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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.

ABSTRACTS OF SPONSORED RESEARCH PROJECTS

Detection of Mines, Submarines and Mapping of Obstacles using Image Processing for Secured Patrolling of Sea Coast

DR.M.N.V.S.S.KUMAR

Associate. Professor, Department of ECE, Aditya Institute of Technology and Management (AITAM) Andhra Pradesh, India

Investigation of various underwater and terrestrial navigational aids and analysis of the propagation characteristics of sonar signals under the influence of underwater noise. Analysis of chirp technology and Monotonic sonar's in terms of range resolution with which separation of two objects can be identified clearly in the image obtained from the sonar. Analysis of the existing image segmentation schemes and their applicability to the sonar images. Development of a new Image Processing algorithm to identify the objects in the noisy underwater sonar images and comparison of its performance with existing segmentation methods. Development of a surface construction algorithm to construct the 3D shape of an underwater object from the 2D images obtained from the sonar.

FEATURE EXTRACTION OF EARTHQUAKE SIGNALS USING FRACTIONAL DOMAIN

P.V.MURALIDHAR

Associate. Professor, Department of ECE, Aditya Institute of Technology and Management (AITAM) Andhra Pradesh, India

Earlier methods are used to analyse the feature extraction of Earthquake signals by Fourier transform (FT), Short Time Fourier Transform (STFT), Continuous Wavelet Transform (CWT)[3] are fixed with respect to their kernel function but, implementation of feature extraction[2] with Fractional Fourier Transform (FrFT) or combinations of different transforms with various windows combinations will give a better input to the pattern matching in terms of their spectral quality of the Earthquake signals. Recently in literature, FrFT plays significant role in signal processing [4]. It is generalization Fourier transforms, whose kernel functions gives better resolutions in terms of spectral analysis of signals by virtue of its kernel function. Necessary filters will be implementing in FrFTdomain, In fact it helps to analyse better identification of Earthquake.

GIS, RS and Image Processing for Location based services for

Everyday Essentials – A Case study on Srikakulam Municipality

K.V.L.BHAVANI

Associate. Professor, Department of ECE, Aditya Institute of Technology and Management (AITAM) Andhra Pradesh, India

Government of Andhra Pradesh announced Srikakulam town as a 'Smart City' which will be very useful for the people who live in Srikakulam. Srikakulam is a city, municipalityand the headquarters of Srikakulam district of Andhra Pradesh, India. The Municipality had apopulation of 133,811 (as per census 2011) . It is situated within the geographic co-ordinates of 18°-20' and 19°-10' N and 83°-53' and 84°-50' E. It occupies an area of 20.89 squarekilometres .Though the level of essential services offered in the town is in the class of itsown, most of the people are unaware of the essential services in the vicinity and are forced towander around the city which is not appropriate whenever required. Srikakulam is no more atraditional city; earlier the similar type of service was available in the same area/ location dueto developmental activities the city expanded, services are spread all over the city. Theessential service providers Education services(Training & Coaching, Institutes(Schools, Colleges, Universities)), Shop and Suppliers, Entertainment, Eat outs (Restaurants),Lifestyle based services. Currently the services of these relevant service providers are notautomatically integrated. Therefore the need for GIS based Web Services with improved quality images becomes imperative. This project acts as a repository of all the Essential Services inSrikakulam. The key issue is to match the users query over the system effectively. This has been done by making a user friendly website using image processing techniques which extracts the desired information from the geo database. The Utilization of GIS and RS in providing immediate response to requests for emergency services is the key feature which makes this system more effective.. As the town is moving towards the cyber hub and is being flooded with new commuters day by day, this system is going to play a very important role in the future. This aim is to develop a semi-automated system for essential service managementof Srikakulam city. This system provides the details of all services needed for general public and generates visual presentation of all the facilities in the map.

TUNING OF PID CONTROLLER FOR AIRCRAFT ATTITUDE CONTROL SYSTEM BY TCGA METHOD

D.V.L.N.SASTRY

Assistant. Professor, Department of ECE, Aditya Institute of Technology and Management (AITAM) Andhra Pradesh, India

The optimum design of the proportional-integral derivative (PID) controller plays an important role in achieving a satisfactory response in the aircraft attitude control system. This paper presents the optimal design of the PID controller in the aircraft attitude control system by using the Taguchi Combined Genetic Algorithm (TCGA) method. A multi objective design optimization is introduced to minimize the maximum percentage overshoot, the rise time and settling time. The proportional gain, the integral gain, the derivative gain defines the search space for the optimization problem. The approximate optimum values of the design variables are

determined by the Taguchi method using analysis of means. Analysis of variance is used to select the two most influential design variables. MATLAB toolboxes are used in this paper. With this proposed TCGA method, the step response of the aircraft attitude control system can be improved.

Analysis of Three-Dimensional Magnetic Resonance Imaging Data to Identify Brain Disorders

Y.SRINIVASA RAO

Assistant. Professor, Department of ECE, Aditya Institute of Technology and Management (AITAM) Andhra Pradesh, India

In the present world, most of the human beings are suffering with mental disorders like false beliefs, unclear or confused thinking, auditory hallucinations, reduced social engagement and emotional expression, and inactivity because of their mental tensions. This disorder is called as Schizophrenia. The disorder can be diagnosed by differentiating schizophrenic patients and normal persons. This can be done by analyzing the structure of grey matter at the bottom of the brain. For this the 3D construction of the brain slices from Magnetic Resonance Imaging (MRI) is required from which the structure of grey matter can be identified. So 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. In order to know the structure of grey matter these two dimensional images are need to be converted to three dimensional. For this the data set can be obtained from the 2D data of MRI. The main objective of the proposal is to construct the 3D surface of the brain using this 2D data. There are so many techniques which are useful in constructing the 3D surface like ball pivoting algorithm, triangulation, quick hull algorithm. But they failed to construct the image with high resolution. 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 the healthy persons. To extract the 2D image information from the MRI, image processing techniques are to be implemented.

B.TECH PROJECT ABSTRACTS

Sl. No.	Roll No.	Name of the Student	Project Title
1	11A51A0429	DASYAM DHANA LAKSHMI	Home automation security system using GSM technology.
	11A51A0440	GIDUTHURI SIREESHA	
	11A51A0450	JAYASREE TAMMINENI	
	11A51A0453	K LALIT KUMAR	
	11A51A0412	BENDI ADI LAKSHMI	

ABSTRACT

In today's life in every field, security is needed and physical work is being reduced by implementing technology so that to save time and labour. This technology is already implemented in abroad. It is to be implemented with low cost and high technology. In this project, Home Automation Security System is designed by using GSM technology, Here Microcontroller, GSM modern, LCD and Sensors are used. The purpose of this project is to design and construct a GSM based home automation using AVR software. GSM technology is a digital mobile telephony system widely used in many parts of the world. It used TDM access, FDM access and the latest technology with high globalization in communication. Using GSM networks a home power control system has been proposed and that will act as an embedded system which can monitor and control the appliances and other devices locally. AT mega 16 micro controllers is used i9nstead of 8051 microcontroller as it is the advanced microcontroller with high performance and high security. This is useful in restricted areas, where security is needed and it will help in taking the action quickly. It is also used in the investigation. The main aim of this project is to design a security system with low cost and better performance with advanced technology than existing one. This is applied for home appliances, banking, building automation, home entertainment, lighting, internet using areas mobile electronics etc.,

Sl. No.	Roll No.	Name of the Student	Project Title
2	11A51A0451	KANCHARAPU SWARNALATHA	High speed discrete wavelet transform using an efficient VLSI architecture.
	11A51A0452	KARRA UMADEVI	
	12A55A0407	KUPPILI SOUNDARYA	
	11A51A0416	BODDEPALLI GEETANJALI	

ABSTRACT

The wavelet transform (WT) has gained widespread acceptance in signal processing and image compression. Because of their inherent multi-resolution nature, wavelet-coding schemes are especially suitable for applications where scalability and tolerable degradation are important. To use the wavelet transform for image processing we must implement a 2D version of the analysis. In this project, pipeline architecture for fast computation of the 2D DWT low latency is proposed. In order to achieve a critical path with only one multiplier, at least four pipelining stages are required for one lifting step, or a large temporal buffer is needed. In this brief, modifications are made to the lifting scheme, and the intermediate results are recombined and stored to reduce the number of pipelining stages. As a result, the number of registers can be reduced without extending the critical path. The low latency is achieved by proper designing of two 1-D DWT filtering processes and also efficiently transferring the data between the two 1-D DWT filters. The wavelet transform is computed separately for different segments of the time-domain signal at different frequencies. Good for signal having high frequency components for short durations and low frequency components for long duration, e.g. Images and video frames.

Sl. No.	Roll No.	Name of the Student	Project Title
3	11A51A0413	BHAIKAR SUNEELKUMAR	Under water active target tracking using Extended Kalman Filter.
	11A51A0430	DATTI SWETHA	
	11A51A0422	CHALLA RAMBABU	
	11A51A0434	DUGANA MAHESHKUMAR	

ABSTRACT

Target tracking systems 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 filters like IIR, FIR. However there are some limitations in these algorithms which could not enable to predict the future position of the target. In 1960 kalman proposed a new algorithm which is linear estimator algorithm. In our project, we implemented Extended Kalman adaptive filter for active target tracking applicable for both linear and nonlinear applications also

Sl. No.	Roll No.	Name of the Student	Project Title
4	11A51A0455	KILLAMSETTY DEVISRI	Design of underwater software acoustic modem.
	11A51A0459	KORNU RUPA	
	11A51A0443	GUNTA ROJA	
	12A55A0411	MANGI KRISHNA REDDY	

ABSTRACT

The advent of the underwater vehicles has revolutionized the field of underwater navigation and surveillance. The underwater surveillance application includes monitoring a protected area for new unidentified objects, detection of submarines and to study the ocean and ocean floor. An Autonomous Underwater Vehicle (AUV) is a robotic system that is driven through the water by a propulsion system, controlled and piloted by an onboard computer and the sonar is used as the main sensor for sensing the environment. The main limitations of AUVs are that they are controlled through cables and they need the mother vessel for their deployment. But wired communication is limited to a certain distance as the vehicle is connected through cables. Other disadvantage with under water wire communication is that the cables are easily damaged by trawlers and other underwater activity. In addition, the vehicle connected to the cables must have additional power to counteract the drag of the cable through the water. The aim of this project is to develop a modem based on PC soundcard which allows the system to reduce complexity and increase robustness in time variant underwater environment.

Sl. No.	Roll No.	Name of the Student	Project Title
5	11A51A0407	BANDI DURGANAGESWARARAO	Comparison of histogram equalization techniques for image enhancement.
	11A51A0457	KOMMALA KAVYA	
	11A51A0458	KONNA PUSHPALATHA	
	12A55A0405	IRINJALA GOWTHAM	

ABSTRACT

In general the quality of image is degraded due to the noise and blurring effects. The

noise and blurring effects occur because of lighting effects, atmospheric turbulences, instrument problems (like camera lens, flash, capturing). To regain the quality of image we use image enhancement technique.

The main objective of the image enhancement technique is to improve the interpretability of the information present in image for human viewers i.e. increasing the image contrast. Histogram equalization is one of the best techniques of enhancement because of its better contrast adjustment.

The techniques used in Histogram equalization are classical histogram equalization (CHE), adaptive histogram equalization (AHE), contrast limited adaptive histogram equalization (CLAHE), and adaptive non-linear histogram equalization (ANLHE). Through MATLAB we do the above procedure and the quality of image is analyzed in both the subjective and objective measures.

