MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

(UGC-AUTONOMOUS)
Approved by AICTE , New Delhi & Affiliated to JNTUA , Ananthapuram
Accredited by NBA for ECE,CSE,EEE, & MEC(An ISO 9001:2008 Certified Institution)
Affiliated to JNTUA, Anantapur and approved by AICTE,
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POSITRON 2K15

POSITRON 2K15

Highlights:

- ✓ Perspectives from the dept. Head
- ✓ Faculty features
- ✓ Technological updates
- ✓ Student contributions
- ✓ Illuminatus
- ✓ Awards & Honours
- ✓ Research snapshots

The 21st century has seen a rising importance of quality technical education that reflect the demands of the fast developing world. In recent decades, revolutions in communication and information technology have broken the barriers that once kept countries and markets apart, creating a single, global economy that is more integrated and interconnected than ever before. It is not the world-class workforce that is essential, it is an educated workforce that is essential. The department of ECE, MITS is constantly striving towards developing such a workforce. The active student-faculty interactions help in bridging the academic gap. The FDPs and the student centric activities conducted by the department plays a vital role in sparking off students mind and hence giving it a research centric platform. We the students also enjoy the extra efforts put in by the faculty for us to excel in the various competitive exams like GATE, GRE, JEST, CAT etc. This edition of POSITRON 2k15 is to throw light on the progress of the department during the academic year 2014-15. We also feel proud in bringing to readers, the various departmental activities that took place, faculty and student achievements, placement highlights among others.

**You are always a student, never a master.
You have to keep moving forward.
- Conrad Hall**

"Grab the opportunities to the best of exposure":

A word from the Correspondent.

Everyone should be glad to ensure POSITRON 2K15 as an excellent opportunity to make ourselves of being informative and knowledge oriented. I believe in the department of ECE will continue to work in fascinating this magazine an incredible one that looks forward advanced technology and with fully loaded commitment. Brace up yourself with the devices which in sense you with healthy valuable returns. Warm up with ultra-gaming experiences and find out your career option. I contemplate; this magazine will fasten your growth, development and discriminate your knowledge at various levels. Grab the opportunities to the best of its exposure and illuminate your carrier, overcoming the odds against your efforts and endeavor. I am happy that every year the Department of ECE resolves to create a Magazine which cherishes the student's awareness in substantial making of his carrier.

- Sri. N Vijaya Bhaskar Choudary

"Multiply knowledge to continue the challenging legacy of achieving excellence"

A message from the Chairman

With the philosophy of taking our students to the forefront of the new economy and to drive them by intellect and values, the enthusiastic Faculty drawn up this Magazine to their appreciation. It is for sure that this magazine will create real talk amongst the students and give access to the best of electronics and electronical engagements. To continue the challenging legacy of achieving excellence, I would therefore advice the students to be cognizant to multiply the knowledge. Know about the Faculty, polish yourself with their help and set your minds to get holistic success.

- Sri. N Krishna Kumar

Message from the Principal

It is indeed a great pleasure that the Department of electronic and communication Engineering is publishing newsletter POSITRON 2K15 as a part of one day National Level Technical Symposium and project expo on 31st March 2015, at Madanapalle Institute of Technology & Science, Madanapalle.

I am confident that this technical symposium shall be a platform for learning and sharing the knowledge that can inspire many young minds. I appreciate the department for organizing this symposium and bringing out the souvenir and the newsletter.

I take this opportunity to thank the Management for extending their constant support during all the events undertaken. I also appreciate the efforts of Head of the department, faculty, non-teaching staff and student volunteers for making this symposium memorable.

I extend my greetings and best wishes to all the participants and wish the Symposium all success.

- Dr. C. Yuvaraj

Message from the HOD

I am happy to see one more issue of POSITRON - a departmental newsletter exclusively for students and faculty. Our faculty has achieved a distinct progress in teaching to the students, and conducting research in various fields of electronics and communication engineering. This newsletter brings all about their achievements. Our students have made deep impact in the Rayalaseema region by bagging several prizes in various events conducted by Engineering Colleges. Congratulations to all the winners. Exciting developments are taking place in the area of electronics and communication. The number of transistors are on a silicon die is ever increasing with the shrinkage of device geometry. Device sizes, as small as 22 nm, are being produced. A vertical layer is created and transistors are stacked like a "double-decker" bus to increase the transistor density. System-on-chip is accelerating the integration of the number of functions packaged in a module. The country is wired with fiber optic cables for backbone communication network. This network supplemented with the wireless networks is connecting India for voice, video and Internet services. Lot of research is carried out to realize long range and large bandwidth cellular communication networks. These objectives are achieved with the deployment Multi Input Multi Output (MIMO) antenna systems, and Orthogonal Frequency Division Multiplexing (OFDM) modulation. Research for developing 5G cellular products is in full swing and these products will be ready by year 2020. The 5G networks will provide 1 GB/s data rates under mobile conditions. The size of the Base Transceiver Station will be the same as that of small match-stick box. Opportunities are created with ITIR for Electronic Hardware Manufacturing (EHM) hubs. Investments will be made in VLSI, Embedded systems and other allied electronic products. It is up to the young engineer to grab the opportunity and make India rich. I wish success for all out going students of batch 2011-15.

- Dr. A R Reddy

Perspectives from Head of the Department

Q: What is your vision and department targets for the year 2014-15?

