFDM) technique is becoming the most frequently used technique for wireless systems such as long term evolution (LTE) and enhanced standards are contemplating its combination with multiple input multiple output (MIMO). These systems suffer from inter-channel interference (ICI) Introduced by phase noise and channel estimation errors. ICI is also caused due to Quadrature phase shift in the signals which leads to the loss of information. It degrades the signal to interference noise ratio (SINR) which in-turn decreases the system performance. In this project we will derive and analytical expression for SINR degradation for the linear Zero Forcing & MMSE receivers.

Sl. No.	Roll No.	Name of the Student	Project Title
24	12A51A0490	MENDA USHA	Remote override of traffic signals in emergency.
	12A51A0479	LENKA TEJA	
	12A51A0494	N. SOWNDARYA	
	12A51A04A8	P. VENKATA SATVIK	

ABSTRACT

The project is designed to develop a dynamic traffic signal system having remote override facilities. During normal time the signal timing changes automatically on the specified time given at the junction but in the even of any emergency vehicle like ambulance, fire brigade etc. requiring priority are built in with RF remote control to override he set timing by providing instantaneous green signal in the desired direction while blocking the other lanes by red signals for some time. Traffic congestion is a severe problem in many major cities across the world thus it is felt imperative to provide such facilities to important vehicles.

Conventional traffic light system is based on fixed time concept allotted to each side of the junction which cannot be varied as per varying traffic density. Junction timings allotted are fixed. Sometimes higher traffic density at one side of the junction demands longer green time as compared to standard allotted time. The present system using a microcontroller of 8051 family changes the junction timing automatically to accommodate movement of vehicles smoothly avoiding unnecessary waiting time at the junction. The override feature is activated by on-board RF transmitter operated from the emergency vehicle. It selects the particular lane number. When a traffic jam is encountered in the route, the lane number is encoded and transmitted by using RF transmitter present in the emergency vehicle, to the RF receiver module at the junction. The received RF signal is decoded and processes to make the particular lane signal to green for

certain time duration. As the ambulance passes by, it regains its original flow of sequence of singling.

Sl. No.	Roll No.	Name of the Student	Project Title
25	12A51A0462	SILLA SRAVANTHI	Medical image compression using discrete cosine transform discrete wavelet transform.
	12A51A04A2	PALAVELLI PAVAN KUMAR	
	12A51A0467	K. B.PRASANNA	
	12A51A04A0	PAIDI PRASANTH	

ABSTRACT

Image compression the art of reducing the amount of data required to represent an image generally we use lossless image compression for medical image. The main objective of this method is to increase the compression ratio of medical image by using hybrid method. The medical image is segmented into two portions called Region of interest (ROI) and Non ROI. These two portions are compressed by lossless and lossy techniques using DWT & DCT and they by combining those we get compressed image. In DWT we use hear, daubechies, symlet transform techniques to compress the ROI part. Then analyze the results using MATLAB. Software and calculate various parameters such as CR, PSNR, MSE, Execution time to compress the ROI part of the images without losing any contents of the images and to maintain the storage memory space. The new techniques are enhanced to compress the medical image so that the problems encountered in the previous study can be solved.

Sl. No.	Roll No.	Name of the Student	Project Title
26	12A51A04B8	P. SIVA SAMPATH KUMAR	Removal of salt and pepper noise in image using modified decision based unsymmetrical trimmed median filter.
	12A51A0484	M. SANTOSH SUDARSAN	
	12A51A04B6	PONNADA KAVYA SRI	
	13A55A0416	MALIPEDDI RAMANAMMA	

ABSTRACT

Transmission of images are overcome channels, Due to unwanted communication the salt and pepper noise is occur in images. The word salt and pepper noise is also speaks out an Impulse noise. The filtering mainly used for removal of impulse noise of salt and pepper noise for noise free images and fully recovered by minimum signal distortion also uncorrupted the images.

The process of MDBUTM Filter is to identify the noisy images or pixels and then remove the noisy pixels and replace them at same position by using the median filters or its variants, where the remaining are same or unchanged. The adaptive median filter is best for removal of noisy pixels at low level. But at high level noise the adaptive median filter is provide a large window size it is not to fit the pixel. The existing system are Robust Estimation Algorithm (REA), Adaptive Median Filter (AMF), Standard Median Filter (SMS), it shows best performances at low noise and at high noise level bad. A new weighted median Filter (WMF) is best for high noise level is a proposed.

Sl. No.	Roll No.	Name of the Student	Project Title
27	12A51A04B3	PILLI DIVYA VATHI	Development of a hybrid algorithm

	13A55A0412	K. UMAMAHESWARA RAO	to detect tumours in brain MRI slices.
	12A51A0471	KILLARI DILEEP KUMAR	
	12A51A04C0	PRAGADA SWETHA	

ABSTRACT

In present world, most of the human beings are suffering with mental disorders like false beliefs, confused thinking, auditory hallucinations, reduced social engagement and emotional expressions because of their mental tensions. This disorder is called schizophrenia. The disorder can be diagnosied by differentiating schizophrenic patients and normal persons. In order to achieve this various algorithms are to be analyzed and a new algorithm is to be developed. In general MRI data consists of two dimensional data. To extract 2-D image information from the MRI, image processing techniques are to be implemented. So a new algorithm is needed to be developed to overcome this problem and to make doctors easy to identify the brain disorders by comparing this data with healthy persons. The new algorithm is to be implemented using MATLAB.

Sl. No.	Roll No.	Name of the Student	Project Title
28	12A51A04A7	PATNALA SINDHU	Design and analysis of fast adders.
	12A51A04B9	PRAVALYA BARATAM	
	12A51A04A1	PAILA VAMSI KIRAN	
	13A55A0410	JAMI PRAVEEN KUMAR	

ABSTRACT

The speed of any digital design of a signal processing or communication system depends heavily on basic building blocks like adders, multipliers and delay elements. Adders are used in addition, subtraction, multiplication and division. The Ripple Carry Adder (RCA) is the slowest in a adder family, which is designed by using carry propagation technique. To avoid the slow carry propagation, fast adders are used. In this project fast adders such as carry look ahead adder(CLA), hybrid CLA, carry select adder(CSA), carry save adder and carry skip adder are designed, analyzed and compare their results in terms of speed and area using simulation and synthesis tools.