Sl. No.	Roll No.	Name of the Student	Project Title
6	11A51A0447	JAMI DIVYA	Enactment of ATM security system using GSM technology
	11A51A0438	GANNAVARAPU NEELIMA	
	11A51A0402	AKKURADA JANARDHANA RAO	
	11A51A0435	D RAMASWAMY SANTHOSH BHARAT	

ABSTRACT

Day by day usage of ATM is elevating, that means the transaction amount upsurges. For that the bank is providing a huge amount of money to the Teller Machine, thieves are catching this point and stealing the money by breaking the machine. For that vim we should catch the thieves and secure the money. Although the bank is taking the responsibility by placing a security guard, secret camera and a password lock, still the thefts are happening. For that we are introducing the new security system "GSM BASED ATM SECURITY". This gives full electronic security to secure the ATM. In this system, we are providing information about the theft being happened to the bank employee.

Here we are implementing this system with the help of 8052 microcontroller. A GSM module will operate as an informer and as a security key. To get the information that whether any movement occurred in the ATM machine then vibration sensor and door sensor are activated. The microcontroller will then send the information to the bank (employee's mobile) through an SMS by the GSM. Along with that the processor also allows alarm to ring and makes a forward motion to the stepper motor which closes the shutter of the chamber. In order to reopen the shutter, a message is needed from the employee number, if the saved and received numbers are same then the stepper motor will moves in reverse direction. So by this system collateral to the ATM's intensifies.

Sl. No.	Roll No.	Name of the Student	Project Title
7	11A51A0420	BUDDU SWATHI	A modified Butterworth transfer function used for filters and as a window function.
	11A51A0410	BASAVA DEEKSHITH	
	11A51A0403	AKKURADA ROJA	
	11A51A0448	JAMI NAVEEN	

ABSTRACT

The Butterworth filter has a maximally flat response, i.e., no pass band ripple and roll-off of minus 20db per pole. Another name for it is "flat maximally magnitude" filters at the frequency of $\Omega = 0$, as the first 2N - 1 derivatives of the transfer function when frequency (Ω) = 0 are equal to zero. The Butterworth filters achieve its flatness at the expense of a relatively wide transition region from pass band to stop band with average transient characteristics. This filter is completely defined mathematically by two parameters i.e. cut off frequency and number of poles. Hence in our proposals an attempt is made to derive a novel mathematical transfer function of Butterworth and which will be compared with existing Butterworth in terms of order and filter characteristics. It is extended to use as window function to analyze the spectral characteristics of signal and to implement corresponding FIR filters. To implemented FIR differentiator and integrator by using novel window. It also extended to implement image enhancement by using novel Butterworth filter.

Sl. No.	Roll No.	Name of the Student	Project Title
8	11A51A0409	BANU DEVAVARAPU VENKATESH	PAPR Reduction in MIMO OFDM Using unitary Matrix Precoding.
	12A55A0403	CH. NAVEENA	
	11A51A0454	KENGUVA SANKAR SANTOSH	
	11A51A0423	CHALLA PRIYANKA	

ABSTRACT

One of the effective methods used for reducing Peak to Average Power Ratio (PAPR) in Multi Input Multi Output Orthogonal Frequency Division Multiplexing (MIMO – OFDM) systems is Adaptive Active Constellation Extension Algorithm. The proposed scheme is employed with Quadrature Amplitude Modulation (QAM). One of the big advantages is that the side information does not need to be sent to the receiver. The Adaptive Active Constellation Extension method is the most attractive scheme due to its good system performance and simplicity, also effectively reduces Peak to Average Power Ratio (PAPR) for different modulation formats and subcarrier sizes without any complexity increase and bandwidth expansion. The proposed scheme has the ability to provide large Peak to Average Power Ratio (PAPR) reduction, low bit error rate and low computational complexity without side information in Multi Input Multi Output Orthogonal Frequency Division Multiplexing (MIMO-OFDM) systems.

Sl. No.	Roll No.	Name of the Student	Project Title
9	11A51A0406	BALLEDA SREEJA	Improved performance of chirp technology sonar using advanced window techniques for multiple object detection.
	11A51A0428	DASARI VENKATESH	
	11A51A0456	KOLLA DILEEP	
	11A51A0436	DUSI JAYASREE	

ABSTRACT

CHRP is a platform to send data over sound. A CHIRP is a signal in which the frequency increases up chirp of decreases down CHRP with time. In some sources, the term chirp is used interchangeably with sweep signal. It has also been called quadratic phase signal. By using SONAR (Sound Navigation and ranging we can avoid collision of the Autonomous underwater vehicle with the floating objects in the underwater. The technology used in this forward looking

SONAR is CHIRP. Because of chirp technology high resolution images of scabbed are produced. Using CHIRP technology SONAR it is easy to distinguish the objects if they 7.5 mm apart with using Blackman-Harris windowing technique. The main purposed of usage of window technique is to reduce the side lobes in signal processing. Windows allows signal in certain limit of frequencies above the limit it will become zero. In this project the generation of CHIRP pulse is analyzed using the pulse compression technique and different combinational conventional and polynomial windowing techniques in low pass filter are citilized to detect the peak of the received signal. By utilizing the combinational window techniques in low pass filter we can improve the performance by increasing the side lobe attentions which in helpful in detection of multiple objects.

Sl. No.	Roll No.	Name of the Student	Project Title
10	11A51A0445	HANUMANTHU ASWINI	A new approach to Design fault coverage circuit with efficient hardware utilization for testing applications.
	11A51A0404	BALAGA RAVITEJA	
	12A55A0404	GORIVEDLA BALAKRISHNA	
	12A55A0402	AVVA CHINNAPPANNA	

ABSTRACT

Test Pattern generation has long been carried out by using Linear Feedback Shift Registers (LFSR's). LFSR's are a series of flip-flop's connected in series with feedback taps defined by the generator polynomial. The seed value is loaded into the outputs of the flip-flops. The only input required to generate a random sequence is an external clock where each clock pulse can produce a unique pattern at the output of the flip-flops. This random sequence at the output of the flip-flops can be used as a test pattern. The number of inputs required by the circuit under test must match with the number of flip-flop outputs of the LFSR.

To reduce the power by maintaining the fault coverage in these project three intermediate patterns between the random patterns is generated. The goal of having intermediate patterns is to reduce the transitional activities of Primary Inputs (PI) which eventually reduces the switching activities inside the Circuit under Test (CUT) and hence power consumption is also reduced without any penalty in the hardware resources. The experimental results for c17 benchmark, with and without fault confirm the fault coverage of the circuit being tested. In this project the power is mention that 14mw. Now the proposed system has to reduce it to less than 14mw i.e. nearly 12mw. At the same time we will reduce the device utilization also.

Sl. No.	Roll No.	Name of the Student	Project Title
11	11A51A0460	KOTA BALAJI	Signal extraction feature using higher order spectral analysis.
	11A51A0427	DAKKATA BHAVANI SANKAR REDDY	
	12A55A0406	KOLLA RAMA RAO	
	11A51A0437	DUSI KRANTHI KUMAR	

ABSTRACT

The main aim of this project is to analyze the signals coming from the various ships and submarines for the purpose of identifying them. The analysis methods using now a days mostly employs the half spectrum analysis for the detection of fundamental frequencies present in the signal. These signals are recorded by hydrophones and the received signal is

contaminated by the underwater noise from propellers, machinery, and other measuring instruments, old ships etc. When these signals are passed through a non-linear medium the frequencies are coupled and these coupled frequencies are also received at the receiver.

The occurrence of a frequency and its harmonic does not guarantee that the set of frequencies are produced by the same machinery (on board a ship). It is possible that random generation of the fundamental and harmonics have occurred. In order to verify if a set of frequencies (fundamental and the harmonic) are from same machinery we can verify if they are phase coupled or not. In order to verify phase coherence we need to calculate higher order spectrum. By the analysis methods like half spectrum analysis, the quadratic coupled frequencies cannot be identified. The analysis methods are such that these coupled frequencies can be detectable. Higher order spectrum analysis methods like one and half spectrum and two and half spectrums, which use higher order coefficients can give the information about the coupling of frequencies. In this project higher order methods are analyzed for acoustic signals.

Sl. No.	Roll No.	Name of the Student	Project Title
12	11A51A0411	BEHARA LAVANYA	Design of pyramidal horn antenna at 10GHZ using WIPL-D.
	11A51A0444	GURUBELLI MURALI MANOHAR	
	12A55A0408	LABBA GEETHA RANI	
	11A51A0405	BALAGA YASODHAR SAI	

ABSTRACT

Horn antennas are widely used as feeds for large reflector and lens antennas, as high gain element in phased arrays and also used as standard-gain antenna in antenna measurements. The classic analysis of horn antennas is based on equivalence principle using the approximate aperture field distribution, giving satisfactory results for the main beam of the radiation pattern and antenna gain. Moment method, finite difference time domain methods are used for improving the accuracy of antenna. But, these methods cannot be efficiently used for analysis of electrically large horns. A hybrid technique enables very accurate evaluation of the radiation pattern, even in the back region. However, once developed for horns of circular or rectangular geometries cannot be applied to other geometries. The standard horn antenna at 10GHz is modeled and the radiation pattern was observed. Further it cannot be efficiently used even with personal computers and it cannot evaluate the input impedance of a horn antenna if it is fed by coaxial line. WIPL-D is used to analyze and optimize the dimensions of horn antenna which is based on method of moment's solution for computations. All these problems can be overcome if the WIPL code is used. WIPL (is a code for electromagnetic modeling of composite wire and plate structures)

Sl. No.	Roll No.	Name of the Student	Project Title
13	12A55A0410	M.BABJI	Implementation of call admission control in wireless networks by using direct sequence code division multiple access (DS-CDMA)technique.
	11A51A0426	CHOKKARA DEVENDRA NATH	
	11A51A0442	G.KARTHEEK	

ABSTRACT

In Wireless/Mobile networks various kinds of on coding schemes were used for

transmission of data over bandwidth. The desired quality and generated traffic varies with the requirement with this bandwidth. A generic video telephony may require more than 40 kbps whereas a low motion video telephony may require about 2.5 kbps for data transmission. From the designing point of view these requirement demands for an alternative resource planning, especially for bandwidth allocation in wireless networks. In wireless network where bandwidth is a scare resource, the system may need to block incoming user if all of the bandwidth has been used to provide highest quality of service to existing users. However this bandwidth resource planning may be unacceptable for larger application. A degradable approach to multiple users can be made on bandwidth allocation to reduce the blocking probability without degrading the quality of service to existing users. This project aims towards realization of a wireless/mobile network using WCDMA multi access technique supporting multilevel quality of services. The bandwidth allocation to multiple users is adjusted dynamically according to the required network condition so as to increase bandwidth utilization. The project analyze the performance deriving the degradation period ratio, mean degradation time and degradation state for the implemented wireless network.

The proposed work is aim to implement on mat lab tool for its functional verification considering various mobility patterns.

Sl. No.	Roll No.	Name of the Student	Project Title
14	11A51A0497	SAHU ASHWINI	Performance analysis of image compression using various transformation techniques.
	11A51A0499	SANTHI MOHAN KRUSHNA	
	11A51A0498	SANAPALA SRAVANI	
	12A55A0414	NADIMIVALASA SIVA	
	11A51A0476	NAGA JAGAN MOHAN.G	

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 Discrete cosine transform (DCT) and Discrete wavelet transform (DWT) are used to compress the image.

Image compression is implemented by using DCT and wavelet transforms such as Haar, Daubechies, Symlet, Coiflet, Bi-orthogonal wavelet techniques. In this project, different coloured input images such as Lena, Bus and Man is considered. Performance analysis is done by using peak signal to noise ratio (PSNR) and mean square error (MSE). This project is implemented on MATLAB 7.0.1.