A: ECE department vision is to groom students for placements, and higher studies. The target is to place 80% of students by July 2015.

Q: What are some of the faculty highlights from this past year that you want to share?

A: Faculty is able to use teaching tools such as PPT presentations. Dr Mahesh obtained Ph.D. degree. Three of the faculty members have got research projects worth Rs. 12 Lakhs. Faculty members have published research papers. Faculty members have conducted workshops and conferences.

Q: What are the initiatives taken up by the dept. that directly impact UG students?

A: Use of teaching tools by faculty. Focusing soft skills. Conducting classes for GATE preparation. Conducting student symposium. Carrying out mini projects by second and third year students.

Q: What are the current strengths of the department?

A: Strong research and development team to take up new projects and guide B Tech, M Tech and Ph.D. students.

Q: The Department organised a two day national conference on "Recent Trends in Signal Processing" in the college campus on 18 – 19 Feb. What are your comments on the impact of the program?

A: This conference is funded by DST. This shows that department is capable of getting funds from external agencies to organize such events. Department is matured enough to organize conferences. Faculty has improved research skills.

ECE DEPARTMENT FACULTY:

Professors:


Dr. A R Reddy


Dr. S A K Jilani


Dr. J L Mazher Iqbal


Dr. Ravi Srinivasa Rao

Associate professors:


Dr. Gautam Narayan


Dr. Mahesh


Mr. S Javeed Hussain


Mr. M Jagadeesh Babu


Mr. B Sukumar


Mr. V Sai Kumar

Assistant professors:


Mr. M Sreenath Reddy


Mr. S Arun


Ms. C K Hemantha lakshmi


Ms. G R Hemantha


Mr. J T Pramod


Mr. P R Ratna Raju K


Mr. M Venkata Srinu


Mr. R Ravindraiah


Mr. L Ashok


Mr. P Sravan Kumar


Ms. G Naga Swetha


Mr.V Sathish Kumar


Mr. D Balakrishna Reddy


Mr. B Vamsi Krishna


Mr. U sreenivasulu


Mr. D Girish Kumar


Mr. G Sambasiva Rao

Placement officer:


Mr. P Pushpak Kumar

Teaching Assistants:


Mr. P Durga Nagendra Kiran


Ms. J M A Asha Latha


Mr. E Ramesh


Ms. M Haritha


Ms. K Keerthi


Ms. N Hima Bindu


Ms. C Prasanna


Mr. R S Shaikshavali Malik

Technical Staff:


Mr. P Md Akram


Ms. T Neeraja


Ms. M Manjula


Ms. Reddy Rani

Supporting Staff of ECE Department:


Mr. C Sreenivasulu


Ms. D Sasi Kala

DEPARTMENTAL ACTIVITIES:

ILLUMINATUS:

Illuminatus is a Latin word which means "to give light''. It was a secret scientific society that carried out research in closed circles with limited resources as in those days, the church decisions regarding scientific discoveries were considered final and none were allowed to go against them.

In a similar sense, the college alumni brought in a technical platform that aims at providing a plethora of opportunities to express their ideas through discussions, experimentations, mini projects, and presentations. In a broader sense, it instills a necessity for self-development in a student.

One hour per week is allotted for Illuminatus to the students where that students conduct various programs like group discussions, seminars, quizzes, paper presentations. Not only limiting it to technical aspects, students took it into a very innovative aspect of self-development by conducting debates, picture descriptions etc. These implementations helps at the time of campus placements as after the technical round, either a group discussion or an essay writing is given by companies as the elimination round before the final HR interview.

Along with technical seminars and discussions, debates and discussions on social issues like "Social Networking", "Women Empowerment", "Educational system in India", "Educational reservation policies", quizzes on general knowledge, discussion on

latest trends in electronics, showcase of mini projects, sometimes followed by guest lectures of distinguished alumni supported by faculty members and placement officers help the students understand the present industry requirements and gives hands-on-experience.

At times, there are visits from lecturers who motivate the students for better participation in activities being conducted. Regular industry oriented talks are also delivered by the college placement officer which help in getting a better understanding of the industry.

"Ideas just bubbled out of these conversations we were having," Harsha remarks. "It was a really productive back-and-forth."

- Harsha Reddy, II B.Tech

discussing his Illuminatus experience

Techno-Updates

This section provides is a collection of the major engineering advances along with their practical applications in the field of Electronics & Communications. The inputs for this section has been taken by referring various resources on the internet and many national and international journals. Since this section aims to throw some light on the recent trends in the world, it is not fully efficient in going into deeper sections of a particular topic. The reader is advised to refer to the source directly if further interested.

INNOVATIVE IDEA:

BLIND VISION

Can we imagine this world without light and colors? Obviously not.

Being an Engineer it is our honor to design a device which acts as a key to open the doors of this beautiful world to the blind people.

Initially the concept of this device is first presented in "NIT-CALICUT" and this paper grabbed the attraction of many of the Professors over there.

The "BLIND VISION" is a device which helps the Blind people like a guide throughout 24*7. The input voice command through the Bluetooth to the GPS that is received by the processor and also through the ultrasonic sensor .Then the processer analyses both the signals

received from sensor and GPS. Then it guides the user how to reach their destiny by avoiding obstacles in their way.