Sl. No.	Roll No.	Name of the Student	Project Title
29	12A51A04A9	PATNANA NIREESHA	Maximum likelihood estimation for MIMO based free space optical communication system.
	12A51A0489	MENDA SRIDHAR	
	12A51A0475	KONNA RAMANA	
	12A51A0473	KALLEPALLI AISHWARYA	

ABSTRACT

In this project, multiple-input multiple-output (MIMO) based free-space optical (FSO) communication system is presented. The free space optical communication (FSO) is the combination of optical and wireless communication. So this system is operated in the both short-ranges (personal and indoor) and long-ranges (outdoor and hybrid). The advantage of FSO system is to utilize optical beams to carry data through the atmosphere or vacuum. It is similar to RF wireless, but radio waves are replaced by with light and antennas with free-space optical trans receivers. Multiuser systems with multiple antennas at transmitters and receivers are called MIMO multiuser systems. The multiple antennas can significantly enhance performance in

multiple ways. In this project, light emitting diode (LED) and avalanche photodiodes (APD) are used for transreceivng light signal in the presence of atmospheric

Turbulence. FSO communication system has main important key challenges are dispersion, path loss, power consumption, bandwidth requirement, reliability and cost. This project contains the maximum-likelihood estimation (MLE), to achieve the proper MIMO setup. The objectives of this project are to transfer the large amount of data with the minimum dispersion, low path loss, less power consumption and reasonable bandwidth requirement. Its corresponding constraints are high reliability, high-speed and high-capacity. The major parameters influence on specified objectives and constraints of FSO system are bit error rate (BER), signal to noise ratio (SNR), sensitivity, range of optical light transmission, bit rate, size of system and number of subcarriers. This project is utterly implemented by MLE algorithm and Monte Carlo MATLAB simulations for these parameters. Keywords: SNR, BER, Bit rate, MIMO, MLE.

Sl. No.	Roll No.	Name of the Student	Project Title
30	12A51A04A3	PALLAVI KOKKERAGEDDA	Design of an accident prevention system using ultrasonic sensor.
	13A55A0411	K. SANTOSH KUMAR	
	12A51A0495	NEERAJA CHINTADA	
	12A51A0482	MADAN MOHAN RAO VANA	

ABSTRACT

This project aims to avoid the accidents by smart monitoring the vehicle and surroundings. It used an ultrasonic sensor to calculate the distance between two vehicles, if the distance is less than the pre-described value it alerts the driver by blowing a buzzer and vehicle automatically stops. An electrical vehicle is considered and powered by small battery. In case of conventional diesel vehicles, they can be controlled through electro mechanical brakes. Ultrasonic ranging module HC-SR04 provides 2cm to 200cm non-contact measurement function. Adriano, an AVR microcontroller based single chip computer will trigger the Ultrasonic sensor and calculate time to get an echo. Thereby, it finds the distance from the obstacle by using velocity of sound in air formulae. Power train of the proposed vehicle uses two battery operated (BO) motors. These are driven by L293D motor drivers and controlled by Adriano. The proposed vehicle goes in a straight manner if there is no obstacle in front of it. The longer distance from the obstacle is shown in the LCD display. If it reaches to any near object, a beep sound is produced by buzzer and vehicle stops immediately.

Sl. No.	Roll No.	Name of the Student	Project Title
31	12A51A0492	M. VAMSI KRISHNA REDDY	Design of rectangular micro strip patch antenna using CST.
	13A55A0413	KOMANAPALLI YAMUNA	
	12A51A0476	KONNA SIVA	
	12A51A0483	MALIPEDDI PRATHYUSHA	

ABSTRACT

In this project a performance analysis of FR-4 substrate for high frequency micro strip antenna with inset feed & coaxial feed rectangular micro strip antenna is designed. The proposed antenna is designed using transmission line model and can create resonance at 2.4 GHz

Coaxial feed technique is used to excite the patch even though micro strip inset feed technique is present because of low radiation, which enables its usage in the wireless communication domain Micro strip antennas basically consist of a radiating patch on one side of a dielectric substrate, which has a ground plane on the other side. The patch is very thin and is placed a small fraction of a wavelength above the ground plane. The micro strip patch is designed so its pattern maximum is normal to the patch (broadside radiator). This is accomplished by properly choosing the mode (field configuration) of excitation beneath the patch. The rectangular and circular patches are the basic and most commonly used designs in micro strip antennas. Their designing methods are numerous, yet getting the actual data for developing real prototypes for experiment is found to be difficult.

The MSA is an excellent radiator for many applications such as mobile antenna, aircraft and ship antennas, remote sensing, missiles and satellite communications. It consists of radiating elements (patches) photo etched on the dielectric substrate. Micro strip antennas are low profile conformal configurations. They are lightweight, simple and inexpensive, most suited for aerospace and mobile communication. Their low power handling capability posits these antennas better in low power transmission and receiving applications. This work investigated the use of FR-4 substrate as a possible candidate for antenna design in the X-band. Been designed at frequencies ranging from 1.8 to 3 GHz.

Sl. No.	Roll No.	Name of the Student	Project Title
32	12A51A04E2	TANGUDU ANJANI	Design of circular patch micro strip antenna using CST.
	13A55A0435	VAMBARAVELLI SANTOSH	
	12A51A04D3	SISTU SANTHI SREE	
	11A51A04B8	RAMPATRUNI GOWTHAM	
	12A51A04D9	T VISHAL KUMAR	

ABSTRACT

In this project a performance analysis of FR-4 substrate for high frequency micro strip antenna and inset-fed dual circular microstrip antenna is designed. The circular microstrip antenna resonates at 1.3 GHz. Which enables it's usage in the wireless communication domain Micro strip antennas basically consist of a radiating patch on one side of a dielectric substrate, which has a ground plane on the other side. The patch is very thin ($t << \lambda$ is free space wavelength) and is placed a small fraction of a wavelength ($h << \lambda o$ usually $0.003\ \lambda o \leq h \leq 0.05\ \lambda o$) above the ground plane. The microstrip patch is designed so its pattern maximum is normal to the patch (broadside radiator). This is accomplished by properly choosing the mode (field configuration) of excitation beneath the patch. The rectangular and circular patches are the basic and most commonly used designs in micro strip antennas. Their designing methods are numerous, yet getting the actual data for developing real prototypes for experiment is found to be difficult. The MSA is an excellent radiator for many applications such as mobile antenna, aircraft and ship antennas, remote sensing, missiles and satellite communications. It consists of radiating elements (patches) photo etched on the dielectric substrate. Micro strip antennas are low profile conformal configurations. They are lightweight, simple and inexpensive, most suited for acrospace and mobile communication. Their low power handling capability posits these antennas better in low power transmission and receiving applications. This work investigated the use of FR-4 substrate as a possible candidate for antenna design in the X-band. Been designed at frequencies ranging from 2 to 10 GHZ.