Sl. No.	Roll No.	Name of the Student	Project Title
15	11A51A04A0	B.MANIKANTA	Android mobile controlled smart home.
	11A51A0467	L.NIKHIL	
	11A51A0489	P.RAMAKRISHNA RAO	
	10A51A0452	K .PRAVEEN KUMAR	
	11A51A04B3	V.PRASANNA	

ABSTRACT

Nowadays technology becomes more and more advanced in all areas. With the development of modern technology and Android Smartphone, Smart Living is gradually changing people's life. With the openness, flexibility and features that Android offers, it has been widely adopted in applications beyond just Smart Phones. This project presents the design and implementation of a low cost yet compact and secure Android mart phone based smart home system. This design is based on the popular open sourced Arduino prototyping board where the sensors and electrical appliances are connected to the input/output ports of the board. Smart home includes home automation, security and emergency system. Home automation allows to control household appliances like light, fan, AC, TV, Door etc. It also provides home security and emergency system to be activated. Home automation not only refers to reduce human efforts but also energy efficiency and time saving. The main objective of Smart Home i.e., home automation and security system is to help handicapped and old aged people which will enable them to control home appliances and alert them in critical situations. The major building blocks of this project are:

1. Microcontroller of Atmega328P series mother board(Ex: Arduino Uno microcontroller board)
2. Arduino IDE
3. Bluetooth Module
4. Passive Infrared Sensor
5. Ultrasonic Sensor

Sl. No.	Roll No.	Name of the Student	Project Title
16	11A51A04B2	V.MADHURI	Multi Resolution Scene Based Video Watermarking In Discrete Multi wavelet Domain.
	12A55A0413	M.MOHINI	
	11X11A0417	L.GNANESWARI	
	10A51A0480	P.VENKATA RAMYA	

ABSTRACT

Most of the techniques for watermarking are for still images. Very less work has been done on video watermarking. Most of the existed video watermarking techniques add watermark in the compressed domain for fast detection but these techniques are not resistant to various operations like frame rate changing, compression in other formats etc. The objective of this project is to develop a watermarking technique for uncompressed video using DWT technique. Here the watermark is recovered by using appropriate keys. The watermark should be robust against any intentional or unintentional operations to remove the watermark. The detection of the watermark should be as fast as possible such that it can be used for real-time applications.

Sl. No.	Roll No.	Name of the Student	Project Title
17	12A55A0419	S.SANGEETA	BER analysis of conventional and wavelet based OFDM in LTE using different modulation technique.
	11A51A0495	R.DIVYA	
	11A51A0471	M.PRASAD	
	11A51A0479	N.SURYA PRASANNA KUMAR	

ABSTRACT

Orthogonal Frequency Division Multiplexing (OFDM) and Multiple Input and Multiple Output (MIMO) are two main techniques employed in 4th Generation Long Term Evolution

(LTE). In OFDM multiple carriers are used and it provides higher level of spectral efficiency as compared to Frequency Division Multiplexing (FDM).

In OFDM because of loss of orthogonality between the subcarriers there is inter carrier interference (ICI) and inter symbol interference (ISI) and to overcome this problem use of cyclic prefixing (CP) is required which uses 20% of available bandwidth. Wavelet based OFDM provides good orthogonality and with its use Bit Error Rate (BER) is improved. Wavelet based system does not require cyclic prefix, so spectrum efficiency is increased.

It is proposed to use wavelet based OFDM at the place of Discrete Fourier Transform (DFT) based OFDM in LTE. We have compared the BER performance of wavelets and DFT based OFDM.

Sl. No.	Roll No.	Name of the Student	Project Title
18	11A51A04A5	T.SRILATHA	Design of compact broad band micro strip antennas for dual band applications.
	11A51A0470	M.KAVITHA	
	11A51A0492	P.GIRIJA SHANKAR	
	11A51A04A1	SHAIK RUKSANA BEGUM	

ABSTRACT

A novel micro strip patch antenna design is proposed for wide beam, and low profile applications. In this project micro strip patch antenna is structures to compose X-shaped cut on rectangular patch.

The need of high data rates for wireless communication becomes more and more urgent, and various solutions have been brought forward. This X-shaped micro strip patch antenna is an excellent design for ultra wide band applications.

The proposed antenna simulation is going to be carried out through 3d electromagnetic simulation software called ANSOFT HFSS and fabricated on dielectric substrate FR-4 by using Micro strip line feeding technique. Using Vector Network Analyzer E5071C, the fabricated antenna is going to be tested and results are to be compared with Simulation results. 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
19	11A51A0485	P.PRIYANKA	Low power and high speed reconfigurable fir filter based on a novel window technique.
	11A51A0494	P.VIHARI	
	11A51A04A4	T.LAVANYA	
	11A51A0488	P.NEELAKANTAM	

ABSTRACT

One of the most widely used operations performed in DSP is digital filtering. Other than this DSP is used in numerous applications such as video compression, digital set-top box, multimedia and wireless communication. In brief we proposed Hybrid window function(which means combination of any two window functions) with various mathematical operations for designing a FIR low pass filter and compare the results with the designing of FIR filter with individual window function in terms of relative side lobe attenuation and peak amplitude of side lobe. These results will be simulated using MATLAB.

Sl. No.	Roll No.	Name of the Student	Project Title
20	11A51A0463	K.HEMANTH	Implementation of compact i-shape fractal antenna for wireless communication applications.
	11A51A04B0	V.HARIKRISHNA	
	11A51A0496	R.SRIKAVYA	
	11X11A0403	A.SRAVANTHI	
	11A51A0482	P.PRASANTH KUMAR	

ABSTRACT

This project describes the design and simulation of different compact slot antenna using the fractal structure. It is advantageous in generating multiple frequencies and enhanced bandwidth. The shape of each antenna gives better performance. These antennas can be used in the different wireless applications i.e., Wi-Fi, WLAN and Wi-MAX etc. The proposed antennas design is considered different shapes for simulation.

The proposed antennas simulation is carried out through electromagnetic simulation software ANSOFT HFSS by using the FR-4 as dielectric substrate with coaxial probe feeding technique. The parameters that are focused here are resonant frequency, return loss, VSWR, Gain and Percentage Bandwidth.

The second iteration I-antenna resonating at four bands of frequencies i.e., at 2.3GHz, 4.5GHz, 6.4GHz and 7.9GHz with return loss of -14.3dB, -13.3dB, -18.2dB, -12.2dB. The E shape patch antenna resonates at 5.4GHz and 8.3GHz with return loss of -14.3dB and -10.9dB. The symmetric multi slot antenna resonating at 3.3GHz, 6.4GHz and 7.6GHz with return loss of -13.9dB, -13.8dB and -30.1dB.

Sl. No.	Roll No.	Name of the Student	Project Title
21	11A51A0475	M.RAJENDRA PRASAD	Sub band coding of speech signals using decimation & interpolation.
	11A51A0493	P.KALA SAGAR	
	12A55A0423	Y.RAGHAVENDRA SWAMY	
	12A55A0417	P.NARAYANA RAO	

ABSTRACT

In conventional speech processing applications. Speech signed is encoded using fixed number of bits over the entire speech signal band. During this process, the bandwidth requirement for speech transmission is relatively high which is of concern. In this project, the OMF Quadrature Mirror Filter banks which are the fundamental building blocks are used for spectral splitting of speech signal. The low pass filtered signal is decimated and encoded with more number of bits and the high pass filtered signal is also decimated and encoded but with less number of bits. These two bit streams are multiplexed and transmitted. On the receiver side, the received signal is de-multiplexed and then decided. The signal is passes though interpolators and then through the synthesis filters so as to reconstruct the speech signal. The reconstructed signal is compared with the original signal.

Sl. No.	Roll No.	Name of the Student	Project Title
22	11A51A0490	P.JOTHI KIRAN	Novel adaptive wavelet threshold for image denoising and compression.
	12A55A0421	S.MANASA	
	11A51A04B5	Y.DHANUNJAYA	
	12A55A0416	P.BHARAT KUMAR	

ABSTRACT

During the image acquisition and communication the image is corrupted by noise. This is a classical problem in the field of signal or image processing. A new compromise threshold method that improves performance is presented, based on the standard compromise threshold method, yet more flexible and easier to treat mathematically. The improved adaptive Bayesian wavelet compromise method avoids the discontinuity of the hard-threshold method, at the same time increase the correlation judgment process, improve image details loss problem. Simulation results show that the improved method is better at the adaptability, at the same time increase the correlation judgment process, improve image details loss problem.

Sl. No.	Roll No.	Name of the Student	Project Title
23	11A51A0487	P. RAJA RAO	Indoor propagation modelling using FDTD for UWB communication using mat lab.
	11A51A0486	P.SWATHI	
	11A51A0464	K.VENKATA SRINIVAS	
	11A51A04A3	S.LEELA KUMAR NAIDU	

ABSTRACT

Ultra wideband (UWB) radio (wireless transmission) technology is becoming very popular for certain short range applications including indoor communications systems, home networks, cordless phones, high speed local area networks, and security sensors in wireless communications due to reducing link lengths and higher data rate and large spatial capacity . In particular, the planning of the coverage in indoor spaces creates design problems without deterministic models. In this project, the Finite Difference Time Domain (FDTD) method is used for time domain electromagnetic modeling of ultra wideband indoor radio channel and prediction of wave propagation through indoor channel.

Many researchers investigate UWB by using MB-OFDM (Multi Band Orthogonal Frequency Division Multiplexing). The main goal of the project is to increase interest in UWB technology and to explore its usefulness by building an indoor UWB communication system that can be applied to file and message transmission.

Sl. No.	Roll No.	Name of the Student	Project Title
24	11A51A0481	N.YASWANTH KUMAR	Remote control system of high efficiency and intelligent street lighting using a Zigbee network of devices and sensors.
	11A51A0473	M.VENKAT VIKAS	
	11A51A0483	P.SWATHI	
	11A51A04B1	V.DINESH	

ABSTRACT

The proposed remote control system can optimize management and efficiency of street lighting systems. It uses Zig Bee-based wireless devices which enable more efficient street lamp-system management, thanks to an advanced interface and control architecture. It uses a sensor combination to control and guarantee the desired system parameters; the information is transferred point by point using Zig Bee transmitters and receivers and is sent to a control terminal used to check the state of the street lamps and to take appropriate measures in case of failure.

Sl. No.	Roll No.	Name of the Student	Project Title

25	11A51A0461	K.CHANDRASEKHAR	. Medical Image Enhancement Algorithm Using Edge -Based De-Noising And Adaptive Histogram Stretching
	11A51A0480	N.R.SURYANARAYANA	
	11A51A04B4	V.CHANAKYA RAJU	
	11A51A0478	N.SURYADILEEP	

ABSTRACT

In the production of medical images, noise reduction and contrast enhancement are important methods to increase qualities of processing results because of malfunctioning of sensor material which captures image or power fluctuations. Wavelet transforms have shown promising results for localization in both time and frequency, and hence have been used for image processing applications including noise removal. First, a medical image is decomposed by wavelet transform, and then all high frequency sub images are decomposed by Haar transform. At the same time, edge detection with Sobel operator is performed. Second, noises in all high frequency sub-images are reduced by edge-based soft-threshold method. Third, high frequency coefficients are further enhanced by adaptive weight values in different sub-images. Through the inverse Haar transform and the inverse wavelet transform, the enhanced image is obtained. Finally, adaptive nonlinear histogram stretching is applied to increase the contrast of resultant image. The above procedure will be implemented using MATLAB and the performance of the method will be given in terms of both objective and subjective measures.