The main advantage of this is cost effective, easily affordable, occupies less size and portable.

Therefore this "BLIND VISION" device will help blind people as a opened door to show this beautiful world with voice guidance without taking any help from others.

"THIS IS OF OUR OWN THOUGHT, WITH THE HELP OF FACULTY, FRIENDS & THE COMPONENTS INFORMATION IS COLLECTED FROM INTERNET".

GURU PRASAD.M, & SAMARA SIMHA REDDY.M,

III ECE.

FASTER THAN THE FAST-FOURIER TRANSFORM

The Fourier transform is one of the most fundamental concepts in the information sciences. It's a method for representing an irregular signal — such as the voltage fluctuations in the wire that connects an MP3 player to a loudspeaker — as a combination of pure frequencies. It is universal in signal processing, but it can also be used to compress image and audio files, solve differential equations and price stock options, among other things. The reason the Fourier transform is so prevalent is an algorithm called the fast Fourier transform (FFT), devised in the mid-1960s, which made it practical to calculate Fourier transform very fast.

At the Symposium on Discrete Algorithms (SODA), a group of researchers presented a new algorithm that, in a large range of practically important cases, improves on the fast Fourier transform. Under some circumstances, the improvement can be dramatic — a tenfold increase in speed. The new algorithm could be particularly useful for image compression, enabling, say, smartphones to wirelessly transmit large video files without draining their batteries or consuming their limited bandwidth allotments.

Like the FFT, the new algorithm works on digital signals. A digital signal is just a series of numbers — discrete samples of an analog signal, such as the sound of a musical instrument. The FFT takes a digital signal containing a certain number of samples and expresses it as the weighted sum of an equivalent number of frequencies.

"Weighted" means that some of those frequencies count more toward the total than others. Indeed, many of the frequencies may have such low weights that they can be safely disregarded. That's why the Fourier transform is useful for compression. An eight-by-eight block of pixels can be thought of as a 64-sample signal, and thus as the sum of 64 different frequencies. But as the researchers point out in their new paper, empirical studies show that on average, 57 of those frequencies can be discarded with minimal loss of image quality.

Signals whose Fourier transforms include a relatively small number of heavily weighted frequencies are called “sparse.” The new algorithm determines the weights of a signal’s most heavily weighted frequencies; the sparser the signal, the greater the speedup the algorithm provides. Indeed, if the signal is sparse enough, the algorithm can simply sample it randomly rather than reading it in its entirety.

“In nature, most of the normal signals are sparse. Consider, for instance, a recording of a piece of chamber music: The composite signal consists of only a few instruments each playing only one note at a time. A recording, on the other hand, of all possible instruments each playing all possible notes at once wouldn’t be sparse — but neither would it be a signal that anyone cares about.

The new algorithm relies on two key ideas. The first is to divide a signal into narrower slices of bandwidth, sized so that a slice will generally contain only one frequency with a heavy weight.

In signal processing, the basic tool for isolating particular frequencies is a filter. But filters tend to have blurry boundaries: One range of frequencies will pass through the filter more or less intact;

“Frequencies just outside that range will be somewhat attenuated; frequencies outside that range will be attenuated still more; and so on, until you reach the frequencies that are filtered out almost perfectly. If it so happens that the one frequency with a heavy weight is at the edge of the filter, however, it could end up so attenuated that it can’t be identified. So the researchers’ first contribution was to find a computationally efficient way to combine filters so that they overlap, ensuring that no frequencies inside the target range will be unduly attenuated, but that the boundaries between slices of spectrum are still fairly sharp.

Once they’ve isolated a slice of spectrum, however, the researchers still have to identify the most heavily weighted frequency in that slice. In the SODA paper, they do this by repeatedly cutting the slice of spectrum into smaller pieces and keeping only those in which most of the signal power is concentrated. They describe a much more efficient technique, which borrows a signal-processing strategy from 4G cellular networks. Frequencies are generally represented as up-and-down squiggles, but they can also be thought of as oscillations; by sampling the same slice of bandwidth at different times, the researchers can determine where the dominant frequency is in its oscillatory cycle.

Some scientists had previously proposed an algorithm that improved on the FFT for very sparse signals but only if the sparsity k — the number of heavily weighted frequencies — was considerably smaller than the input size n. The newly proposed algorithm, however, greatly expands the number of circumstances where one can beat the traditional FFT. Even if that number k is starting to get close to n — to all of them being important — this algorithm still gives some improvement over FFT.

P. SAI KRISHNA

II ECE - B

EXTRACTING SOUND FROM SOUNDLESS VIDEO SIGNALS

Researchers at MIT, Microsoft, and Adobe have developed an algorithm that can reconstruct an audio signal by analyzing minute vibrations of objects depicted in video. In one set of experiments, they were able to recover intelligible speech from the vibrations of a potato-chip bag photographed from 15 feet away through soundproof glass.

In other experiments, they extracted useful audio signals from videos of aluminum foil, the surface of a glass of water, and even the leaves of a potted plant. The researchers will present their findings in a paper at this year's Siggraph, the premier computer graphics conference.

"When sound hits an object, it causes the object to vibrate," says Abe Davis, a graduate student in electrical engineering and computer science at MIT and first author on the new paper. "The motion of this vibration creates a very subtle visual signal that's usually invisible to the naked eye. People didn't realize that this information was there."