Sl. No.	Roll No.	Name of the Student	Project Title
33	12A51A04C1	POTURAJU MAHALAKSHMI	Optimal design of digital differentiator using genetic algorithm.
	13A55A0434	TUPILLI BHAVANI	
	12A51A04G5	YENNI MANIKANTA	
	12A51A04C6	RELLA SATYANNARAYANA	
	11A51A0439	GATTAM DHILLESWARA RAO	

ABSTRACT

Digital differentiators are used in various fields of signal processing such as in the design of compensators in control systems and analyzing signals in radar systems. Design of digital differentiators with specified parameters named as Group delay, Phase delay and Absolute magnitude error response will play a major role in practical applications. In this project, optimal coefficients of digital differentiators are calculated based on the globally optimized techniques. Many optimization techniques exist in literature. Here, we are going to implement Genetic Algorithm as an optimization tool to get the optimized differentiator coefficients. Genetic Algorithm is a method for solving both constrained and un constrained optimization problem based on natural selection process that mimics biological evaluation. The Algorithm repeatedly modifies a population of individual solutions. The performance of the designed differentiator is evaluated based on different parameters such as magnitude response, phase response, absolute magnitude error and mean square error.

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Sl. No.	Roll No.	Name of the Student	Project Title
34	12A51A04G1	VYSYARAJU SAI MANOJ	GPS navigation based .autonomous qurdcopter
	12A51A04F5	VAKADA HINDHUJA	
	13A55A0420	PARICHHA DEEPA KUMARI	
	12A51A04F3	VADDI VENKATA SAI GOWTHAM	
	12A51A04D5	SURAPATI SAMUEL BENSON	

ABSTRACT

This project is to build a quadcopter that doesn’t need a manual controller to look after it all the way to guide it between source and destination. The coordinates of the source and destination are enough to move the quadcopter between them. The coordinates can be updated by using our mobile phone (android*). This can be done adding the quadcopter some extra features. Generally, the quadcopters available in the market are strictly manual controlled. But this project develops the quadcopter to become partially autonomous (as they still relay on the coordinates to be given manually) by adding extra sensors to its controller board such as: motion capture sensor, barometric sensor, magnetometer sensor, Ultra Sonic Sensors and importantly GPS receiver(global positioning system) and Blue-tooth data link. The raw quadcopter consists of a microcontroller board, ESCs, Motors, and Supply, Radio link (to transmit the signals from transmitter to receiver and vice versa). Now these additional sensors are mounted on the micro-controller board to form new controller which turn the manual quadcopter to partially autonomous quadcopter. The sensors: magnetometer, barometer, motion capture sensors

stabilizes the movement of the quadcopter in the directions: pitch, roll, yaw effectively without being flipped off or to lose control on itself and the path. The GPS receiver always updates the current or present coordinates of the quadcopter at a frequency mentioned or specified to get accurate results. Now using the Bluetooth data link the destination coordinates are updated using a android cell phone. When the quadcopter learns its new destination coordinated it responds to the call by altering the supply given to the motors it have. This relatively changes the current position or coordinates in which the quadcopter is present. Then the distance between locations is calculated by the quadcopter. Depending upon the distance it get, corresponding action is taken by the quadcopter to null that distance to as minima as possible it can do. This is done by using Distance vector routing algorithm.

Sl. No.	Roll No.	Name of the Student	Project Title
35	12A51A04C2	PUTHIKA LATHA SRI	GSM based patient monitoring system.
	12A51A04F8	VELAMARTHI RAJESH	
	12A51A04E9	TUNGANA MADHUSRI	
	12A51A04E8	TULAGAPU MOHANA RAO	

ABSTRACT

In this fast pace of life, it is difficult for people to be constantly available for their near ones who might need them while they are suffering from a disease or physical disorder. So also constant monitoring of the patient's body parameters such as temperature, pulse rate, sugar level etc. becomes difficult. Hence to remove human error and to lessen the burden of monitoring patient's health from doctor's head, this paper presents the methodology for monitoring patients remotely using GSM network. Patient monitoring systems measure physiological characteristics either continuously or at regular intervals of time. Recently, the health care sensors are playing a vital role in hospitals. The patient monitoring systems is one of the major improvements because of its advanced technology. So this can be implemented just by connecting the temperature sensor and heartbeat sensor so that simultaneously it can monitor the patient's condition and hence ruling out the use of the thermometer and other devices to check the condition of the patient.

Sl. No.	Roll No.	Name of the Student	Project Title
36	12A51A04F1	VADDI DIVYA	.design and analysis of fast multipliers
	13A55A0436	YEDURU DURGA BHAVANI	
	12A51A04E0	TADDI RAVI SANKAR	
	13A55A0421	PARICHHA RAVICHANDRA	

ABSTRACT

Multipliers play an important role in today's digital signal processing and various other applications. High speed and low power multiplier unit is the requirement of today's VLSI systems and Digital Signal Processing applications. Multiplication operation involves generation of partial products and their accumulation. The speed of multiplication can be increased by reducing the number of the partial products. So minimization of partial products is the main objective of our project. Here the fast multipliers like Booth, Vedic and Modified Booth multipliers are designed, analyzed and compared on the basis of parameters Time, Power consumed and Area. The simulation and synthesis of above multipliers will done using

VERILOG hardware description language.

