
FACULTY OF ENGINEERING
& TECHNOLOGY
TECHNOLEDGE
(A Year's Preview of ECians)
ELECTRONICS & COMMUNICATION
ENGINEERING
MJP
ROHILKHAND UNIVERSITY

FROM THE EDITOR'S DESK

The Editorial team of the department brings to you the official magazine "TECHNOLEDGE 2014", a chronicle of the year's academic, co-curricular activities, events, functions and various other features. In the pages you will find the honest attempt of the team to bring out a magazine with a new ideas. To the discerning eye, this magazine may contain a few flaws. But in the words of Scott Adams "Creativity is allowing yourself to make mistakes. Art is knowing which ones to keep." So my appeal to you all is to go about reading the magazine and accept it with all its strengths and its weaknesses.

My gratitude to our management for giving us a free hand in the publication of this magazine. Garnering the resources, compiling them and presenting it to you in its present form needs a lot of effort, our editorial team have done a wonderful job.

So buckle up and get ready to surf through the pages of "TECHNOLEDGE 2014" the perfect host.

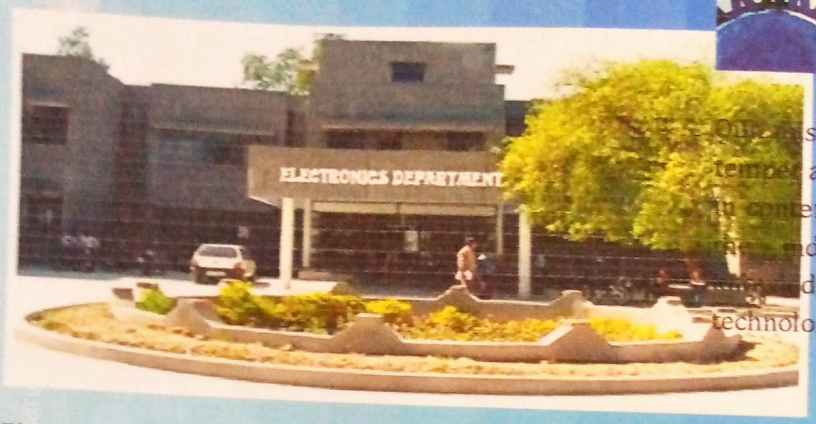
EDITORIAL MEMBERS

Mrs.Chhavi Sharma, Assitant Professor(CSE Deptt.)

RashiSolanki (IIIrdYear)

ShivangiAgarwal (IIIrd Year)

OUR DEPARTMENT



The Department of Electronics Communication was established in 1995.

The Electronics & Communication Engineering course provides comprehensive knowledge of the subject through coverage of relevant and contemporary issues. The focus is on sharpening analytical as well as designing skills and problem-solving abilities based on sensitivity to the rapidly changing environment, and a firm grasp of right values. The course structure is dynamic and is reviewed periodically to strengthen existing courses and introduce new ones in keeping with the requirements of the environment. A variety of individual and group learning projects that provide the participants with exposure to real - world instrumentation issue.

DEPARTMENT VISION

Our vision is to develop the department in to a full fledgedCenterof learning in various fields of electronics and communication Engineering keeping in view the latest developments and to invoke enthusiasm among the students to continually renew their education in rapidly developing technological scenario.

DEPARTMENT MISSION

Our mission is to inculcate a spirit of scientific temper and analytical thinking & train the students contemporary to meet the challenging needs of industry by providing versatile sound edge in the field of engineering and technology.

Faculty & staff Details

- Dr. Shiv Kumar Tomar
- Dr. Manish Rai
- Mr.Hari Kumar Singh
- Mr.JanakKapoor
- Mr.SumitSrivastava
- Mrs.Chhavi Sharma
- Mrs.InderpreetKaur
- Ms.Pooja Singh
- Mr.Talha Chisti
- Ms.Apoorva
- Mr.RavindraSrivastava
- Mr. B.S. Lal
- Mr.Yash Pal Mehta

FRESHERS PARTY

The welcome party for first year students of B.Tech was organized by their seniors, the second year students on 07 March 2014. Several group dances, skits, comedy and singing performances really made the new entrants enjoy to the fullest. They also participated with full zeal & enthusiasm and displayed their cultural skills.