Reconstructing audio from video requires that the frequency of the video samples — the number of frames of video captured per second — be higher than the frequency of the audio signal. In some of their experiments, the researchers used a high-speed camera that captured 2,000 to 6,000 frames per second. That is well below the frame rates of the best commercial high-speed cameras, which can top 100,000 frames per second. In other experiments, however, they used an ordinary digital camera. Because of a quirk in the design of most cameras' sensors, the researchers were able to infer information about high-frequency vibrations even from video recorded at a standard 60 frames per second. While this audio reconstruction wasn't as faithful as that with the high-speed camera, it may still be good enough to identify the gender of a speaker in a room; the number of speakers; and even, given accurate enough information about the acoustic properties of speakers' voices, their identities.

The researchers' technique has obvious applications in law enforcement and forensics, but Davis is more enthusiastic about the possibility of what he describes as a "new kind of imaging."

"We're recovering sounds from objects," he says. "That gives us a lot of information about the sound that's going on around the object, but it also gives us a lot of information about the object itself, because different objects are going to respond to sound in different ways." In ongoing work, the researchers have begun trying to determine material and structural properties of objects from their visible response to short bursts of sound.

P. SAI KRISHNA

II ECE - B

ACHIVEMENTS OF ECE FACULTY DURING 2013-15:

- ✓ Dr. A R Reddy attended a 2nd national conference on "Radio frequency engineering of 4th generation mobile phone networks for long term evolution advanced specification" and "Performance study of 4G modulation schemes with MIMO in Rician channel" which is organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Dr. A R Reddy, participated in International conference on Computer Science and information Technology titled "Generating the New S-box and analyzing the Diffusion Strength to Improve the Security of Rijndael algorithm"

- ✓ Dr. S A K Jilani attended a 2nd national conference on "Video stabilization using Raspberry pi", "Advanced spy camera using Raspberry pi" and "Arm-9 based finger print authentication system" which is organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Dr. J L Mazher Iqbal attended a 2nd national conference on "3-D image reconstruction method from 2-D image", "Intelligent medicine box for medication management using IOT" and "Elderly abnormal human activity recognition based on morphology and hidden Markov model classifier" , organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Dr. Gautam Narayan attended a 2nd national conference on "Weathering a storm in space: satellites and space –weather", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mahesh and Dr. M.V. Subramanyam "Feature Based Image Registration Using Steerable Filters and Harris Algorithm". Fourth International Conference ARTCom - 2012, p. 95 – 99 Bangalore Oct 19-20, 2012 Proceedings DOI: 10.1049/cp.2012.2503 ISBN: 978-1-84919-929-2 IET Digital library.

- ✓ Mahesh, and Reddy Sekhar, "Performance Evaluation of Corner Detectors: A Survey" International Journal of Computer Science and Mobile Computing (IJCSMC), ISSN: 2320–088X, Vol. 2, Issue. 10, pp.226 – 233, October 2013.

- ✓ Mahesh, Dr. M.V. Subramanyam, "Feature Based Image Mosaic Using Steerable Filters and Harris Corner Detector" I.J. Image, Graphics and Signal Processing, (IJIGSP) Vol.5, No.6, may 2013 pp.9-15. (ISSN Online: 2074-9082, ISSN Print: 2074-9074 (Free journal): DOI: 10.5815/ijigsp.2013.06.02.

- ✓ Mr. S Javeed Hussain, Participated in All India Workshop on Robotics Assembly and Programming in BCETFW, Department of ECE, Kadapa.

- ✓ Mr. S Javeed Hussain, Participated in Short term workshop on "Biomedical signal, Image processing and Analysis" during 20-22 Jan 2011 organized by Department of Medical electronics.
  Participated in Short term Workshop on MATLAB & Simulink for engineering Education on 6th September 2011 organized by MATHWORKS India.

- ✓ Mr. S Javeed Hussain, "Hand Written Character Recognition using Hybrid Intelligence", National Conference on Recent Trends in Electrical and Communication Technologies,METSCON-09,ThrissurDist, Kerala, India.

- ✓ Mr. S Javeed Hussain, "A Real Time License Plate Recognition Using Image Segmentation Technique" National Conference For Research Scholars and Post Graduates, RESPOGRAF-08, Chandrayangutta, Hyderabad, India.

- ✓ Mr. M Jagadeesh Babu, "Color Image Enhancement Using Particle Swarm Optimization". IRACST – Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol.2, No. 3, June 2012.

- ✓ Mr. M. Jagadeesh Babu, "Radio frequency grid for electronic voting machine theft prevention based on MEMS and GSM". IRACST – Engineering Science and Technology: An International Journal (ESTIJ)

- ✓ Mr. M. Jagadeesh Babu, "Android Mobile Based Home Automation", two day National conference on Advanced Communication systems & Applications Proceedings, ISBN 978-93-82829-39-3 organized by Dept of ECE, Madanapalle Institute of Technology & Science.

- ✓ Mr. M. Sreenath Reddy attended a 2nd national conference on "Design and Simulation of Solid Staten Power amplifier for radar application", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. B Sukumar, attended a 2nd national conference on "Arm-9 based finger print authentication system", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. V Saikumar, "Modeling and simulation of cantilever sensor using CONSOL multiphysics" International Journal & Magazine of Engineering, Technology, Management and Research".