Sl. No.	Roll No.	Name of the Student	Project Title
37	12A51A04G6	YERUSU CHANDINI	Calibration of array coefficients by using Tyler series and LMS algorithm.
	13A55A0425	PYLA SURESH	
	12A51A04E4	TANKALA SRIKANTH	
	12A51A04C7	ROKKAM MAHESH BABU	

ABSTRACT

An algorithm for automatically tracking the desired performance of an antenna array by dithering its coefficients and observing its field in the near-zone has been proposed and demonstrated by considering a uniform linear array comprised of Heritzian dipoles. An LMS type algorithm has been presented for correcting for the coefficients.

The objective is to devise a means for automatically correcting the coefficients. To this end, by introducing noise-like fluctuations into the magnitude and phase of the array coefficients. The log-normal distribution with a standard deviation of dB for the magnitude and uniform distribution with a maximum deviation of for the phase. Accordingly, the fluctuating magnitudes and phases of the true array are introduced. The Normalized coupled current excitation of N elements for True Array and a=Actual Array are plotted Taylor series synthesis method. Now using the current distribution, the Magnetic Field Vector is calculated and ploted for both true and actual arrays the magnetic field vector of both true and actual array are dithered and the resultant are so called as true dithered and actual dithered coefficients. The error signal is calculated as difference of true and actual dithered coefficients. The error signal is calculated as difference of true and actual dithered coefficients. Hence the error signal will have a minimum at the true coefficients and a gradient based algorithm can be devised to nullify unwanted deviations. It follow the spirit of the LMS (Least Mean Square) algorithm, which is based on minimizing the error signal, Such a minimization fates place when the coefficients are corrected in the direction of the gradients of the error signal with respect to the actual coefficients.

Sl. No.	Roll No.	Name of the Student	Project Title
38	12A51A04D0	SASANAPURI PRUDHVI RAJ	Design of master and slave robot using RF module.
	12A51A0407	VADDI MOUNICA	
	12A51A04G9	RAGHUPATHRUNI SRINUMADHURI	
	12A51A04G2	YAGATI RAMA KRISHNA	

ABSTRACT

In our daily lives people are tired to do same work repeatedly. For example if any has done a work at a particular place we can do the same work at distant places. Robots are used for completing same kind of tasks in different places at the same time, sometimes task may change in those cases programming every robot is a time taking process to overcome this problem master and slave idea can be implemented.

Here we are using a robot (master) which have all the equipment's like sensor, detectors and etc. The slave robot doesn't contain any sensor are detectors. Master robot is either autonomous or manual control but the slave bots can only be control by the master bots. The

specialty of this robot doesn't need microcontrollers for simple task but when task becomes complex it is flexible to use micro controllers for the master and slave to perform the assigned task. To communicate between master and slave, a communication link can be established between them. A single master can have many numbers of slaves.

Sl. No.	Roll No.	Name of the Student	Project Title
39	12A51A04D1	SEEPANA RAMPRAKASH	Automatic path detection in road maps.
	12A51A04G4	YEDDUMATTI RATNA KUMARI	
	13A55A0430	SANA SANTHOSH	
	12A51A04C3	RAGHUMANDALA RAMAKRISHNA	

ABSTRACT

The most leading research now a day's is in vehicle automations. The rate at which the roads are being constructed is enormously increasing. There is a great need for automating the detection of roadway paths. There are some problems for the present existing technology in this area. The problems like not able to find the shortest path inspite of having the clear road maps of that particular areas. This project is intended to write an algorithm which is basically a shortest path algorithm and show how this algorithm can be effectively implemented in real time.

In this project a color road map is used to track the path. The road mentioned in map should be in black color all the road paths from source to destination are found and the minimum distance path is found from the paths and shows to the users. For this the shortest path algorithm is developed, the user can select any place as the destination in the map. MATLAB software is used to implement the algorithm. This project has wide variety of applications namely in industries and in military.

Sl. No.	Roll No.	Name of the Student	Project Title
40	12A51A04D7	SURAPU REVATHI	A novel design of enhanced minutia ROI extractor for optimized fingerprint recognitions.
	13A55A0422	PEDADA RAVITEJA	
	13A55A0426	RAMPATRUNI SANDHYA RANI	
	13A55A0419	PARAPATI VENKATESH	

ABSTRACT

Fingerprints are well popular in details which are known as minutia, which can be used as identification marks for fingerprint verification. These are acts main role among the all biometrics because of their evident services in forensic and authentication fields. To study on fingerprint recognition system based on minutia based matching which is quiet frequently used in various fingerprint algorithms and techniques. The approach of this project involves how the minutia points are extracted from the fingerprint images and after that between two fingerprints we are performing the fingerprint matching. Current techniques, using in fingerprint identification are suffer with a significant levels of false rats. These false detections are mainly due to improper ROI considerations.

This project is to analyze different up-to-date methods in image enhancement and feature extraction processing and to integrate a novel solution for extraction of exact ROI to design an

optimized fingerprint recognition system with improved performance. All above algorithms are designed using high level language MATLAB and the integrated using a GUI interface and all operations are performed sequentially (one-by one manually). A set of fingerprint images are collected and used to test the proposed system performance by performing minutia extraction and matching.

Sl. No.	Roll No.	Name of the Student	Project Title
41	13A55A0431	SANA VIJAY KUMAR	Design and simulation of E shaped micro strip path antenna for GPS application.
	12A51A04E5	THAMMINAINA SRUJANA	
	12A51A04C4	R LAKSHMIPRIYADARSHINI	
	12A51A04H0	BIVEK KUMAR GUPTA	

ABSTRACT

The current global positioning system (GPS) is the culmination of years of research and unknown millions of dollars. Navigational systems have been and continue to be developed and funded by the U.S government. GPS provides specially coded satellite signals that can be processed with a GPS receiver, enabling the receiver to compute position. Velocity and time. A minimum of four GPS satellite signals are required to compute positions in three dimensions and the time offset in the receiver clock. GPS is the Application of the E-shape micro strip patch Antenna.

Micro strip antennas are widely used in many applications due to their low profile, low cost and ease of fabrication. In some applications it is desired to have a dual band or multiband characteristics.