After stupendous performances in highly competitive rounds of dance and Question & Answer session the following:

B.tech1st year students were declared by a panel of judges and awarded the titles indicated below:

Mr. Fr[illegible] : Deepak Pandey

[illegible] : Shalu Tanwar

[illegible] : Ravi Kumar

[illegible] : Namrata

[illegible] : Pranjal

"Today's moment becomes memory of tomorrow. Embrace each moment with happiness. Strive to enjoy your day to the fullest."

NATIONAL CONFERENCE

The department of ELECTRONICS AND COMMUNICATION has organised a national conference (AECE14) on ADVANCES of ELECTRONICS AND COMMUNICATION ENGINEERING.

The idea of organizing this National conference on 'Advances of Electronics and communication Engineeringaimed to provide a national platform for the exchange of information on latest findings, new ideas and technical expertise among researchers, developers, engineers and students in India.

The Conference covered wide range of topics from RF Communication, Microwave Engineering, VLSI circuits, Antenna Design, Data Network, Network security, Optical Communication, Nano Technology etc. The department had a very good response from various nstitutions of India.

AECE14 contained 4 technical sessions poster session and invited talks. After ignificant deliberations 30 out of 55 of the ubmitted papers were selected for either ral or poster presentations; resulting in n overall acceptance rate of 60%. Overall wasa successful event organised by the EPARTMENT OF ELECTRONICS ND COMMUNICATION ENGINEERING.

"Take time to search within, we all have the power to change and correct our mistakes towards our life journey. List the things you conscience tells you that you are doing wrong, appreciate the finding within, then make amendment today and discover your inner power, your ethics require personal growth."


ADVANCES IN ELECTRONICS AND COMMUNICATION ENGINEERING
AECE-2014
27/28 March 2014


NATIONAL CONFERENCE


SIXTH SENSE TECHNOLOGY

questions in life and hold on to your intigrity."

ıction

ORIENTATION PROGRAMME

The Orientation Programme for the first year (B.Tech) students was conducted on 2 September 2014.

As a personality development programme initiative it has been planned, students. This will not only increase the analytical power of the students but their communication skills will improve too. This method will develop as a great tool in developing confidence in the students . It has been implemented for all students.

Introdu

[illegible] you want [illegible] better and [illegible] your own e[illegible] bu[illegible] a sense of [illegible] [illegible]ing for y[illegible]elf [illegible]ing at all [illegible]

TEACHER'S DAY

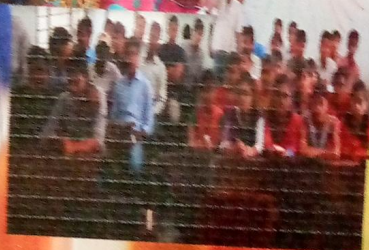
In India, 5th September is celebrated as Teacher's Day as a mark of tribute to the construction made by teachers to the society. 5th September is the birthday of great teacher Dr. SarvapalliRadhakrishnan who was a staunch believer of education and was the well known diplomat scholar, President of India and above all **" A Teacher".**

In our Department of Electronics and Communication Engineering, we also celebrate the teacher's day on 5th September, 2014 for paying tribute to all the teachers of our department who are always ready to help the students in all the spheres of their lives, who always motivate us

for doing something great and achieve the heights of success in whatever we do.

"Instead of celebrating my birthday, It would be my proud privilege if 5th September is observed as Teacher's Day."