- ✓ Mr. V Saikumar and Sravanan Kumar Reddy, "Modelling and Simulation of Cantilever Sensor Using COMSOL Multiphysics", International Journal & Magazine of Engineering, Technology, Management and Research".

- ✓ Mr. M. Sreenath Reddy, attended a 2nd national conference on "Design and Simulation of Solid Staten Power amplifier for radar application". Organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. M. Arun attended a 2nd national conference on "*Realization of aging-aware reliable multiplier design using VHDL".* Organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Ms. C K Hemantha Lakshmi attended a 2nd national conference on "*Image processing based robotic arm control by using Raspberry pi",* organized by department of ECE/18-19 February 2015 at Madanapalli Institute Of Technology & Science.

- ✓ Ms. C.K. Hemantha Lakshmi, "L2C GPS signal Simulator in IJERT, volume-3, issue -3 nov-12, 2014, Reg.No:IJERTV315110125.

- ✓ Ramesh E, Hemantha Reddy G, "Contrast Enhancement Using Dominant Brightness Level Analysis Adaptive Intensity Transform", International Journal of Computer Science and Mobile Computing Vol.2 Issue. 11, November- 2013, pg. 12-17.

- ✓ K.Chandana, G.R.Hemantha, "Navigation for the Blind Using GPS along with Portable Camera Based Real Time Monitoring", SSRG International Journal of Electronics and Communication Engineering (SSRG - IJECE) – volume1 issue8 Oct 2014.

- ✓ Mr. J T Pramod, Sreedhar Rajput, "A Survey on Copy Move Forgery Detection Techniques", National conference on Advanced Communication Systems & Applications, ISBN (978-93-82829-39-3), MITS, Madanapalle, 25th & 26th June 2013, PP 112-116.

- ✓ Mr. M. Venkata Srinu, attended a 2nd national conference on "*A fast and novel method for car license plate detection using image processing"*, organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. R Ravindraiah, Dr. J L Mazher Iqbal "Segmentation of Diabetic Retinopathy Images Through a Subjective Approach" GESJ: Computer Science and Telecommunications 2014|No.4 (44), ISSN 1512-1232.

- ✓ Mr. R Ravindraiah, Ms. K Tejaswini, "IVUS Image Segmentation By Using Expectation - Maximization Approach", International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 2, February 2014. ISSN (Online): 2278 – 1021.

- ✓ Mr. M Venkata Srinu, attended a 2nd national conference on "A fast and novel method for car license plate detection using image processing", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. M Venkata Srinu, published a paper titled "A Multiscale Image Enhancement model using Human Visual System characteristic in IJTGSP (a free journal), feb-2015.

- ✓ Mr. P Sravan Kumar attended a 2nd national conference on "pilgrim identification system based on an RFID' and Comparative study of implementation of secant method and newton-raphson method in finding the optimum weight vector for adaptive systems", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. P Sravan Kumar published a paper titled "Hardware Implementation of OFDM transmitter and receiver using FPGA in an international journal Magazine of Engineering and Technology (IJMET).

- ✓ Mr. D Bala Krishna Reddy attended a 2nd national conference on "*portable camera – based assistive text and product label reading from Hand-Held objects for blind persons"*, organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. B. Vamsi Krishna attended a 2nd national conference on "*ARDUINO based wireless security system for emergency reporting"*, organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. B Vamsi Krishna, Mr. D Girish Kumar, "a novel nash equilibrium technique for allocation in multihop wireless networks." National conference on Advanced Communication systems & Applications Proceedings – ISBN 978-93-82829-39-3 organized by Dept. of ECE, Madanapalle Institute of Technology & Science on 25th& 26th June 2013.

- ✓ Reducing the jitter noise power by oversampling in High speed OFDM system, International Journal of Engineering and Science Invention (IJESI) Volume 2 Issue 3 ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726 March 2013 PP: 42-46.

- ✓ A Novel Nash equilibrium technique for Channel allocation in Multihop wireless networks, Advanced Communication systems & Applications, MITS, Madanapalle, 25 to 26 june 2013, ISBN 978-93-82829-39-3

- ✓ Mr. P Sravan Kumar attended a 2nd national conference on "pilgrim identification system based on an RFID' and Comparative study of implementation of secant method and newton-raphson method in finding the optimum weight vector for adaptive systems". Organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ V. Saikumar and Sravanan Kumar Reddy published a paper on "Modelling and Simulation of Cantilever Sensor Using COMSOL Multiphysics", International Journal & Magazine of Engineering, Technology, Management and Research".
- ✓ B. Sukumar attended a 2nd national conference on "Arm-9 based finger print authentication system". Which is organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Ms. G Nagaswetha and Mr. N. Ramkumar attended a 2nd national conference on "Secure Vehicle Parking System and token issuing using thermal printer and arm-9 Processor". Which is organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Ms. G Nagaswetha and Y sudhakar, "Design and implementation of intelligent energy monitoring system of industrial machines" International association of scientific innovation and research, IJETCAS, issue 10, vol-4, pp.399.405, sep-nov 2014.

- ✓ Ms. G Nagaswetha, Mr. Gurraiah "GSM based greenhouse monitoring system for agricultural field" by, published in IJPRES, vol-3, issue-3, sep-2014.