This project presents the design and simulation of E-shape micro strip patch antenna with wideband operating frequency for wireless application. The shape will provide the broad band width which is required in various applications like remote sensing. Biomedical application, mobile radio, satellite communication etc. The antenna design is an improvement from previous research and it is simulated using CST (Computer Simulation Technology) version 2014 software.

Coaxial feed or probe feed technique is used in the experiment. Parametric study was included to determine affect of design towards the antenna performance. The performance of the designed antenna was analyzed in term of bandwidth, gain, return loss, VSWR, and radiation pattern. The design was optimized to meet the best possible result. Substrate used was air which has a dielectric constant of 1.0006. The results show the wideband antenna is able to operate from 5 GHz to 20 GHz frequency band with optimum frequency at 11GHz.

Sl. No.	Roll No.	Name of the Student	Project Title
42	13A55A0432	SUNEETHA TANGI	Design of rectangular micro strip antenna with different feeding techniques for wireless applications
	12A51A04E3	TANGUDU SIREESH KUMAR	
	12A51A04F0	TUNGANA RAMESH	
	13A55A0423	PERISETTI ASHOK KUMAR	

ABSTRACT

Recently, the field of wireless communication is the most widely researched area and the study of communication system is incomplete without knowing the operation and the use of different types of antenna. Although there are many types of antenna, antennas that are having

light weight, compact, inexpensive and are capable of maintaining high performance over a wide range of frequencies are preferred. One of the antennas that fulfill the above mentioned criteria is the Microstrip patch antenna.

This project describes the performance analysis of micro strip patch antenna different feeding technique for wireless applications. Here four types of feeding techniques i.e. Microstrip line feed, coaxial probe feed, Inset feed and CPW feed are used. From the four feeding techniques, micro strip line and coaxial probe feeds are contacting scheme, in which RF power is fed directly to the radiating patch using a connecting element such as a Microstrip line. The proposed antenna simulation is done through simulation software called Ansoft HFSS. The parameters that are focused here is Resonant frequency, Return loss, VSWR, Gain and Percentage Bandwidth.

The Antenna designed using these four feeding technique and gives a better understanding of design parameters of an antenna and their effect on return losses, bandwidth, VSWR and resonant frequency.

Sl. No.	Roll No.	Name of the Student	Project Title
43	12A51A04F2	VADDI SUJANA	Accelerometer based hand gesture controlled Robot.
	13A55A0429	SAMPATHIRAO GIRIRAJU	
	13A55A0418	NASAKA TEJESWARA RAO	
	13A55A0424	PITCHUKA VEERABHADRA RAO	

ABSTRACT

Robots are becoming one of the major development in field of technology and robotics and are being used in many fields like defense, automobile, medical, construction etc., In many application of controlling robotic gadget it becomes quite hard and complicated when there comes the part of controlling it with remote or switches, sometime the operator may get confused in the switchers and button itself.

The main objective of this project work is to control a robot with gestures of our hand. A gesture controlled robot is a kind of robot which can be control by your hand gestures not by old buttons, for that just need to wear a small transmitting device in your hand which included an accelerometer. This will transmit an appropriate command to the robot so that it can do whatever operator want. An accelerometer is a gravity sensor which gives an analog data while moving in X,Y,Z direction.

In this project we will learn how to design an accelerometer based hand gesture controlled robot with microcontroller. Here we will use our hand gestures as input signals to drive the robot in different direction. The controlled hand gestures for the robot are controlled by different tilting motions in three dimensions.

Sl. No.	Roll No.	Name of the Student	Project Title
44	12A51A04F7	VASUPILLI CHANDRIKA	Traffic monitoring by using farm by farm approach.
	12A51A04F4	VAJJA HAREESH	
	13A55A0428	RUPPA SRINU	
	12A51A04E6	THUTTA VINAI KUMAR	

ABSTRACT

As the problem of urban traffic congestion spreads, there is a pressing need for the introduction of advanced technology and equipment to improve the state-of –the –are of traffic control. Traffic problems now days are increasing because of the growing number of vehicles and the limited resources provided by current infrastructures. The simplest way for controlling a traffic light use electronic sensors in order to detect vehicles, and produce signal that cycles Traffic congestion is a condition on road networks that occurs as use magnifies, and is described by slower speeds, longer trip times, and augmented conveyance queuing. The most communal example is the physical use of roads by vehicles, When traffic postulate is great enough that the interaction between vehicles slows the speed of the traffic pour, this results in some congestion.

As demand approaches the competency of a road (or of the intersections along the road), extreme traffic jam sets in. When vehicles are fully stopped for epoch of time, this is conversation is known as a traffic jam or traffic snarl-up. For this, we must need an efficient traffic control system. Automatic traffic control and surveillance are important for road usage and management. Timers for each stage are the simplest way to control the traffic. Another way is to use electronic sensors in order to find out vehicles, and produce signal. Here we suggest a system that implement image processing algorithm in real time traffic light control which will control the traffic light efficiently. A web camera is placed in each stage of traffic light that will capture the still images of the road where we want to control the traffic. Then those captured images are successively back ground subtraction method using image subtraction with a reference image which is an empty road image. The traffic is governed according to number of vehicle.

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Sl. No.	Roll No.	Name of the Student	Project Title
45	12A51A04D4	SUNKANA DURGA PRASANTH	Performance analysis and comparative study of micro strip path antenna using different dielectric materials.
	12A51A04C5	RAKOTI PRASANNA KUMARI	
	12A51A04D6	PEDDINTI RAMANA MURTY	
	12A51A04F6	SANDEEP KUMAR VAKAMULLA	

ABSTRACT

This project describes the comparative analysis of micro strip patch antenna using different dielectric materials by increasing the dielectric constant of substrate material allows shrinking of patch antenna. But this shrinking of dimensions comes with a trade-off in bandwidth, impedance and efficiency. This paper presents the comparative study of Rectangular shaped micro strip patch antenna for different Dielectric constant. The antennas were simulated for purposed the application of 3G communications for resonance frequency 3.1GHz. Five materials with different dielectric constants and substrate height 2.54mm were chosen on for the analysis of their performances. Coaxial Probe-feed methods are used for feeding techniques. Dimension like width, length, feed point location ground dimension for each patch antenna of different dielectric material are calculated and compared. The comparative study of different patch antenna performance parameter like VSWR, Reflection coefficient, Bandwidth, Impedance, Mismatch loss, Directivity, Gain and Field are analyzed and compared. Various tables, graphs showing these comparisons with detailed analysis have been included in this paper. This study was carried out by using HFSS software.