-Dr. SarvapalliRadhakrishnan



THE TOP 4 TECHNOLOGY TRENDS THAT WILL DOMINATE 2014-

With Smart TV shipments expected to reach 123 million in 2014 – up from about 84 million in 2012 – we are poised to see explosive growth in this industry.In the midst of this growth, we will continue to see fierce competition between major players like Samsung, Panasonic, and LG. Prices will need to continue to drop, as more consumers crave, and even expect, the ability to use Netflix, Hulu, Amazon Instant Video and their web browser via their TV.Of course, the development we're all waiting for in 2014 is the release of Apple's much anticipated iTV. It appears the iTV is now in the early development stage, and that Apple may be in the process of making a deal with Time Warner to facilitate programming on Apple devices.The device is rumoured to include iCloud sync, the ability to control your iPhone, and ultra HD LCD panels. Keep an eye out for this release as early as summer 2014.

2. Google Glass will still be in "wait and see" mode

While Google Glass has not yet been released to the general public, we've heard enough about it to know it's still very early days for this technology. With an estimated 10 units expected to sell in 2013, and a prediction of several million in 2014, it's still a long way from becoming a common household technology. These augmented reality glasses allow you to access information like email and texts, take hands-free pictures and videos, effortlessly translate your voice, and even receive overlaid walking, cycling or driving directions, right within your field of vision.It's predicted that both Google Glass 2.0, and its companion, the Glass App Store, should be released to the general public sometime in 2014. Be on the lookout for competition in this market, particularly from major players like Samsung. I predict we'll see much of this competition aimed at niche markets like sports and healthcare.

We've seen a huge rise in the popularity of 3D printing this year, coupled with a dramatic fall in pricing. The ability to easily create multi-layered products that are actually usable – well, that's pretty amazing.I'll be watching for a movement towards simple products being produced close to home, and to greater customization given the ease of manufacturing. I think it's inevitable that manufacturing in countries such as China will become less appealing and lucrative for businesses given the high costs of shipping and managing overseas contracts.I don't think these changes to reach the full effect in 2014, however I believe businesses will be starting to consider how this will affect their production plans for 2015 and beyond.

4. The movement towards natural language search will make search more accurate and intuitive

There was a time when we used terms like "personal digital assistant" to describe a hand-held calendar. Oh, how times have changed.With the emergence of intelligent personal assistants like Google Now and Apple's Series, the goal is to have information intuitively delivered to you, often before you even ask for it. The shift seems to be away from having to actively request data, and instead to have it passively delivered to your device.Natural language search will continue to overtake keyword-based search, as seen by Google's move towards longer, more natural searches in its recent release of Hummingbird, Google's largest algorithm update thus far.

RashiSolanki(III[rd] Year)

TECH NEWS :

ShivangiAgarwal (III[rd] year)

NASA's latest space technology small

Satellite phonesphone The tiny spacecraft that uses an off-the-shelf smartphone for a brain has completed checkout and sent back data confirming all systems are 'go' for the spry spacefarer PhoneSat 2.4, a cube approximately 10 centimeters square, weighs only about one kilogram and was developed at NASA's Ames Research Center in Moffett Field, Calif. It is first of thePhoneSatfamily to use a two way S-band radio, allowing engineers to command the satellite from Earth. It is confirming the viability of using smartphones and other commercially available electronics in satellites destined for low Earth orbit.

"It's great to hear from NASA'smost recentcubesat spacecraft", said MichaelGazarik, NASA's associate administrator for space technology in Washington. NASA is committed to opening up the high frontier [illegible] of explorers who can take [illegible] small satellites to do [illegible] development at a fraction of [illegible] more complex spacecraft."In April, [illegible] a one week mission [illegible] expected orbital lifetime of [illegible] will measure how well [illegible] perform in [illegible] The innovative [illegible] technologies [illegible] low risk, highly [illegible] NASA science and

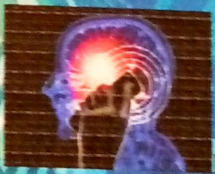
A cost effective battery that can store solar power in works

Imagine a battery that could store solar power! Well, a battery of this kind is being worked upon by the Indian Institute of Technology(IIT), Madras. What is more interesting is that it will be a cost effective battery technology, which will be capable of storing large quantity of electricity.