- ✓ Mr. D. Bala Krishna Reddy attended a 2nd national conference on "portable camera – based assistive text and product label reading from Hand-Held objects for blind persons", organized by department of ECE/18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. U Sreenivasulu, "Design improved area efficient weighted modulo 2N+1 adder with simple correction schemes" IJERT July 2013.

- ✓ Mr. D Girish kumar, attended a 2nd national conference on "Home automation through Email using RASPBERRY Pi", organized by department of ECE, 18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. G Sambasiva Rao, attended a 2nd national conference on "Design of digital systems using Adiabatic Techniques", organized by department of ECE, 18-19 February 2015 at Madanapalli Institute of Technology & Science.

- ✓ Mr. G Sambasiva Rao, "Distributed arithmetic unit design for FIR filter design in IJMETMR, ISSN no: 2348/4845, volume no-2(2015), issue 2(feb).

- ✓ Ms. J Mary Angel Asha Latha, Prof. G.V.R.Sagar, Adiabatic Logic Based Low Power Carry Select Adder for future Technologies", International Journal of Modern Engineering Research (IJMER) www.ijmer.com Vol. 3, Issue. 5, Sep - Oct. 2013 pp – 2928 – 2931 ISSN: 2249 – 6645.

- ✓ Ms. M Haritha, Syed Jahangir Badashah, "A novel VLSI architecture for SPHIT ENCODER" International journal of computers and Technology, ISSN 22773061 Vol 10, No 4 editor@cirworld.com

- ✓ Ms. K Keerthi, Shaik Jaffar, "Implementation of efficiency CORDIC algorithm for sine and cosine generators", IOSR Journal of Electronics and Communication Engineering (IOSR-

JECE) e-ISSN: 2278-2834, p- ISSN: 2278-8735.Volume 6, Issue 5 (Jul. - Aug. 2013), PP 49-56, www.iosrjournals.org.

- ✓ Mr. R S. Shaikshavali Malik, "Modelling and Simulation of Cantilever Sensor Using COMSOL Multiphysics" International Journal & Magazine of Engineering, Technology, Management and Research", Volume No: 1(2014), Issue No: 12 (December) December 2014 www.ijmetmr.com Page 6 ISSN No: 2348-4845

ACHIVEMENTS BY STUDENTS OF ECE IN 2014-2015:

- ✓ Anand Kumar and Mallikarjuna, of IV- ECE department presented a technical paper entitled "INTELLIGENCE AMPLIFICATION SYSTEM FOR MILITARY OPERATIONS" at KSRM Kadapa and secured **III RD PRIZE.**

- ✓ K.Udaya Rashmi and E.Santhosh, of III-ECE department presented a technical paper entitled "NANO GENERATORS" at S.V.University College Tirupathi and secured **II ND PRIZE.**

- ✓ K.Udaya Rashmi and V.Pushpavathy, of III- ECE department presented a technical paper entitled "Concealed weapon detection by using image processing" at NBKR College, Nellore and secured **I ST PRIZE.**

- ✓ B.Aruna and Arshiya Banu, of III- ECE department participated in "Tennikot" at Mits Madanapalle and secured **I ST PRIZE.**

- ✓ M.Aamani and S,Gowthami,of III-ECE department presented a technical paper entitled "WIRELESS POWER TRANSMISSION" at Siddhartha Engg College at Puttoor and secured **I ST PRIZE.**

- ✓ Asha and Deavilalitha, of III- ECE department participated in Shuttle at MITS and secured **I ST PRIZE**

- ✓ Avani and Indusree, of III- ECE department participated in Throw Ball at MITS and secured **I ST PRIZE.**

- ✓ Hema Nandini, of III-ECE department participated in Dance Competition in MITS College and got 5000/- cash prize.

- ✓ M.Guru Prasad, of III-ECE department participated in ASHV cultural fest -'Short film Contest' held in MITS and got **III-prize.**

- ✓ M.Sathya and G.Susmitha Sen,of III-ECE department presented a technical paper entitled "A MODERN MICROWAVE LIFE DETECTION SYSTEM TO DETECT HUMANBEING BURIED UNDER RUBBLE " at Aditya Engg College Madanapalle and secured **II ND PRIZE.**

- ✓ M.Sathya and G.Susmitha Sen,of III- ECE department presented a technical paper entitled "NANOGENERATORS" at Anamacharya Engg College Kadapa and secured **II ND PRIZE.**

- ✓ M.Vijaya and Thejeswani, III-ECE department presented a technical paper entitled "HACKING INTIMATION & AUTOMATIC VEHICLE PARKING" at Sri Vidyanikethan Tirupati and secured **I ST PRIZE.**

- ✓ N.Vishnu Vardhan Reddy and Sai Prathap Reddy,III- ECE department presented a technical paper entitled "COIN BASED MOBILE CHARGER" Naryana Engg College at Nellore and secured **II ND PRIZE.**
- ✓ M.Sumanth and Pushpalatha, of III- ECE department presented a technical paper entitled "MICROWAVE LIFE DETECTION" KSRM at Kadapa and secured **II ND PRIZE.**

- ✓ S.Narayana and S.Noushad, of III- ECE department presented a technical paper entitled "NEUROMAORPHIC VLSI USING BAT ECHOLOCATION" KSRM at Kadapa and secured **II ND PRIZE.**

- ✓ E.Santhosh, G.Sirisha, K.UdayaRashmi,K. Sravani (Project Proposal was selected for TEXAS INSTRUMENTS INNOVATION CHALLENGE).