Sl. No.	Roll No.	Name of the Student	Project Title
26	11A51A04B7	Y.RAMYA	Analysis of smart antennas using LMS & NLMS algorithms.
	11A51A04A7	T.CHARMILA	
	12A55A0422	T.BHEEMARAO	
	12A55A0415	P.SRIDEVI	

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
27	11A51A0466	K.B.DURGAPRASAD	Implementation of children tracking system on android mobile terminals.
	11A51A0468	L.KARTHEEK	
	11A51A04A9	T.RAJU	
	12A55A0418	S.SANTOSH KUMAR	

ABSTRACT

Recently, all over the world crime against children is increasing at higher rates and it is high time to offer safety support system for the children going to schools. This project focuses on

implementing children tracking system for individual child attending school. The proposed system continuously tracks the position of the children using GPS and that information is dispatch to the Parents mobile and school Principal mobiles periodically or on-demand of the Parent/Principal using GSM technology. All the modules are controlled by the host microcontroller. Here LCD is used to display the GPS values.

The GSM is a wireless communication technology stands for Global System for Mobile Communication. GSM is the world's most popular standard for mobile telephony systems. This also facilitates the wide-spread implementation of data communication applications.

The GPS is global positioning system used for tracking the position. GPS makes it possible to precisely identify locations on the earth by measuring distance from the satellites. GPS allows you to record or create locations from places on the earth and help you navigate to and from those places.

The prototype model of the project was implemented by using microcontroller AT89C51. The GPS and GSM system are used to track the position of child.

Sl. No.	Roll No.	Name of the Student	Project Title
28	11A51A04A8	TARINI PRASANTH	Density based traffic signals using microcontroller.
	11A51A04B6	V.VIJAYA KRISHNA RAJU	
	11A51A0465	K.CHANAKYA KUMAR	
	11A51A0469	M.HARI KRISHNA	

ABSTRACT

Road congestion is a common problem worldwide. We observe in general some roads are free and some roads are congested with traffic. Even though some roads are empty, green light on for empty road and the people in the congested road have to wait for green signals. This leads heavy traffic in some roads and low traffic in some roads. In our project a method is proposed by using microcontroller and the proposed method try to give the solution to solve above problem. This project is a low cost ITS technique to detect congestion.

IR transmitter continuously sends signals to IR receiver. When the road is empty received signal has high strength so microcontroller understood that the road is empty. If the road is empty it will switch on red light using relay. If the signal strength received by IR receiver is weak that means the road is congested and microcontroller switch on the green light. By using this project we can design the traffic lights system which works depending on the density of traffic on the roads.

This project uses regulated 5V, 1A power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

M.TECH PROJECTS ABSTRACTS

Sl. No.	Roll No.	Name of the Student	Project Title
1	13A51D5702	MATTA ASHA	Implementation of ASIC for high Resolution Image Compression in JPEG Format

ABSTRACT

Increase in multimedia applications drastically increased the demand for digital

information. Reduction in the size of this data for transmission and storage is very important. This is done by Image compression. JPEG (Joint Photographic Experts Group) is an international compression standard for continuous tone still image, both grayscale and color. There are software solutions as well as hardware solutions for JPEG compression depending upon the application. Hardware solutions are mainly used for high speed and parallel processing applications. As the distinct requirement for each of the applications, the JPEG standard has two basic compression methods. The Discrete cosine transform (DCT)-based method is specified for lossy compression, and the predictive method is specified for lossless compression. Simple lossy technique is baseline, which is a DCT-based method, has been widely used and is sufficient for a large number of applications. In this project, introduce the JPEG standard and focuses on the baseline method. The objective is to implement hardware based Processor and Controller for high throughput Image compression. Images have certain statistical properties which can be exploited by specifically designed encoders. Some of the finer details in the image can be sacrificed for less storage space. Images need not be reproduced exactly. An approximation of the original image is enough for most purposes, as long as the error between the original and the compressed image is tolerable. The main aim of this project is to develop a method for JPEG encoding to process large images of size 10 mega pixel or more. Encoding such a large size images in short duration is difficult in traditional software or hardware methods. This project involves development of JPEG encoder with parallel processing techniques to compress 10M pixels or more in size images in 40 milliseconds time frame. Project implementation involves development of digital blocks, coding of logic in VHDL, verification of functionality with Verilog HDL test-bench, synthesis of logic in Altera Cyclone-III FPGA and demonstrate the functionality.

Sl. No.	Roll No.	Name of the Student	Project Title
2	12A51D3807	Y. RAMANA MURTY	Development of Principal Component Analysis based Algorithm for the detection of Underwater Objects from Sonar Images

ABSTRACT

SONAR (Sound Navigation and Ranging) is a modern technology which helps to track submarines, fish, ship wrecks, map the seabed and for other navigational purposes. In underwater scenario SONAR is used to detect the objects, where as in terrestrial applications RADAR is used. Radar uses radio waves for detection of objects in atmosphere, while sonar uses sound waves (Or acoustic) for detection. In underwater radio waves cannot be used, as they attenuate at shorter distances because of the conductivity of water. In general SONAR gives the object information in the form of images by scanning the object. The scanning process is used to create a sonar image which is different from the process used by the human eye or a camera to produce optical images. SONAR sends the acoustic signals and receives the echoes of the signals after hitting the targets. These signals are displayed in the form of images which contains object information along with lot of noise. So there is a need for processing the images to identify the objects. In this project a new Principle Component Analysis (PCA) method is proposed to identify the objects. Also various segmentation methods are to be analyzed to identify the object. The both PCA and Segmentation methods are to be implemented on simulated images and real time images. The performances of all these methods are to be analyzed in terms of PSNR &

execution time.

Sl. No.	Roll No.	Name of the Student	Project Title
3	11A51D5707	S. VIJAY KUMAR	VLSI Implantation of Huffman Decoder using Binary Tree Algorithm

ABSTRACT

Huffman decoder is the one of the compression technique. Compression is useful technique in digital system, as it reduces the channel bandwidths and storage size, This project presents new Huffman decoder based on binary tree method for improving usage of memory and bandwidth. The major disadvantage of array data structure is the memory cost spent on storing such a complete binary tree by using an array, which also results in a slow decoding speed. In order to solve this problem, a new binary tree method is used. But the advantage of proposed method for representing the above Binary tree is that original data is retrieved easily and requires less memory. The proposed Huffman decoder is implemented by using ASIC and FPGA design methodologies. To implement the encoder and decoder architectures, 0.6 Micron standard cell library is used for ASIC implementation and Xilinx Spartan 2E is used for FPGA. Various performance metrics like leakage power, dynamic power and area are obtained by using ASIC and FPGA implementations and the results are compared. The simulations are carried out by using Model sim tool.

Sl. No.	Roll No.	Name of the Student	Project Title
4	13A51D3804	H. NAGAVENI	A Novel video stabilization Qualify Assessment Algorithm

ABSTRACT

The poor image quality of many video surveillance cameras will lead to unanticipated effects; they are limitedly suitable for the purposes of identifying a person, a license plate, etc. Under certain conditions, however, it may be possible to combine multiple video frames for such identification tasks. Motion in video images is caused either by the object motion or by the camera movement. A stable output video will be attained without the effect of jitter that caused by shaking the handheld camera during video recording. Firstly salient points from each frame from the input video is identified, processed and followed by optimization and stabilization of the video. Optimization includes the quality of the video stabilization The output of using such method showed good result in terms of stabilization and discarded distortion from the output videos recorded in different circumstances. Harris corner detection method was used to identifying corner points, but unable to remove jitter caused by shaking camera. A logical and computationally efficient technique for video stabilization and enhancement has been presented. The recent significant advance in video stabilization is to create a new video sequence where the motion between frames has effectively been removed. The newly developed algorithm FAST detection algorithm presented in this work provides a fast and robust stabilization system, and alters real-time performance. The project is implemented by using MATLAB Release 2013a.

Sl. No.	Roll No.	Name of the Student	Project Title
5	13A51D3813	G. RAVIKUMAR	Implementation of 2-D DCT

			Architecture for Optimized Area and Power Utilization

ABSTRACT

The main challenging areas in VLSI are performance, cost, size, speed and power dissipation. The demand for portable computing devices and communications system are increasing rapidly. These applications require low power dissipation VLSI circuits. Hence low area and less power dissipation circuits are needed to improve the performance of the chip. A new approach termed as Space-Time Scheduling (STS) strategy is introduced where both area and performance evaluations are improved simultaneously. To reduce an area to proposed architecture is designed for both 1-D and 2-D applications using cascading approaches. In that it can calculate 1-D and 2-D transformations simultaneously in single 1-d Discrete Cosine Transform (DCT) core to reach less hardware utilization. The DA-precision bit length is chosen as 9 bits instead of the traditional 12 bits to reduce the size of the chip without any degradation of the performance. Modules in the 1-D Discrete Cosine Transform (DCT) core, including the modified Two-Input Butterfly (MBF2), the pre reorder, the Process Element Even (PEE), the process Element Odd (PEO), and the post reorder share the hardware resources in order to reduce the area. The adders in the design are replaced by a low power and area efficient adders to improve the overall performance of the system.

Sl. No.	Roll No.	Name of the Student	Project Title
6	13A51D3808	M. ESWARA RAO	Audio Equalizer with Fractional order Butterworth Filter

ABSTRACT

An attempt made to implement Fractional order infinite impulse response (IIR) Butterworth filter. This has given sharp cut off frequency and better spectral response. An audio application like CD player, digital audio equalizer is one used to make sound as one desire by changing filter gains for different audio frequency bands. Other application include adjusting the sound source to take acoustics into account removing un desired noise and boosting the desired signal in the specified pass band of Butterworth is key block in equalizer. Here, an attempt will be made to implement such band pass filters in equalizer using fractional order Butterworth filter (FBWF). In S-plane Butterworth filter is implemented for both integer and fractional order but equalization purposed want to convert into complex-plane. Detailed mathematical calculations will be presented.

Sl. No.	Roll No.	Name of the Student	Project Title
7	13A51D3816	CH. MONICA	A Bandwidth Degradation Technique to Reduce call Dropping Probability in Mobile Network Systems

ABSTRACT

In Mobile networks various kinds of encoding schemes were used for transmission of data over a bandwidth. The desired quality and generated traffic varies with the requirement with this bandwidth. A generic video telephony may require more than 40 kbps whereas a low motion video telephony may require bout 25 kbps for data transmission. From the designing point of view these requirements demands for an alternative resource planning, especially for bandwidth

allocation in wireless networks. In wireless network where bandwidth is a scare resource, the system may need to block incoming user if all of the bandwidth has been used to provide highest quality of service to existing users. However this bandwidth resource planning may be unacceptable for larger application. A degradable approach to multiple users can be made on bandwidth allocation to reduce the blocking probability without degrading the quality of service to existing users to an unacceptable level. This work aims towards a realization of a mobile network using W-CDMA multi access technique supporting multilevel quality of services. The bandwidth allocation to multiple users is adjusted dynamically according to the required network condition so as to increase bandwidth utilization. The work analyzes the performance deriving the degradation period ratio., mean degradation time and degradation state for the implemented wireless network. The proposed work is aim to implement on Mat lab tool for its functional verification considering various mobility patterns

Sl. No.	Roll No.	Name of the Student	Project Title
8	13A51D3815	CH. SWATHI	A Novel Approach to Design High Speed and Low Power Parallel Counter

ABSTRACT

The main objective of this project is to design and analyze the operation and performance characteristics of counter and counter and to implement certain techniques which make the counter efficient in terms of operating frequency and dynamic power consumption. In this process concept of clock gating is adopted in the design of counter in order to reduce the unnecessary switching activity of the counter which further helped in reducing dynamic power consumption. Counters with varying widths are designed and implemented. Parameters like area occupied by counter, operating frequency and dynamic power consumption are measured and analyzed. Comparison between the parallel counter and proposed counters in terms of area, operating frequency and dynamic power consumption is done. Considering the advantage of double edge triggered topology, a counter is proposed which is capable of operating at high frequency with less dynamic power consumption and that is able to perform the total count in half the time required by the parallel counter. The counter is described in verilog Hardware description language and if functionally tested using CADENCE sim vision simulator. The synthesis of the counter is done using the RTL compiler. Synthesis of proposed counter for different technologies is performed. Encounter tool is used to perform placement and routing for the proposed counter with 90nm technologies.