Sl. No.	Roll No.	Name of the Student	Project Title
46	12A51A04E1	TADOJU S S SARAT CHANDRA	Development and testing of vehicle monitoring and security systems.
	12A51A04D8	PITCHUKA BHAVANI	
	13A55A0433	TAMMINENI DHANA RAJ	
	13A55A0427	ROUTHU JAGADEESWARA RAO	

ABSTRACT

Currently almost every citizen is having own automobile, ate the same time theft is also on increasing rate during at parking places or driving in secured places or paths. The safety vehicles are extremely essential. In order to achieve all these things we a technology called Vehicle Tracking and Locking System.

Vehicle Tracking and Locking System is installed in the vehicle to track the place and locking of engine motor. The place of the vehicle is identified by using Global Positioning System (GPS) and Global System Mobile Communication (GSM). These

Systems constantly monitor the vehicle and report the status on demand. On occurrence of theft responsible person have to send SMS to the microcontroller, then it issues the control signals to stop the engine motor. To start the vehicle again authorized person have to send the password to the controller to restart the vehicle and open the door. This is more secured, reliable and low cost.

Faculty publications

ORTHOGONAL DECOMPOSITION ALGORITHM FOR IONOSPHERIC DELAY ESTIMATION FOR PRECISE GPS APPLICATIONS

Dr.M.N.V.S. Santosh Kumar Department of ECE, AITAM, Tekkali, India

Abstract

The time delay of GPS link1 (L_1) and link2 (L_2) signals in ionosphere is one of the propagation path effects caused when the signal is travelling from satellite to receiver. The absence of the Selective Availability (SA) made the ionospheric delay as the predominant accuracy limiting factor for GPS. As the density of the ionized plasma varies, the velocity of the GPS signals differs from the velocity of light. Due to this the GPS radio frequency (RF) signals experience the group delay or phase advance. Hence the one way time transfer of the GPS is affected, intern resulting in pseudo range error varying from few meters to tens of meters at zenith. To correct the GPS range measurements this delay is estimated using conventional Code Range technique which models the Total Electron Content (TEC). In this method the TEC is an additional parameter to be calculated and the accuracy of the TEC depends on the inter channel biases and solar activity. To overcome this, an orthogonal decomposition algorithm is proposed in this paper. The proposed algorithm decomposes the coefficient matrix derived from the linear combination of GPS measurements. The proposed algorithm not only avoids TEC calculation but also minimizes complex computations. The comparative analysis of the estimates of the proposed algorithm and conventional method are presented in this paper. The proposed algorithm is implemented and estimates are validated for the ephemerides data collected on 07^{th}April 2015 from the Dual Frequency GPS (DFGPS) receiver located in the Department of Electronics and Communications Engineering (ECE), Andhra University College of Engineering (AUCE), Visakhapatnam (Lat:17.73^0N/Long:83.319^0E). The proposed algorithm can be implemented for precise navigation and tracking applications like Category I (CAT I) precision approach (PA), Precise Point Positioning (PPP), geographic information systems (GIS) and Real Time Kinematic (RTK) positioning.

Keywords Eigenvector Ionosphere Pseudo range Carrier Phase range

TDOA MEASUREMENT BASED GDOP ANALYSIS FOR RADIO SOURCE LOCALIZATION

Dr.M.N.V.S. Santosh Kumar Department of ECE, AITAM, Tekkali, India

Abstract

The revolution brought by GPS has lead to the development of various positioning applications. These applications use measurements (travel time of signal or time of flight) in determining the position. The time of flight requirement in GPS has restricted its use in positioning of unknown objects. Whereas, localization of an unknown enemy Radio Source (URS) such as enemy radar system, tracking of Unmanned Aerial Vehicle (UAV) etc., have high demand in the field of defence in a country like India, they require a new type of measurement technique called Time difference of Arrival (TDOA). There are various factors that affect the position accuracy including amount of measurement noise, algorithm employed for positioning and sensor URS geometry. The sensor-URS geometry is one of the most predominant factors in determining the accuracy estimate and is referred to as Geometry Dilution of Precision (GDOP). This is a well defined problem in positioning systems that use GPS/Time of arrival (TOA) measurements. However, it needs to be refined for URS localization systems/TDOA measurements. This paper mainly focuses on explaining and deriving the concepts of GDOP in relation to TDOA measurement based URS localization systems. For a comprehensive understanding, an illustrative example of localizing an URS with TDOA measurements is explained and discusses the effect of sensor geometry with the help of GDOP profiles. In addition, this paper explains the process of identifying an optimal sensor configuration for URS localization systems. For the purpose of simulation, five sensors arranged in two different configurations are considered. A target surveillance area of 3600 Sq-Kms with 169 target zones is used in generation of GDOP profiles over the Indian subcontinent.

POWER, AREA AND DELAY COMPARISION OF DIFFERENT MULTIPLIERS

EPPILI JAYA, K.CHITAMBARA RAO Department of ECE, AITAM, Tekkali, India

Abstract

Multipliers play an important role in today's digital signal processing and various other applications. High speed and low power multiplier unit is the requirement of today's VLSI systems and Digital Signal Processing applications. Multiplication operation involves generation

of partial products and their accumulation. The speed of multiplication can be increased by reducing the number of partial products. So, minimization of partial products is the main requirement. Here the fast multipliers like Booth multiplier, Vedic multiplier and Modified Booth recoded multiplier are designed, analyzed and compared on the basis of Power, Speed and Area. The analysis i.e., simulation and synthesis of above multipliers were done using XILINX 13.1. Index terms—Low power consumption, LUTs, Modified Booth recoded multiplier, partial products, Vedic mathematics,