- ✓ G.Thulasi, of II- ECE department participated in Throw Ball at MITS and secured **I ST PRIZE.**

- ✓ N.Vidhya, of II-ECE department participated in Running Race at MITS and secured **III RD PRIZE.**

- ✓ Mahesh,of II- ECE department participated in Volley Ball at MITS and secured **I ST PRIZE.**

- ✓ D. Venkatesh, D. Siva Prasad, T. Siva Prasad & Team (MITS Cricket Tournament Winners).

- ✓ S. Narendra (Runner in Shuttle Tournament at SVCET Youth Fest-Chittoor. and also Participated in U-19 Shuttle Badminton Tournament at Hyderabad under Chittoor District).

ARTICALS BY STUDENTS:

1) Silicon

Commodities are at your ease now and saying no to no for any exertion .we are all commencing with a commitment .Even Mendeleev couldn't have been predicted that the 14th brick from his periodic building will leave the world in trans .It happened and all the people are addicted to an electronic drug with the invention of diodes and transistors.

However silicon didn't fail in creating its own world, without which no pocket or bag is exceptional these days. Years ago, people used to please the dawn with a reputable face and now no association centre in is ready to receive an image other than a silicon good. Humans

aborted in conceiving the binary language being creators they started to interface with the binary language and of course they are successful in creating a machine level language but the thing is silicon did not convince.

2) Abiotic walls

Abiotic walls in Jallianwallabagh didn't forget the cruelty of whites and the well nearby will never lose its recognition for swallowing many to death. It keeps striking my brain how worst the situation would have been, people sensing their last breath along with the penetration of bullets through their skin forming a 10^{th} aperture. And another such incident where people were tied to the mouth of a canon and were blown into pieces.

INDEPENDENCE DAY celebrated on 15 of august every year was born out of the blood stains of many such legends, who wanted to free India from the colonial world. And one out of them was not ready to accept it, as it is and quoted that "India will have its independence complete only when an Indian woman is free from all the social evils that exist in our society even at midnights and we know how better independent we are. This is the 67^{th} year of independence and we still need to be independent, may sound different but truth. We just sleep on a bed of ignorance never bother to wake up to our minor duties. Instead they only work to the money that they get under the table, perhaps that too they may pretend as working. Few middle corrupted class are there who take money to show them off. And they showoff to such an extent that they are very much concerned about the perfume they use even when they walk to their MOTHER'S FUNERAL. MY COUNTRY IS CORRUPTION FREE!!!!!!!

WAH!!!! Words which my vocal cord is dying to slip air for voicing them, but my ears start laughing at it and keeps reminding that 'you can't expect that being in India'. By the way my brain and heart are the long waiting dull audience for this never ending play, meanwhile my soul may start getting ready for the departure without witnessing the words getting engraved on the stone. Perchance it knows it well in advance that it has to be disheartened at the end of the play. The funniest thing in India is the one who is corrupted, himself wants India to be developed, and thank god he at least wants others to be perfect though he will never be. Frankly speaking India was great in the past for 180 years of bloodshed and will never be in the future unless the realization comes as a boon to every Indian. And now India is no more India.

Above all it would have been better if the freedom was delayed by hundred more years' .So that welcoming death in the united India would be better than dying in this unhealthy corrupted India. Anyhow that was just a taste of independence in the mid-1947 and there is no point in cherishing it now as the situations, now are much worse than earlier. The vision of mission t20 was to see India free from corruption. Perhaps t20 was meant to convey the year twenty thousand twenty and may not be twenty twenty. And we will have to wait for seeing it happening with these people, who does not belong to this kind of humanity and are very much habituated to make their way with the imprints of Gandhi .Lets wake up to our trivial duties, perform them to their best.....

3) Heights in belief

When the SUN started to shrink, my limbs lost the principle of spring and my eyes started to shut because of witnessing the roads of Madanapalle for a day. My father still waits for sun to rest his carpels and fills his daily life with the hard memories of "OPERATION PAWAN". Which was a peace keeping mission by the Indian government to take the control over Jaffna from the hands of Tamil tigers.

And I am stuck in a place where people still expect ALMIGHTY to condense the post state of evaporation. It did find my ear drum unique to receive that a village will be deserted for a day in order to convince their virtual belief. And it happened when I had to fully stop my world of dream only to find mist mourning escorting creatures to shut down all their business and step ahead to announce few last calls to the other end of troposphere. After all I understood that it is just a belief of the earlier generation that if we lock our homes and leave the village for a day, we will rise their hope of getting their lands wet. Perhaps call was not received and a day merely was a waste one.

This is the smallest instance consideringthe existing ones and just imagine the situation when the industrial revolution was on a swing. And the population growth had its own methods to increase and it was even compared with the exponential signal to measure.The belief that people had no role to play in reducing the population or to increase the needs unless the one who was very eager in the existence of future argued regarding the population explosion, as it was uncontrollable multiplication of population. If that was not the case the word trillion has been frequently used in the general knowledge queries. Then obviously peoples of the world would have been on their toes to satisfy their basic needs, I meant to say the very basic needs perhaps few water drops.