Sl. No.	Roll No.	Name of the Student	Project Title
9	13A51D3809	PAKKI PAVANI	Design of a Novel Image Fusion Algorithm for Impulse noise removal in remote sensing Images by using the Quality Assessment

ABSTRACT

Now-a-days remote sensing plays very important role in satellite based communication. The satellite gives images in digital format. Digital images are often corrupted during acquisition, transmission or due to faulty memory locations in hardware. This corruption can be caused by a camera due to the faulty nature of the sensor or during transmission of coded images

in a noisy communication channel. Consequently some pixel intensities are altered while others remain noise free. The images captured by multiple sensors can be differently noised depending on the proximity to the object, environmental disturbances and sensor features. There are different types of noises produced in satellite images such as Impulse noise, Speackle noise, Gaussian noise and Quantization noise.

Sl. No.	Roll No.	Name of the Student	Project Title
10	13A51D5701	K. JANARDHANA RAO	Intelligent Approach for decision making in Handover Process Management

ABSTRACT

To coordinate the various access technologies in the 4G-communication system, intelligent vertical handoff algorithms are required. In order to improve the accuracy of the vertical handoff decision for radio heterogeneous networks, this project proposes a multi-criteria Vertical Handoff Decision Algorithm (VHA). This algorithm uses Fuzzy Inference System (FIS) of MATLAB for simulation. The FIS adopts crucial criteria of the vertical handoff as the input variables such as Received Signal Strength (RSS), bandwidth, power consumption, transmission range etc, and makes handoff decision based on the defined rule base.

This project explains Fuzzy based vertical handover algorithm and FIS performance. Fuzzy based vertical handover algorithm determines whether a handover is necessary to an available network. Algorithm chooses the "best" candidate network among the available candidate network based on a set of parameters and it has two levels named as primary and intermediate where different parameters of different technologies are considered and processed. The entire work of the project is divided into four chapters. Introduction of 4G networks and their challenges are discussed in the first chapter. In chapter II a brief discussion on literature survey and discussion about handover mechanism and handover algorithms are presented. The chapter III contains description about fussy based vertical handover algorithm.

Sl. No.	Roll No.	Name of the Student	Project Title
11	13A51D5713	PADDANA HEMAMALINI	Realization of FIR filter design for low power efficient digital signal processing applications

ABSTRACT

Digital filters are becoming very important in audio applications. Good digital filter performance is important in audio system design. Digital filters differ from conventional analog filters by their use of finite precision to represent signals, coefficients and finite precision arithmetic to compute the filter response. Multiplication is one of the most area consuming arithmetic operations in high performance circuits. Here FIR filter is designed, generally FIR filter consists of multipliers and adders. The FIR filter designs use different type of multipliers to reduce the cost effective parameters. In this project truncated filter is designed. FIR filters with modified Wallace multipliers along with truncated multipliers are designed. So ultimately truncated multiplier and Wallace multiplier is compared in terms of power, memory and area.

Sl. No.	Roll No.	Name of the Student	Project Title

12	13A51D5715	POTNURU. BOBITHA	Significance of Weighted Type Fractional Fourier Transform in FIR Filters

ABSTRACT

The desired frequency response of a filter is periodic in frequency and can be expanded in Fourier series. One possible way of obtaining FIR Filter is to truncate the infinite Fourier series. But abrupt truncation of the Fourier series results in oscillation in the pass band and stop band. These oscillations are due to slow convergence of the Fourier series by the Gibb's phenomenon. To reduce these oscillations the Fourier coefficients of the filter are modified by multiplying the infinite impulse response with a finite weighing sequence called a window.

The Fourier Transform (FT) of a window consists of a central lobe and side lobes. The central lobe contains most of the energy of the window. To get an FIR filter, the desired impulse response and window function are multiplied results to give finite length non-causal sequence is obtained.

Fractional Fourier Transform (FrFT) is generalization of FT. Here an attempt is to implement Weighted Type Fractional Fourier Transform (WFrFT) based FIR filters using window method. This windowed concept of FrFT is extended to design Differentiator and Integrator. The WFrFT is a powerful time frequency tool and is very useful I signal processing and Image Processing.

Sl. No.	Roll No.	Name of the Student	Project Title
13	13A51D5703	PYDI KALPANA	Design and analysis of Low swing conditional capturing flip flop for LC resonant clock distribution networks

ABSTRACT

A Clock Distribution Network in digital integrated circuits distributes the clock signal which in turn acts as a timing reference for controlling the data flow in the system. The clock signal always operates at higher frequencies and consumes large amount of power in the synchronous systems. Approximately 30%-50% of high performance processor's power is consumed in the clock distribution network. Latest development in 3D integration where multi-plane synchronization is required, lead us to believe that the power consumption of the clock distribution network will remain at high levels. Using resonant clocking the clock signals can be achieved. In the existing systems CDN's are using intermediate buffers as the processing element which will be combined of high number of components. As it is having high number of components the power consumption is also increased. To overcome this problem, in this dissertation a method is proposed i.e., Low Swing Differential Conditional Capturing Flip Flops (LS-DCCFF). It is implemented using Low Swing LC Resonant CDN's. In this approach LS-DCCFF operates with a low swing Sinusoidal clock through the utilization of reduced swing inverters at the clock port. No additional power is required to achieve low swing clocking. Here an general use Reduced Swing Inverters can be done, which are connected to the node and a low swing sinusoidal clock will be generated as a result. The LS-DCCFF enables 6.5% reduction in power compared to the full swing flip flop with 19% area overhead. The functionality of low swing differential conditional flip flop can be tested and verified using H-spice tool.

Sl. No.	Roll No.	Name of the Student	Project Title
14	13A51D5704	B.M SOUJANYA	Speech Enhancement using Combinational adaptive LMS algorithm

ABSTRACT

In signal processing the key parameter is to cancellation of noise signal from desired information. In this Project, an attempt is made to analyze the different parameters for cancellations of noise like SNR, Steady state error and Convergence factor based on adaptive LMS algorithm. To obtain denoised signal at output by using combinational adaptive LMS algorithm like Standard LMS, Normalized LMS, Variable step sized LMS, Sign step sized LMS, Linear smoothing LMS, Non linear Smoothing LMS etc. The fundamental idea behind LMS is to implement filter with FIR for different window functions that are Rectangular, Hamming and Hanning etc. Finally the observations made on test signal and speech signal for different LMS algorithm based on adaptive filter is presented.

Sl. No.	Roll No.	Name of the Student	Project Title
15	12A51D5705	K. LAKSHMI PRASANNA	Design of CPW-FED Monopole antenna with L-Shape and T-Shape for WLAN/WIMAX applications

ABSTRACT

A novel dual-band design of a finite ground coplanar waveguide (CPW)-fed monopole antenna is presented for simultaneously satisfying wireless local area network (WLAN) and worldwide interoperability for Microwave Access (Wi-MAX) applications. The proposed antenna comprising a rectangular planar patch element embedded with L shape and T shape slots in the middle of the patch element. The simulated -10dB bandwidth for return loss is from 2.0 to 2.2GHz and 2.8GHz to 3.1GHz, covering some of the Wi-MAX and WLAN bands. Prototypes of the obtained optimized antenna have been designed and constructed. The antenna has 22.5% (-10dB return loss) band width ranging from 2 to 2.2GHz, and -21 dB return loss is from 2.85 to 2.95GHz. The parametric study is performed to understand the characteristics of the proposed antenna. Also, good antenna performances such as radiation patterns and antenna gains over the operating bands have been observed and VSWR is 1.6 at 2.4 GHz.

Sl. No.	Roll No.	Name of the Student	Project Title
16	12A51D3802	GEMBALI KRISHNA RAO	Performance Analysis of Adaptive MIMO based OFDM Using FFT and DWT

ABSTRACT

Orthogonal Frequency Division Multiplexing (OFDM) is a Multi Carrier Modulation (MCM) scheme which converts a broadband frequency-selective channel into parallel flat-fading narrowband sub-channels. Cyclic Prefix (CP) is added to each symbol to mitigate the Inter Symbol Interference(ISI) caused by multipath wireless channel. Cyclic prefix leads to spectral inefficiency and causes ripples in the Power Spectral Density (PSD) of the Ultra Wide Band (UWB) signal. This results increase in power losses when OFDM is implemented using Fast Fourier Transform (FFT).

On the other hand, wavelet based modulation satisfies orthogonality criterion by orthogonal wavelet filter banks. In this method traditional sinusoid carriers of the Fourier based OFDM are replaced with suitable wavelets. Wavelet based systems have been shown to have better immunity to impulse and narrowband noises than Fourier OFDM. Moreover, Discrete Wavelet Transform (DWT) based OFDM doesn't require any CP; so, it increases spectral efficiency, not produce the ripples, reduces complexity and leading to a better symbol rate. Therefore, there is no power wastage for redundancy in the case of Discrete Wavelet Transform (DWT) based OFDM. Also the performance of equalization in wavelet system is better than conventional OFDM. Wavelet packet modulation will have much lower side lobes in transmitted signals which reduce the Inter-Carrier Interference (ICI) and Narrow Band Interference (NBI).

Recently the implementation of Multiple Input and Multiple Output (MIMO) has dramatically improved the channel capacity performance of wireless communication system. Here the basic principle is to exploit multipath signals in order to improve signal quality, increase in the range and throughput. MIMO systems are equipped with multiple number of antennas at both transmitter and receiver side to improve communication performance. MIMO offers a significant improvement in data throughput without additional bandwidth requirement. This is achieved by higher spectral efficiency and link diversity by reducing fading.

DWT with Haar mother constructed multicarrier in addition to the predictable OFDM is less than the consequence of taking multiple antennas scheme while taking Binary Phase Shift Keying (BPSK) and Quadrature Phase Shift Keying (QPSK) as dual modulation schemes in Additive White Gaussian Noise Channel (AWGN). Based on the performance of bit error rate to the signal to noise ratio, the DWT constructed multicarrier scheme was established to be higher than the predictable OFDM.

For further improvement in bit error rate performance of DWT based MIMO OFDM in this project adaptive modulation scheme is used. In adaptive modulation, the IDWT Haar transform output is given as feedback to it through the IDWT IBO transform at the transmitter and in adaptive demodulation; the DWT Haar transform output is given as feedback to it through the DWT BO transform at the receiver. The results obtained are proves that, while using adaptive modulation in DWT based MIMO OFDM system results higher BER performance than DWT based MIMO OFDM system. The simulation results for performance of bit error rate to the signal to noise ratio are generated by using the MATLAB software.

Sl. No.	Roll No.	Name of the Student	Project Title
17	13A51D3807	LINGALA VIJAYA LAKSHMI	Radar target characteristics extraction using polarization scattering matrix

ABSTRACT

Now a day's characterization of targets using radar is very important in Air Traffic Control, Defense, Stealth etc. Radar Cross section is used to measure the characteristics of the targets. The response of the radar target is profoundly influenced by the operating frequency, the target orientation relative to the radar system, and the radar waveform and processing. RCS as a scalar number which is a function of Polarization of incident and received waves. The measurement of the polarization is called polarimetry. Radar polarimetry is the science of acquiring, processing and analyzing the polarization state of an electromagnetic field. In-depth study of radar cross section in terms of transmitted and received polarizations in an attempt to better understand the potential of polarimetric Radar. The basics for this analysis is the

polarization scattering matrix. The polarization scattering matrix, is a generalization of the concept of radar cross section, and includes amplitude, Phase and polarization. In order to know the characteristics of the target it is very essential to know the polarization properties of that particular target which depends upon scattering nature of the target. The polarization properties are important for radar target besides amplitude, phase and frequency. The polarization may be potentially used to improve the target detection, anti-interference, and radar target recognition. Polarization properties of a target can be obtained using polarization scattering matrix (PSM). In this project the polarization matrix of various geometrical shapes are derived. For radar target recognition (RTR), a method using properties of the polarization scattering matrix(PPSM) is developed in this project. A sphere and dipole have been considered to calculate the polarization matrix and polarization properties. The properties of the polarization scattering matrix: the determinant, trace of power scattering matrix, Depolation and Eigen polarization angle are analyzed. These properties are analyzed for different orientation angles of the target.