Design of High Directive Planar Antenna using Schelkunoff Polynomial

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Abstract

The words broadcasting, unicasting and multicasting are the well familiar terms in the field of communications and are very important in describing various parameters in designing the system. In the field of communications, the applications which involve broadcasting needs an antenna of high directivity and should use the power effectively (low side lobes). Where in applications that needs uni cast-reception mainly needs high directivity (Zone of reception) and low interference (low side lobes) antennas. There are some special applications like tracking radars, surveillance antennas demand patterns with special characteristics (Beam widths). Due to the non complexity in implementation and ability to produce symmetrical-high directive beams, generally planar array antennas are used in above mentioned applications. Planar antennas, with compromise in increased number of elements and size, produces high directive beams. Other way of generating desired beam pattern is by synthesizing the antenna radiation pattern. Schelkun off polynomial synthesis method is one being used in linear array design for suppressing radiation in undesired directions, there by increases the directivity. In order to produce the desired beam with high directivity this paper proposes a planar array design method and also extends the schelkun off polynomial method (confined as linear array synthesis method) to planar array design to produce cost effective high directive antennas. The radiation pattern characteristics Directivity, 3dB beam width, Null-Null beam width and side lobe levels are used to analyse the performance of proposed design and algorithm.

Keywords

Linear Array; 3D Planar Array; Schelkunoff Polynomial Method; Directivity

POLY-FIR FILTERED ECG FOR BETTER DIAGNOSIS OF CARDIAC DISORDERS

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Abstract

ECG(Electro Cardio Gram) is a biomedical signal used for diagnosis of cardiac patients. ECG recording process is contaminated by power line noise because power line fluctuations from mains AC supply. This will create problem for doctors while analyzing the ECG graph to diagnose correctly the problems of heart as regular pattern of ECG is affected. Here an attempt is made to filter power line noise with a new concept of polynomonial with existing conventional windows.

DENOISING OF ECG USING COMBINED WINDOW TECHNIQUE

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Abstract

Electrocardiography (ECG) is the process of recording the electrical activity of the heart over a period of time using electrodes placed on the skin. These electrodes detect the tiny electrical changes on the skin that arise from the heart muscle depolarizing during each heartbeat. ECG recording process is contaminated by power line noise because power line fluctuations from mains AC supply. This will create problem for doctors while analyzing the ECG graph to diagnose correctly the problems of heart as regular pattern of ECG is affected. Here an attempt is made to filter power line noise with a new concept combined conventional windows.

A NEW METHOD OF TARGET TRACKING BY EKF USING BEARING AND ELEVATION MEASUREMENTS FOR UNDERWATER ENVIRONMENT

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Abstract

Underwater moving object detection/tracking is critical in various applications such as exploration of natural undersea resources, acquiring of accurate scientific data to maintain regular surveillance of missions, navigation and tactical surveillance. Real time object detection/tracking which tends to obstacle avoidance is possible with an autonomous underwater vehicle (AUV) fitted with sensor(sonar). To bring these applications into effective use, there is a

need to evaluate various solutions for the safe navigation of AUV in the significant underwater environment. Convergence time becomes a problem and plays an increasingly important role in safe navigation of AUV applications. To achieve this, several methods, i.e. Kalman Filter (KF), Extended Kalman Filter (EKF) and Particle Filter (PF) have been investigated, although all these methods have their own limitations. In this paper, a new method has been developed wherein tracking algorithm using EKF has been extended to the Bearing and Elevation only Tracking (BEOT) method. By using Monte Carlo approach, the performance of this algorithm has been analyzed. Consequently, the time of convergence has been calculated and accordingly the results have been plotted.

GPS C/A CODE MULTIPATH ERROR ESTIMATION FOR SURVEYING APPLICATIONS IN URBAN CANYON

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Abstract

Global Positioning System (GPS) is satellite based navigation system implemented on the principle of trilateration, provides instantaneous 3D PVT (position, velocity and time) in the common reference system anywhere on or above the earth surface. But the positional accuracy of the GPS receiver is impaired by various errors which may be originating at the satellite, receiver or in the propagation path. These errors have assumed importance due to the high accuracy and precision requirements in number of applications like the static and kinematic surveying, altitude determination, CAT I aircrafts landing and missile guidance. In this paper, the error originating at the receiver due to multiple paths of the satellite transmitted radio frequency (RF) signal is estimated. Multipath phenomenon is prevalent particularly in urban canyons, which is the major error among other GPS error sources originating at the receiver. The algorithm proposed in this paper estimates the error using coarse/acquisition (C/A) code range, carrier phase range and Link1 (L1) and Link2 (L2) carrier frequencies. This algorithm avoids the complexity of the error estimation using conventional methods where sensitive parameters such as the geometry or the reflection coefficient of the nearby reflectors are considered. The error impact analysis presented in this paper will be useful in selecting the site for GPS receiving antenna where the reflection coefficients are hard to measure up to the required accuracy. Analysis of the change in intensity of this error with respect to elevation angle of the satellite will facilitate in selecting pseudoranges with least error. Error estimation and range modeling proposed in this paper will be a valuable aid in precise navigation, surveying and ground based geodetic studies.

ANALYSIS OF STEGANOGRAPHIC COLOUR IMAGE BY USING INTEGER WAVELET TRANSFORMATION

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Abstract

This project deals with secretly communicate the information over open environment like internet. Steganography attempts to hide the secret information & make communication undetectable. Steganography is used to cover the secret information so that no one can intelligence the information. This method has many challenges such as high hiding capacity and more robustness. In existing project have some problems like less powerful and low hiding capacity. In this project we propose a modern steganography technique with Integer Wavelet transform [IWT] and secrete key to achieve high hiding capacity, high security and good illustration quality. Then Integer wavelet transform [IWT] is applied to the cover image to get wavelet coefficients. Wavelet coefficients are randomly selected by using secrete key for embedding the secret data. Whereas the secrete Key is 8x8 binary matrix in which '1' represents data embedded in the corresponding wavelet coefficients and '0' represents no data present in the wavelet coefficients.