After all the words laid here wantto fly opinions among few brains of India who live, but never own their country. They don't exactly know what is that they are believing in, and they believe it just for someone's sake or because of their fear which is not that required to involve in a half belief like that. Finally individual who is the part of any change for a good cause is called to be the avatar of any spirit and makes us to forget that they too have lungswhich expand for the same oxygen that even we strive for. It would improve the level of self-respect if that particular individual is recognized as the human being first. Almighty can the other way said as any force that makes us to do but never makes it for us. And force is diminished by some specious beliefs perchance that is where we step back in our abilities.

-By T.Sree Kanth,

IV-ECE

4) A new coating that improve the efficiency of a solar panel

Amidst current ecological and energy constraints, solar energy is a viable option as an alternate form of fuel. But the use of solar energy to harness electricity has two major limitations:

1. Low output (end-user) efficiency, and

2. High cost of initial investment.

Working on these lines, the efficiency of a solar panel can be largely increased by augmenting its light facing surface with Aluminium nanostructures that can result in a 22% increase in the output current. By studding the light receiving surface of Gallium Arsenide devices with Aluminium nano cylinders, one can promote the scattering of light in the visible part of the sunlight spectrum. The advantage of using Aluminium structures is that the absorption losses are limited to the ultraviolet part of the spectrum. Prior to this, scientists had used silver and gold nanoparticles but the increase was not much when compared with Al coatings.

G. Hima Bindu

II ECE - B

5) Scientists develop an alternative for syringes

Scientists at the Indian Institute of Science (IISc) have successfully tested an alternative to syringes for drug delivery. The method delivers medicine through tiny capsules when triggered by a micro shock wave. Developing methods for alternative to drug delivery hs gained importance, considering the large number of infections that are spread through contaminated non-sterilized syringes. According to a cell biologist on a team of aerospace engineers who developed the model, every year, and 1.3 million deaths are caused by unsafe injections. The researchers designed tiny bio capsules made of a polymer called Spermidin-Dextron Sulphate, otherwise known as Super-DS.

The capsules are so small that 10 of the biggest ones could be placed in a length of 1mm. The capsules are loaded with either Insulin or the antibiotic, Ciprofloxacin. These are placed on the infected site and are triggered by micro shock waves produced by a hand-held machine. These micro shock waves last a millionth of a second and affect a small area. They don't affect the living cells of the body. The result is that a controlled portion of drug is released with each shock wave. Almost 90% of the drug release was observed when the particles were exposed tomicro shock wave 5 times.

A.V. Kaustubha

II ECE - B

6) Two new sub-atomic particles discovered

Two new subatomic particles that could widen our understanding of the universe have been discovered at CERN, the European organisation for nuclear research. The discovery was a part of the particle accelerator experiment at the Large Hadron Collider (LHC) in collaboration with CERN. The two new particles belong to the Baryon family. The particles were predicted to exist by the quark model, but had never been seen before. A related particle was found by the CMS at CERN in 2012.

Like the well-known protons that the LHC accelerates, the new particles are Baryons, made from three quarks bound together by strong forces. The types of quarks are different, though. The new particles both contain one beauty (b), one stranger (s), and one down (d) quark. They are more than six times as massive as the proton. Apart from their masses, the research team also studied their relative production rates, their widths, a measure of how unstable they are, and other details of their decays. The results match up with the predictions based on the theory of Quantum Chromo Dynamics (QCD), researchers said. QCD is a part of the standard model of particle physics, a theory that describes the fundamental particles of matter, how they interact, and the forces between them.

D. Pallavi

II ECE - B

1) Magnetic compatibility for the future

We are all familiar with the magnetic theories and their applications today. My article is on the principle of magnetic free energy system.

If we take some cylindrical magnets and arrange them in a circular shape, these magnets now become capable of any circular object such as a fan. I suggest using this rotation in many ways. One of them is : if we aare able to balance this rotating field, and pass wind through it, then it may become a new model of an aircraft that can be used for carrying small weights which can be used without consuming any fossil fuels. These can also find their applications in ferrying war equipments.

Sudheer
Koneti

II ECE - D

STUDENTS PLACED FOR VARIOUS COMPANIES:

Tech Mahindra

V.Krishna Chitanya

S.Navaneesh

P.Bhavya

C.Deepika

M.Roshini

B.Sai Charan Teja Reddy

S.M.Fayaz

V.Saffiya Azmi

E.Santhosh

M.D.Jyoshna Chowdary

NTT DATA

Global IT Innovator

T.Nithin

Y.Mallikarjuna

A.Karthik

C.Thejasvi

B.Umar Farooq

S.Phaneendar Reddy

P.Puja Naidu

G.Devendra

D.Chandra kala

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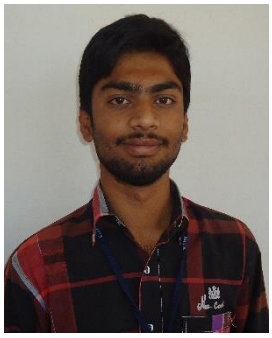
D.Sreeharsha Reddy

C.Thejasvi



B.Sai Charan Teja Reddy

A.J.Karthik

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G.Anitha Choudary

P.Rajesh

D.Chandra Kala

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Fony

D.Shakeer Hussain