Sl. No.	Roll No.	Name of the Student	Project Title
18	13A51D3811	PUNDRU PRASANTH KUMAR	Analysis of Steganographic colour image by using integer wavelet transformation (IWT)

ABSTRACT

The word steganography is originally composed of two Greek words steganos and graphia, which means “covered writing”. The use of steganography dates back to ancient times where it was used by romans and ancient Egyptians. The modern digital Steganography started by Simmons in 1983. Any digital file such as image, video, audio, text or IP packets can be used to hide secret message. There are a number of steganographic schemes that hide secret message in an image file, these schemes can be classified according to the format of the cover image or the method of hiding. We have two popular types of hiding methods, spatialdomain embedding and transform domain embedding. Steganography attempts to hide the very existence of the message and make communication undetectable. Many techniques are used to secure information such as cryptography that aims to scramble the information sent and make it unreadable while steganography is used to conceal the information so that no one can sense its existence. In most algorithms used to secure information both Steganography and Cryptography are used together to secure a part of information. Steganography has many technical challenges such as high hiding capacity and imperceptibility. Steganography is used to hide a secret message within a cover image, thereby yielding a stego image such that even the trace of the presence of secret information is wiped out. The purpose of Steganography is to maintain secret communication between two users. In this project we propose a modern Steganography technique with integer Wavelet transform (IWT) to achieve high hiding capacity, high security and good visual quality. Here cover image is converted in to wavelet transform coefficient and the coefficient are selected randomly and embedding the data. Secrete key is used to calculate the number of bits to be embedded in the randomly selected coefficients. Finally, the Optimum pixel Adjustment process (OPAP) is applied to the stego image to reduce the data embedding error.

Sl. No.	Roll No.	Name of the Student	Project Title
19	13A51D3805	KANCHU SANTOSHI	Performance improvement in noise reduction based on double density

			dual tree complex wavelet transform

ABSTRACT

Now a days, noise is the main problem in image processing. There has been a lot of research work dedicated towards image denoising. However, with the wide spread of image usage in many fields our lives, it becomes very important to develop new techniques for image de-noising. The noise may be added from the image sensors, environmental causes. Apart from these reasons, the noise may be increased during the image processing techniques such as image enhancement.

In general, image denoising techniques employs windowing techniques like wavelets. Among the existing wavelet techniques, Double Density Dual Tree Discrete Wavelet Transform provides more directionality and shift invariants. After decomposing the image into wavelet coefficients, threshold techniques have to applied to shrink the noise. The existing denoising technique considers one of the noise distributions to calculate threshold factor, so it provides lower PSNR values. To increase the PSNR values, proposing a novel method by feeding the directive noise samples from input image to threshold factor calculation. This method adapts soft thresholding with DDDTDWT for better performances.

Sl. No.	Roll No.	Name of the Student	Project Title
20	13A51D5709	KONDETI LAKSHMI	Implementation of FIR Filter Using Booth Multiplier and Carry Skip Adder

ABSTRACT

In modern days digital filters are extensively used in all areas of electronic industry because these filters have the potential to attain much better signal to noise ratios than analog filters. Finite Impulse Response (FIR) are one of the two primary types of digital filters used in digital signal processing. Computations in these devices need to be performed using low-Power, area-efficient and operating at greater speed. Multipliers and adders are the most fundamental components of the processor. Optimizing the speed and area of a multiplier is a major design issue. The area and speed are the conflicting constraints because the faster speed results in the larger area. Based on these requirements several multipliers and adder implementations are available. In this project the Finite Impulse Response filter is implemented using BOOTH multiplier and CARRY SKIP adder. The booth multiplier is combined with adders in the design of FIR filter so that they occupy less amount of space when compared with normal multiplier. This criterion is very important in the fabrication of the chips and the high performance system requires components which are as small as possible. Finally the simulation and synthesis is performed using XILINX ISE 13.1v. and the results obtained are compared with the results obtained by using Multiple Constant Multiplications(MCM) multiplier in the design of FIR filter in terms of delay, power consumption, area and speed to say which one is the Best.

Sl. No.	Roll No.	Name of the Student	Project Title
21	13A51D5708	K.PRAMEELA	Analysis of radiation pattern characteristics For array antenna

ABSTRACT

Antenna is a metallic device that exists almost in all electronic and communication equipments in the present world, starting from a toy car to most advanced GPS system it stands as the backbone. It is a transducer generally used for radiating or receiving radio waves. With the advancement in technology different antennas are emerged down the time. It can be noticed that a single antenna element is not enough to meet the constraints for most of the practical applications and, hence an array of antenna elements are being used to meet the requirements of the system. The three basic antenna array structures are linear, planar and circular arrays.

The applications which involve broadcasting needs an antenna of high directivity (in the zone of transmission) 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. 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. To overcome this, a planar array design is proposed in this project that provides high directivity with reduced number of elements than a normal planar array design.

Other way of generating desired beam pattern is by synthesizing the antenna radiation pattern. Schelkunoff polynomial synthesis method is one being used in linear array design for suppressing radiation in undesired directions, there by increases the directivity. So in this project Schelkunoff method is extended to planar array antennas to produce high directive beam with low cost and size. For implementing this project MATLAB software is used.

Sl. No.	Roll No.	Name of the Student	Project Title
22	13A51D3802	CHINTHADA LAVANYA	Medical Image Enhancement Based On Wavelet Transform

ABSTRACT

Medical Images are often degraded by electronic equipment, power fluctuations and surrounding environment conditions. Medical images are widespread use in the detection of numerous diseases but noise and blurs present in medical images create obstacles in diagnose diseases. In this project, Blind Image De-convolution (BID) procedure is implemented to restore mammographic images from Gaussian blur and then enhancement process is done using real dual tree wavelet transform. The result of these methods is compared with the hybrid combination of BID, conventional wavelet transform and median filter approach to remove Gaussian noise, Salt & Pepper and Speckle Noise with Gaussian blur. Mini-MIAS database is considered to evaluate the performance of these techniques.

Sl. No.	Roll No.	Name of the Student	Project Title
23	13A51D5711	M.M. GAYATHRI	Design And Analysis Of Novel Compact C-Band Antenna For Wideband Applications

ABSTRACT

A novel micro strip patch antenna design is proposed for narrowband, wide beam, and low profile applications. In this project micro strip patch antenna is utilized as a pair of stepped structures to compose U-shaped cut on rectangular patch.

The need of high data rates for wireless communication becomes more and more urgent, and various solutions have been brought forward. The C-band is a name given to certain portions of the electromagnetic spectrum including wavelengths of microwaves that are used for long-distance radio telecommunications. The IEEE C-band (4 GHz to 8 GHz) and its slight variations - contains frequency ranges that are used for many satellite communications transmissions, some Wi-Fi devices. This U-shaped micro strip patch antenna is an excellent design for wide band applications particularly considering applications in C-band.

The objective of this work is to present the analysis of antenna, which are applicable for wideband applications and, in particular, to the requirements of the C-band compact antennas. This is going to be done through a review of the scientific literature on the subject, and the design, computer simulation, and experimental verification, of various suitable designs of antenna.

The proposed antenna is simulated in 3D electromagnetic simulation software called ANSOFT HFSS and fabricated on dielectric substrate FR-4 by using CPW feeding technique. The fabricated antenna is tested on Vector Network Analyzer E5071C and results are compared with Simulation results. 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
24	13A51D3803	D. HIMA BINDU	Performance Evaluation of EDGE Directional Image Interpolation Scheme

ABSTRACT

Earlier there were different interpolation techniques for denoising 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 "DIRECTIONAL DENOISE SCHEME" tries to amend the interpolation error. Meanwhile edge preservation is a critical issue in both image denoising and interpolation. In this project, directional denoising scheme interpolation methods used to address the edge preservation. Linear interpolation methods have been introduced without considering specific local information on edges results into artefacts. Non linear interpolation methods have been suggested to reduce the artefacts of linear method. These non linear methods are often computation intensive and they can be more expansive 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.

Faculty publications

RADAR TARGET CHARACTERISTICS EXTRACTION USING POLARIZATION SCATTERING MATRIX

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Abstract

It is very important to know the characterization of targets using radar. It is extensively used in various applications. The polarization properties are important for radar target besides amplitude, phase and frequency. The polarization may be potentially used to improve target detection, anti-interference, and radar target recognition. Characteristics of the target can be known by using the polarization properties of that particular target. This depends upon scattering nature of the target. Using polarization scattering matrix (PSM), we can obtain the properties of the target. The derivations of scattering matrix for some other various geometrical shapes are presented in this paper. By using the method of the properties of polarization scattering matrix (PPSM) for radar target recognition (RTR) is presented in this paper. The polarization matrix and properties for a dipole is calculated by considering that dipole as target. These properties of the polarization scattering matrix are analyzed for different orientation angles for a target.

Keywords: Polarization, Scattering Matrix.

A NEW BUTTERWORTH FEATURED FILTER, WINDOW FUNCTION, DIFFERENTIATOR AND INTEGRATOR FOR SIGNAL AND IMAGE PROCESSING

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Abstract: The Butterworth filter achieve its flatness at the expense of a relatively wide transition region from pass band to stop band with average transient characteristics. This filter is completely defined mathematically by two parameters i.e., cut-off frequency and the number of poles. In this proposal an attempt is made to derive new mathematical transfer function of Butterworth and which will compared with existing function in terms of order and its filter characteristics. Using the features of this new Butterworth transfer function, it is extended to use as a window function for spectral characteristics , implementation of differentiator and integrators and finally apply 2-D form low pass ,high pass filters for image enhancement .

Index terms: Butterworth ,window function,Differentiator and Integrator.

Gps Receiver Position Estimate With Least Squares And Linear Quadratic Estimator

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ABSTRACT: GPS is a mechanism of attaining the position of any object on or above the earth surface. There are many applications GPS is emerging, which demand multiple level of accuracy in the GPS position estimate, ranging from tens of meters to centimeter level accuracy.The accuracy of GPS position estimate is influenced by various factors like satellite geometry, ionosphere and troposphere delays, multipath effects, number of satellites in view and navigational solution employed. Many of the above factors do not have static behavior globally, and need to be examined regionally to provide a precise solution. This paper mainly focuses on implementation of LSE (Least Square Estimator) and LQE (Linear Quadratic Estimator) on the data taken from dual frequency GPS receiver located at IISC, Bangalore (13.0210N/77.50E) to

provide with suitable navigational algorithm over Southern area of Indian Sub-continent. The algorithm performance based on 2D and 3D statistical position accuracy measures CEP (Circular Error Probability), SEP (Spherical Error Probability), DRMS (Distance Root Mean Square Error) and Confidence Level (CL 40 mts) is evaluated to characterize their performance over this region
Keywords—TOA;LeastSquares; GES; CEP; SEP; DRMS, MRSE

Satellite SET Correction for Precise Medium Earth Orbit Estimation

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ABSTRACT Global Positioning System (GPS) is a all weather 24 hours navigation system that provides a precise three dimensional user position (x,y,z), velocity and time. The user position accuracy is affected by several errors such as onboard atomic clock error (satellite clock error), propagation path delays and receiver noise. Their impact estimation on pseudorange and orbital solution is inevitable in order to improve the precision of the navigation solution. This paper emphasises lack of synchronisation of onboard atomic clock and the GPS system time. Signal emission time of satellite is precisely estimated by considering the clock corrections parameters, signal reception time at the receiver and pseudorange measured between the satellite and the receiver. This signal emission time from the satellite needs to be corrected in order to meet the requirements of critical navigation applications such as CAT I/II aircraft landings. The errors are estimated for a geographical location in Indian subcontinent for typical data collected on 11th March 2011 from the dual frequency GPS receiver located at Department of Electronics and Communication Engineering, Andhra University College of Engineering, Visakhapatnam. During the observation period of 01:22:30 hours at least 9 satellites were visible. Though the data is processed for all visible satellites the result analysis for SVPRN05 and SVPRN26 are presented in this paper. The satellite clock error resulted in estimated signal emission time to be earlier by about 127 microseconds for SV PRN05 and 141 microseconds for SV PRN26. The orbital solution errors for the respective satellites are detailed in later part of this paper.
Keywords— Onboard atomic clock , Signal Emission Time, Pseudorange, Orbital solution.