IIT-M director Prof. BhaskarRamamurthi told Decan chronicle that several faculty at the institute had started their research on optimization of electricity and appropriate battery technology. "We are working on lower life cycle cost. We are looking at bulkier, non-portable, batteries, which would be used for fixed use. Center for Decentralised Photovoltaic Systems in our institute is working on how to handle problem of load shedding and harness solar power locally", he added. He shared that India is a country that gets solar power for over 300 days in a year from 9am to 4pm with variations. However, owing to the solar tech that the country has at present, there is a mismatch in production and storage.

SulbhaSingh(IIIrd Year)

Cellphone Hazards And Recommendation



Mobile phones use electromagnetic radiation in the microwave range which may be harmful to human health. They communicate by transmitting radio wave through a network of fixed antennas called base stations. Radio frequency

Wave is electromagnetic field. They are characterisedby energy per photon of less than about 1.2ev wavelength greater than 100nm and frequency lower than 3*1015 Hz. Mobile phones have been found to cause change in the brain activity, reaction times and sleep patterns, the length of cellphone call [illegible]

Competitive Exam Sites

- GATE 2014 & IAM 2014-
- INDIAN ENGINEERING SERVICES(IES)-
- IIM-
- CAT 2013-
- GMAT-
- GRADUATE RECORD EXAM (GRE)-
- XAT 2014(Xavier Aptitude Test)-
- MAT 2013(conducted by All India Management Association, AIMA)-
- AFCAT 2013(Air Force Common Admission Test)-

The best sites for finding job

CareerBuilder.com

Dice.com

Glassdoor.com

LinkedIn.com

Indeed.com

Monster.com

LinkUp.com

www.naukri.com

- www.fresherworld.com
- www.governmentjobsalerts.com
- www.timesjobs.com

Electronics Sites

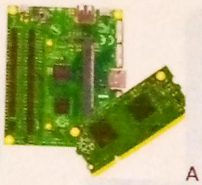
- in.godaddy.com/
- www.espow.com/electronics/
- www.microchip.com/touch
- www.best-electronics-ca.com/
- www.electronicsforu.com/newelectronics/Contact
- www.infiyeam.com/Electronics
- www.top20sites.com/top-electronics-circuits-sites
- www.electronicsforu.com/electronicsforu/Contact
- electronics.toptenreviews.com
- electronicsforu.com

Achievements

- Mr. SARVESH GUPTA has been placed in INTEL CORPORATION.
- Mr. Tarun Singh (2009 Batch) has been placed at DRDO as a research scientist, New Delhi.
- Mr. Raunak Gupta (2009 Batch) has qualified GATE-2013.
- Mr. AkanxitUpadhyay (2008 Batch) had qualified GATE-2012 & is pursuing M.tech. at NIT Jaipur.

TECH NEWS

1. element14 has online resource for dev tools



A new online resource has been launched by element14 to help engineers choose the right development tool for their design. The dedicated design centre aims to support engineers at each step in the design process, by providing them with relevant product information, support, data sheets, stock and supply data, as well as images and videos. Developed based on customer feedback and research, the site provides a search and select functionality by keyword and part number, filtering by manufacturer, core architecture and silicon family. Customers can then purchase the development tools if they so wish on the transactional site.