Keywords: Steganographic, Integer wavelet transform [IWT].Optimum Pixel Adjustment Process [OPAP]

SORENSEN FILTER FOR IMPULSE NOISE REMOVAL

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Abstract

In digital Image Processing, removal of noise is a highly demanded area of research. Impulsive noise is regular in images which happen at the time of image acquisition and or transmission of images. In this paper, a new Sorensen filtering algorithm is presented for the removal of impulse noise from digital images. This proposed filter uses diagonal element alone with Sorensen similarity to obtain appreciable results in terms of computational complexity and visual appearance than existing algorithms.

AUDIO FORENSIC USING DWT – LSB

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Abstract

Many effective watermarking algorithms have been proposed and implemented for digital images and digital video, however, few algorithms have been proposed for audio watermarking. This is due to the fact that, the human audio system is far more complex and sensitive than the human visual system. In this paper, an audio watermarking algorithm based on DWT-LSB is proposed. The DWT transformation decomposes the audio signal into several sub bands,

enabling developers to locate the most appropriate sub-bad to embed. The watermark bits are embedded into the high resolution sub-band by using LSB algorithm, so the satisfactory robustness and the imperceptibility performances are obtained Keywords: DWT, LSB, Forensic Mark, Imperceptibility, and Robustness

IMPACT OF RECEIVER SYSTEMS AND CHANNELS PARAMETERS ON DISTRIBUTES COMPUTING POWER RATIO IN OFDMA BASED WIRELESS DISTRIBUTED COMPUTING NETWORK

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Abstract

In present days, high data rates transmissions and their manipulations are almost completing by wireless distributed computing (WDC) network, generally for minimize the time consumption. But we are unable to minimize the distributed computing power ratio (DCPR) in much manner for same network. The parameters, which are influencing on this DCPR, are network size, bandwidth, computing density, and switching frequency. In this paper, the main objective is to minimize the DCPR with proper allocation of mentioned parameters for a WDC network. I propose OFDMA based WDC system, to achieve the very less interference and to satisfy the above specified objective. This paper uses soft and evolutionary computing algorithm, called the particle swarm optimization (PSO). This algorithm gives global optimum solution to above specified objective. The performance of proposed system with specified algorithm is analyzed using computer MATLAB simulation. Keywords: Wireless Distributed Computing Network, OFDMA, DCPR.

PERFORMANCE EVALUATION OF EDGE DIRECTIONAL IMAGE INTERPOLATION SCHEME

_V. Ashok Kumar, Department of ECE, AITAM, Tekkali, India

Abstract

Earlier there are different interpolation techniques for de noising of images. When an image is zoomed checkerboard effect/ringing arises in images. In order to remove interpolation artefacts such as image blur and checkerboard effect. The proposed technique “DIRETIONAL DENOISE SCHEME " tries to amend the interpolation error. Meanwhile edge preservation is a critical issue in both image de noising and interpolation. In this project, we are using directional de noising scheme interpolation method to address the edge preservation. Linear interpolation methods have been introduced without considering specific local information on edges results in to artefacts. Non linear interpolation methods have been suggested to reduce the artefacts of linear method. These nonlinear methods are often computation intensive and they can be more expensive than linear methods for 2D-Images.Further, they become inefficient in the estimation of edge orientation for the classes of edge model with fine scales. More effective interpolation methods

are yet to be developed in order to accurately preserve the edge orientation without introducing high computational cost. Peak Signal to Noise Ratio (PSNR) Normalized Cross Correlation (NCC) and CPU Run time are used as quantitative measures to compare the ground truth image with zoomed interpolated images. The new interpolation scheme is expected to result in high resolution images having clearer and sharper edges over existing linear interpolation methods. " 1. Introduction " Images captured from both digital cameras and conventional film cameras will affected with the noise from a variety of sources. These noise elements will create some serious issues for further processing of images in practical applications such as computer vision, artistic work or marketing and also in many fields. There are many types of noises like salt and pepper, Gaussian, speckle and passion. In salt and pepper noise (sparse light and dark disturbances), pixels in the captured image are very different in intensity from their enamouring pixels; the defining characteristic is that the intensity value of a noisy picture element bears no relation to the colour of Niebuhr pixels. Generally this type of noise will only affect a small number of pixels in an image. When we viewed an image which is affected with salt and pepper noise, the image contains black and white dots, hence it terms as salt and pepper noise. In Gaussian noise, noisy pixel value will be a small change of original value of a pixel. A histogram, a discrete plot of the amount.

SMART ANTENNA SYSTEM DESIGN USING ADAPTIVE BEAM FORMING ALGORITHMS TO MINIMIZE NOISE

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Abstract

Wireless communication is one of the most rapidly growing industries. The high demand for wireless communication services had led to an increase in system capacity. Then most elementary solution would be to increase bandwidth; however, this becomes ever more challenging as the electromagnetic spectrum is becoming increasingly congested. The ever-increasing demand for increased capacity in wireless communications services has led to developments of new technologies that exploit space selectivity. This is done through smart-antenna arrays and the associated adaptive beam forming algorithms. Smart antenna systems provide opportunities for higher system capacity and improved quality of service among other things In this paper, two non-blind algorithms: Least Mean Square (LMS) and Normalized Least Mean Square (NLMS) algorithms were compared for a robust smart antenna system. It has been found that NLMS performs better in many respects than LMS and so we propose NLMS to be used by mobile companies when they will use smart antenna. Our findings are explained in details in the result and analysis section with graphs. Our comparison and findings were simulated using MATLAB. Index terms—Smart Antenna, Beam forming, LMS and NLMS.

AN APPROACH TO MANAGE HANDOVER DECISION PROCESS IN HETEROGENEOUS NETWORKS USING FUZZY LOGIC

Dr.A.S.Srinivasarao Department of ECE, AITAM, Tekkali, India

Abstract

Signal handover is the foremost thing in communication engineering task where decision making plays a crucial role by taking all the available attributes into account of distinct technology. In order to correlate dissimilar access technologies, vertical handoff algorithms came into existence in diverse forms. In pursuance of upgrading the accuracy of vertical handoff decision making for radio heterogeneous technologies, this work initiates multi criteria vertical handoff decision algorithm. Our work involves with the fuzzy logic controller with mamdani type inference engine by considering cost, bandwidth, throughput, received signal strength etc.., as semantic variables for different kind of networks and we also decide the index of networks which will be further utilized in handover management process for good decision making.

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