Performance Analysis of Edge Detection Methods for X-ray images in Spatial domain

MNVS Santosh Kumar, G.Sateesh kumar, Department of ECE, AITAM,

ABSTRACT Edge detection is a method of segmenting an image into regions based on gray level discontinuities. It filters out unwanted data, noise and frequencies while preserving the important structural properties of an image. So it is essential to have a good understanding of edge detection methods. The edge detection of X-ray image, helps medical practitioners to study the bone structure and detects the minute fractures. This paper presents comparative analysis of different spatial domain edge detection methods for X-ray images. The various spatial domain edge detection operators such as Roberts, Prewitt, sobel, Laplacian of Gaussian and canny are analyzed. Then according to the simulation results, the advantages and disadvantages of these edge detection operators are compared for edge detection. The experimental results shows that the Canny edge detection performs superior than other operators in terms of visual quality. The canny operator has less computation time when compared with other derivative operators. After experimentation, edge detection method proposed in this paper is feasible. Keywords— X-ray image; Edge detection; image processing; differential operator

Implementation of MRA based Biorthogonal Wavelets for Edge Feature Extraction of X-ray Image

MNVS Santosh Kumar Department of ECE, AITAM,

ABSTRACT The X-ray images are extensively used by the medical practitioners to detect the minute fractures of bone images as they are painless and economical compared to other image

modalities. The X-ray images are to be processed for detecting the minute fractures. The edge feature detection deals with detecting meaningful discontinuities in intensity values. Edge detection of Xray images using Multiresolution Analysis(MRA) based biorthogonal wavelets is more preferable when compared with orthogonal wavelets because of more flexibility. The orthogonal wavelet transforms like Haar, daubechies etc can be used as edge detector, but a lot of false edge information will be extracted. Therefore biorthogonal wavelet transforms like bior1.3,bior2.4,bior3.9, bior5.5,bior6.8 are applied to detect the edges and are compared for edge feature extraction. Among all the methods, biorthogonal wavelet bior1.3 performs well in detecting the edges with better quality. The various performance metrics like Ratio of Edge pixels to size of image (REPS), peak signal to noise ratio (PSNR) and computation time are compared for various wavelets.for edge feature extraction. Keywords: biorthogonal wavelet; edge detection; symmetry, multiresolution analysis.

Investigation of various orthogonal wavelets for precise analysis of X-ray images

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ABSTRACT Now-a-days X-rays are playing very important role in medicine. One of the most important applications of Xray is detecting fractures in bones. X-ray provides important information about the type and location of the fracture. Sometimes it is not possible to detect the fractures in X-rays with naked eye. So it needs further processing to detect the fractures even at minute levels. To detect minute fractures, in this paper various edge feature extraction methods are analyzed which helps medical practitioners to study the bone structure, detects the bone fracture, measurement of fracture treatment, and treatment planning prior to surgery. The classical derivative edge detection operators such as Roberts, Prewitt, sobel, Laplacian of Gaussian can be used as edge detectors, but a lot of false edge information will be extracted. Therefore a technique based on orthogonal wavelet transforms like Haar, daubechies, coiflet, symlets are applied to detect the edges and are compared. Among all the methods, Haar wavelet transform method performs well in detecting the edges with better quality. The various performance metrics like Ratio of Edge pixels to size of image (REPS), peak signal to noise ratio (PSNR) and computation time are compared for various wavelets. Keywords - Edge detection, Multi-resolution analysis, orthogonal wavelet, Wavelet transforms

Neutral Atmospheric Delay Effects on GPS C/A Code for Precise Navigation Applications

MNVS Santosh Kumar Department of ECE, AITAM

The Global Positioning System (GPS) is a satellite-based navigation system that provides a precise three-dimensional user position (x, y, z), velocity and time. Electromagnetic carrier signals transmitted by each satellite are affected by the transmission medium, i.e., earth’s atmospheric layer in particular the nonionized tropospheric layer. For many precision applications, position estimates need to be corrected for number of errors, and one of the major error sources to be corrected is satellite clock error and propagation path delay in the troposphere, which is lower atmospheric layer, also known as neutral atmospheric layer (extending from the earth's surface up to an altitude of approximately 50 km). The problem in determining the tropospheric delay is the modeling the wet delay components with high precision, as these components (temperature, humidity and pressure) of the neutral atmospheric layer are highly influenced by the distribution of water vapor which cannot be precisely predicted. These atmospheric parameters act as additional unknowns in the analysis of GPS data and in estimation of receiver position. The tropospheric delay at zenith is about 2 to 4 m. In this paper, the tropospheric delay estimation method proposed is function of orbital dynamics and atmospheric conditions. The pseudorange computed using the C/A code measurements of carrier

signal transmitted by each satellite is corrected for this delay and aging of atomic clock and compared with the geometric range. The delays are estimated for the typical data collected on March 11, 2011 from the dual frequency GPS receiver located at Department of Electronics and Communication, Andhra University College of Engineering, Visakhapatnam

Performance analysis of biorthogonal wavelets for edge feature extraction of X-ray images based on parameterized filter design

MNVS Santosh Kumar , Department of ECE, AITAM

Abstract

The edge feature extraction of X-ray bone image helps medical practitioners to study the bone structure to identify the bone fracture. It is the most common approach for detecting meaningful discontinuities in intensity values. This paper proposes new biorthogonal wavelet based on parameterized algebraic construction method. The two parameters such as scale factor and sign factor which are introduced to assign the characters of biorthogonal wavelet. By choosing different sign, the waveform shape can be changed distinctly. Using scale factor, the detail such as softness can be adjusted. Two biorthogonal wavelets like zbo6. 6, zbo6. 10 are designed by parameterized filter based on perfect reconstruction condition, which is necessary condition for wavelet design in edge detection. The support interval of the filter, symmetry and vanishing moments are selected for edge detection. The simulation results shows that the parameterized design of biorthogonal wavelet is simple, feasible for edge feature extraction. The biorthogonal wavelet zbo6. 6 performs better in detecting the edges with better quality. The various performance metrics like Ratio of Edge pixels to size of an image (REPS), peak signal to noise ratio (PSNR) and computation time are compared for various biorthogonal wavelets for edge feature extraction.

Performance Analysis of Adaptive MIMO Based OFDM using FFT and DWT

Adari Satya Srinivasa Rao Department of E.C.E, AITAM, Tekkali

Abstract

In this paper we examine the performance of Discrete Wavelet Transform (DWT) based Multiple Input Multiple output (MIMO) Orthogonal Frequency Division Multiplexing (OFDM) system using adaptive modulation and compare with DWT based MIMO OFDM system and Fast Fourier Transform (FFT) based MIMO OFDM system. Wavelet based OFDM has lot of advantages compare to the FFT based OFDM like there is no need of cyclic prefix, flexibility and optimal resolution. DWT with Haar mother constructed multi carrier in addition to the predictable OFDM is less than the consequence of taking multiple antennas scheme while taking BPSK and QPSK as dual modulation schemes in additive white Gaussian noise channel (AWGN). Based on the performance of bit error rate to the signal to noise ratio, the DWT constructed multicarrier scheme was established to be higher than the predictable OFDM. While using adaptive modulation in DWT based MIMO OFDM system with BPSK results in higher BER performance than DWT based MIMO OFDM system.

Design of Biorthogonal Wavelets Based on Parameterized Filter for the Analysis of X-ray Images

M. N. V. S. S. Kumar Kumar Department of E.C.E, AITAM, Tekkali,

The X-ray bone images are extensively used by the medical practitioners to detect the minute fractures as they are painless and economical compared to other image modalities. This paper

proposes a parameterized design of biorthogonal wavelet based on the algebraical construction method. In order to assign the characters of biorthogonal wavelet, there are two kinds of parameters which are introduced in construction process. One is scale factor and another one is sign factor. In edge detection, the necessary condition of wavelet design is put forward and two wavelet filers are built. The simulation results show that the parameterized design of biorthogonal wavelet is simple and feasible. The biorthogonal wavelet zbo6.6 performs well in detecting the edges with better quality. The various performance metrics like Ratio of Edge pixels to size of image (REPS), peak signal to noise ratio (PSNR) and computation time are compared for various biorthogonal wavelets.

Keywords
Biorthogonal wavelet Symmetry Vanishing moments Parameterized Support interval Filter banks

High Speed RC4 Algorithm Based on True Dual Port RAM by using Verilog HDL

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Abstract- This paper presents high speed hardware implementation and an area efficient of the RC4 algorithm based on True Dual Port (TDP) RAM. The proposed architecture uses Block RAM (BRAM) implementation to reduce the area and to increase the speed of operation hence throughput. The proposed design uses only one 256 bytes True Dual Port RAM for key stream generation and it needs two clock cycles per one byte. It supports 1 byte to 256 bytes of variable key length and it achieves 71.39 MB/s throughput at 142.78 MHz maximum operating frequency. The True Dual Port RAM RC4 algorithm is implemented in Verilog HDL. The Proposed design is targeted on XC4VFX12-12SF363 Xilinx FPGA and met the operating frequency of 142.78 MHz. Keywords - True Dual Port RAM, BRAM, CPLD, FPGA, RC4 Algorithm and Stream Cipher.

High Efficient Carry Select Adder using Zero Carry Look Ahead Adder

B.Chinna Rao Associate Professor , Department of E.C.E, AITAM, Tekkali

ABSTRACT Adders are used vastly in digital systems; Carry select adder is a fast adder, which uses multiple narrow adders and results fast wide adders. Carry select adders have great scope by reducing area, power consumption and delay. The simple and efficient gate level modification helps to reduce the area and power of CSLA. In this paper the proposed design of 16bit CSLA Using ZCLA is compared with modified version of SQRT CSLA. The result shows that CSLA Using ZCLA is better than the modified SQRT CSLA. This project was aimed for reduce the delay which performance optimized high speed carry select adder architecture. Keywords: Area efficient, Carry Select Adder (CSLA), Square-root CSLA (SQRTCSLA), Zero Carry Look Ahead Adder (ZCLA).

Design of CPW-Fed Monopole Antenna with L- shape and T-shape for WLAN/Wi-MAX Applications

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Abstract: A novel dual-band design of a finite ground coplanar waveguide (CPW)-fed monopole antenna is presented for simultaneously satisfying wireless local area network (WLAN) and worldwide interoperability for Microwave Access (WiMAX) applications. The proposed antenna, comprising a rectangular planar patch element embedded with L shape and T-shape slots in the middle of the patch element. The simulated -10 dB bandwidth for return loss is from 2.0 to 2.2 GHz and 2.8GHz to 3.1 GHz, covering some of the WiMAX and WLAN bands. Prototypes of the obtained optimized antenna have been designed and constructed. The Antenna has 22.5 % (-10 dB return loss) band width ranging from 2 to 2.2 GHz, and -21 dB return loss is

from 2.85 to 2.95 GHz. The parametric study is performed to understand the characteristics of the proposed antenna. Also, good antenna performances such as radiation patterns and antenna gains over the operating bands have been observed and VSWR is 1.6 at 2.4 GHz.