2. Wireless MCU suits low power applications

Texas Instruments has launched the SimpleLink CC2540T, a low power wireless MCU that can operate in temperatures ranging from -40 to 125°C. Featuring Bluetooth Low Energy functionality and USB connectivity, the CC2540T is said to be a complete solution supporting easier development. Amongst benefits claimed by the company include a small form factor, a range of personalised preferences and a range of development tools and software.According to the company, the part comes with the BLE-Stack 1.4.0, features of which include: overlapped processing, allowing concurrent processing while the radio is active; improved over the air firmware downloads; and improved SPI and UART drivers.The CC2540T features a single cycle 8051 compatible core with three memory access busses, a debug interface and an 18 input extended interrupt unit. Along with 256kbyte of flash and 8kbyte of SRAM, the part also offers a 30kHz 12bit A/D converter with eight channels, three general purpose timers and two USARTs.Said to be suitable for systems where very low power consumption is required, the CC2540T offers low power sleep modes and short transition times between operating modes are said to further enable low power consumption.The 2.4GHz radio has a link budget of 97dB, suitable for long range communications without the need for an external front end.Applications for the part are said to include industrial and consumer lighting, wireless human machine interfaces and remote displays and cable replacement.

3. Mouser to stock Broadcom's mass market products

Mouser Electronics has signed a global distribution agreement with Broadcom under which it will offer same day shipping on a variety of Broadcom products intended for mass markets, including the Wireless Internet Connectivity for Embedded Devices (WICED) platform. "Mouser's semiconductor centric marketing and search engine optimisation capabilities make it an ideal choice as our Commerce distributor," said Vince Brocato, Broadcom's senior director, global channel. "Our relationship with Mouser will allow us to expand our customer base and continue to scale our platform offerings." Broadcom says its WICED Wi-Fi and WICED Smart development platforms provide OEMs with simplified implementation of wireless connectivity, resulting in faster time to market for a broad range of Internet of Things innovations. "Mouser is thrilled to serve as Broadcom's first online catalogue distributor," said Jeff Newell, Mouser's senior vice president of products. "Mouser's partnership with Broadcom provides customers worldwide with an enhanced selection of industry-leading products including Wi-Fi, Bluetooth Smart and leading edge RoboSwitch and StrataConnect Ethernet devices."

RashiSolanki (III[rd] Year)

APTITUDE QUESTIONS-

Q.1 An accurate clock shows 8 o'clock in the morning. Through how may degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

a) 144º b) 168º c) 150º d) 180º

Q.2 A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, the how old is B?

a) 7 b) 9 c) 8 d) 10

Q.3 Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

a) 24 b) 40 c) 27 d) Cannot be determined

Q.4 A pump can fill a tank with water in 2 hours. Because of a leak, it took $2\frac{1}{3}$ hours to fill the tank. The leak can drain all the water of the tank in?

a) 1 hour b) 7 hours c) 8 hours d) 14 hours

Q.5 A tank is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the tank in the same time during which the tank is filled by the third pipe alone. The second pipe fills the tank 5 hours faster than the first pipe and 4 hours slower than the third pipe. The time required by the first pipe is:

a) 6 hours b) 10 hours c) 15 hours d) 30 hours

Q.6 Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?

a) Brother b) Nephew c) Uncle d) Son-in-law

Q.7 If A + B means A is the brother of B; A - B means A is the sister of B and A x B means A is the father of B, which of the following means that C is the son of M?

Q.8 A and B ... part in 100 m ... A gives B a start of 8 m and still beats him by 8 seconds. The speed of B ...

a) 5 (?) kmph b) 4.14 kmph c)4.25kmph ...

Q.9 In a 100 m race, A can give B 10 ... and C 36 m. In the same race B can give C:

a) 18 m b) 20 m c) 27 m d) 9 m

Q.10 Find the odd man out- (3, 5, 11, 14, 17, 21)

a) 21 b) 17 c) 14 d) 3

Q.11 What was the day of the week 15th August, 2010?

a) Sunday b) Monday ...

Q.12 The sum of ages of 5 children born at the ... of 3 years each is 50 years. What is the age of the youngest child?

a) 4 years b) 8 years ... years

Answer Key: Q.1 (d), Q.2 (d), Q.3 (a), Q.4(d), Q.5 (a), Q.7 (d), Q.8 (b), Q.9 (b), Q.10 (c), Q.11 (...), Q.12(a)


Electronics & Communication
Department
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