Key Terms : Ground plane, Coplanar Wave guide ,Narrow band, Monopole antennas, WiMAX and WLAN

A Novel Architecture for Radix-4 Pipelined FFT Processor using Vedic Mathematics Algorithm

Dr. G. Sateesh Kumar Department of E.C.E, AITAM, Tekkali

Abstract:

The FFT processor is a critical block in all multi-carrier systems used primarily in the mobile environment. The portability requirement of these systems is mainly responsible for the need of low power FFT architectures. In this study, an efficient addressing scheme for radix-4 64 point FFT processor is presented. It avoids the modulo-r addition in the address generation; hence, the critical path is significantly shorter than the conventional radix-4 pipelined FFT processor by modifying its operation sequence. The complex multiplier is one of the most power consuming blocks in the FFT processor. A significant property of the proposed method is that the critical path of the address generator is independent from the FFT transform length N, making it extremely efficient for large FFT transforms. The results confirm the speed and area advantages for large FFTs. Although only radix-4 FFT address generation is presented in the paper, it can be used for higher radix-4FFT. Index Terms: Pipelined FFT, Switching activity, Coefficient ordering.

OPTIMIZATION OF 1D AND 2D CELLULAR AUTOMATA FOR PSEUDO RANDOM NUMBER GENERATOR.

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Abstract:

In this paper we have implemented 1D binary cellular automata with wrap around at the edges (i.e. a ring). The default update rule used is rule 30 discovered by Stephen Wolfram. Rule 30 is an update rule that when applied to the CA will produce a class III, a periodic, chaotic behavior. The response with respect to rule 2 and rule 90 is also verified on Xilinx Spartan 3E FPGA and this can be applied for modeling PRNG. This paper also discusses the correlation between 1D and 2D cellular automata. Cellular automata concept was first introduced by von Neumann von Neumann for the proposal of modeling biological self-reproduction. The primary interest was to derive a computationally universal cellular space with self-reproduction configurations. Afterward, a new phase of activities was started by Wolfram who pioneered the investigation of Cellular automata as a mathematical model for self-organizing statistical systems. Wolfram was proved that the randomness of the patterns generated by maximum-length Cellular automata is significantly better than other widely used methods, such as linear feedback shift registers. The intensive interest in this field can be attributed to the phenomenal growth of the VLSI technology that permits cost-effective realization of the simple structure of local-neighborhood Cellular automata Wolfram. Keywords: Cellular automata, chaotic, FPGA, PRNG-pseudo random number generator.

PERFORMANCE ANALYSIS OF BLOCK PSO FOR IMAGE DE-NOISING USING WAVELET TRANSFORM

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Abstract:

Image de-noising is one of the fundamental problems in the field of image processing needed for improving the image quality before performing different high-level vision tasks. Numerous wavelet based denoising methods were utilized for performing image de-noising process. In such works, there is a lack of analysis in selecting the appropriate threshold value. Moreover, such analysis leads to the determination of static threshold value. The basic formulae exist if we treat noisy image as a single image without dividing it into blocks. We can also check the performance of the conventional methods by dividing the noisy image into different block sizes and then applying dynamic methods to choose proper threshold value. In this paper, we proposed an adaptive image de-noising technique by dividing the noisy image into blocks then applying wavelet transform on it and then by applying Particle Swarm Optimization (PSO) technique to select proper threshold values. The performance of the image de-noising technique is evaluated by comparing the result of proposed technique with the conventional soft thresholding technique in terms of peak signal-to-noise ratio (PSNR). Keywords: Image De-noising, wavelet Decomposition, Particle Swarm Optimization (PSO), Adaptive Thresholding

DESIGN AND ANALYSIS OF PLUS SHAPE SLOTTED FRACTAL ANTENNA FORDUAL BAND APPLICATIONS

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Abstract:

This paper deals with design of a novel compact plus fractal micro strip patch antenna is to perform the multi band performance. The An soft HFSS simulation software has been used to analyze the performances of the designed antennas such as return loss, radiation patterns, VSWR, Resonant frequency and gain. The antenna has been fabricated on FR-4substrate with dielectric constant 4.4 and thickness of (h) 1.6mm. The proposed antennas are resonating at multiple frequencies with improved return loss, bandwidth and gain. The resonant frequency of the antenna is achieved at0.942GHz and 2.98GHz after second iteration and 0.90 GHz and 3.13 GHz for third iterations respectively. The antenna gives enhanced bandwidth by increasing the iterations up to 32%. The proposed antenna results are measured with Vector Network Analyzer.

KEYWORDS:

Plus Shape Fractal, Multiband Behaviour, An soft HFSS, Wireless Application

DESIGN OF OFDM BASED ACOUSTIC COMMUNICATION SYSTEM USING FPGA

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Abstract:

This paper describes an Underwater Acoustic Communication system for establishing communication between monitoring station and the underwater device. In underwater communication, signal degradation caused by strong multi-path, extremely high ISI, Doppler spread etc are avoided by using an OFDM multi carrier modulation scheme and it is used to obtain high data rates with the utilization of an effective bandwidth. The FPGA is chosen to implement the OFDM based communication system due to its reconfigurability. The functionality is implemented and tested in FPGA. Keywords: ISI, OFDM, QPSK, IFFT, FPGA

A LOW POWER VLSI DESIGN OF AN ALL DIGITAL PHASE LOCKED LOOP

A.S.SRINIVASA RAO Dept. of ECE, AITAM, Tekkali

Abstract:

Phase locked loop is a familiar circuit for high frequency application and very short interlocking time. In this paper we have implemented and analysed All Digital Phase locked loop (ADPLL), as the present applications requires a low cost , low power and high speed Phase locked loops. The design is synthesized in Xilinx ISE software. This work Implements an ADPLL with Nyquist rate phase detector which is basically a digital multiplier, simulation results proves a very high speed of operation for low frequency ranges and resource utilization on FPGA proves the structure simpler. Keywords— ADPLL, DCO, FPGA, Loop Filter, Phase Detector, PLL, wireless communications, Xilinx

EFFECT OF RANGE RESOLUTION ON THE PERFORMANCE OF MONOTONIC AND CHIRP TECHNOLOGY SONAR

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Abstract:

Avoiding collision of the Autonomous underwater vehicle (AUV) with the floating or fixed objects in the underwater scenario needs either apriori knowledge of the operating environment or sensing equipment for evaluating the environment in real time. The sensing equipment in this case is the forward looking Sonar that is mounted on the AUV which scans the area in front and provides the images as the output. The technology used in this forward looking SONAR is CHIRP. In SONAR, Surface Acoustic Wave devices such as Reflective array Compressors are used to generate the chirped signals. Because of Chirp technology high resolution images of sea bed are produced. The range resolution of the CHIRP technology SONAR is much better than conventional monotonic SONAR. With monotonic SONAR it is very difficult to differentiate two objects separated by less than 37.5 mm whereas using CHIRP technology SONAR it is easy to distinguish the objects if they 7.5mm apart. In this paper the generation of Chirp pulse is analyzed. The pulse compression technique and different windowing techniques are analyzed to detect the peak of the received signal.

Keywords

Chirp, Range Resolution, Pulse Compression

DESIGN OF LOW AREA BRANCH PENALTY FREE PIPELINED PROCESSOR ARCHITECTURE

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Abstract:

Branch prediction techniques are widely used to reduce the performance penalties that are caused by branch instructions in pipelined processor such as MIPS. But these techniques do not completely eliminate the penalties that are caused by branch instructions. Here we present an efficient architecture for pipelined processor that eliminates the branch and jump penalties with minimum hardware resources. In the proposed architecture we use sub-bank dual port memory, so hardware requirement for this architecture is reduced when compared to previous architecture. The proposed architecture is implemented in Xilinx tool using Verilog.

IMPLEMENTATION OF HYBRID MODEL IMAGE FUSION ALGORITHM

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Abstract

This paper represents Hybrid model image fusion algorithm based on combination of pyramid method and Wavelet method .To improve the Quality of output image an Algorithm is proposed by using Laplacian pyramid and Gradient pyramid methods from pyramid method and, Haar wavelet from Wavelet method. This algorithm creates new images for further image processing applications like Enhancement, Segmentation, etc. This Algorithm has several applications in Intelligent robots, Manufacturing industry Military and Remote sensing applications, etc. This algorithm was accessed based on the development of some Image quality metrics like Mean square error, Peak signal to noise ratio, etc.

AN AUTOMATED THRESHOLD SELECTION USING WAVELET BASED PSO FOR IMAGE COMPRESSION

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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 data redundancies known as coding redundancy, Inter pixel redundancy and psycho visual redundancy. Recent research in transformbased image compression has focused on the wavelet transform due to its superior performance over other transforms. In the recent survey, image is subjected to wavelet decomposition to obtain wavelet coefficients and then applied Hard or Soft thresholds for neglecting certain wavelet coefficients by manually selecting global and local threshold values. Here, the manual threshold selection becomes very difficult because it depends on the type of image and its statistical properties like mean and standard deviation. In this paper we proposed an automated threshold selection scheme using wavelet based Particle Swarm Optimization which maintains trade of between peak signal to noise ratio (PSNR) and compression ratio (CR). The above work is implemented using MATLAB 2009. Keywords: CR, Image compression, PSNR, PSO, soft threshold, wavelet decomposition,

ENHANCED MULTIPATH OPTIMIZED LINK STATE ROUTING PROTOCOL FOR MANETS

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Abstract:

Mobile Adhoc Networks (MANETs) are dynamic and self-organized temporary networks which include a set of mobile routers and hosts sharing same radio channel using wireless connections exchanging data without a centralized management. Due to limited transmission range of wireless Adhoc network nodes, multiple hops are usually needed for a node to exchange information with any other node in the network. Thus routing is a crucial issue to the design of a MANET. Optimized Link State Routing Protocol (OLSR) is a table driven proactive routing protocol, with topology information and routes. Its efficiency depends on multipoint relay selection. Various studies were undertaken to decrease control traffic overheads by modifying present OLSR routing protocol. A novel routing protocol for Adhoc networks named as SR-MPOLSR develops from OLSR, incorporating multi-path strategy and source routing controlling scheme. It raises the throughput and drops the average delay. The proposed multipath OLSR for

MANETs is based on link quality. It is compared with OLSR and SR-MPOLSR. This new algorithm calculates link quality based multiple routes. Source data transmission is through multiple paths. The experiment includes 50 nodes distributed over a 3 square kilometre area.

Keywords: Mobile Adhoc networks (MANET), Optimized Link State Routing Protocol (OLSR), Quality of Service (QoS) in MANET.

PERFORMANCE ANALYSIS OF FRFT BASED ADAPTIVE FILTERS WITH LMS ALGORITHM

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Abstract:

Fractional Fourier Transform function (FrFT) is a generalization of Fourier transforms (FT). Finite Impulse Response (FIR) filters are implemented based on Fractional Fourier transform domains, then modified filters characteristics some what tunable when compare with existing FT based FIR filters. So, in our proposals implementation is made on the FrFT FIR filters for different windows like Rectangle, Bartlett, Hamming, Hanning, and Kaiser, based on the adaptive algorithms ,and the performance of the proposed filters is made by SNR values of the different obtain filters for given noisy sinusoidal inputs. Keywords Adaptive Filters, FrFT, LMS Algorithm, SNR

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