

Raj Kumar Goel Institute of Technology

Udghosh

A VOICE OF ECE DEPARTMENT



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NISHTHA RAI (3RD YR.)

SHIVAM SINGH (3RD YR.)

AMULYA BAJPAI (2ND YR.)

SHASHANK BINDAL (2ND YR.)

SHIVANGI SRIVASTAVA (2ND YR.)

DEEKSHA SRIVASTAVA (2ND YR)

VARAHMIHIR **ASTRONOMY CLUB**

Astronomy is the way to understand this vast cosmos which has been getting explored by NASA, ISRO, & various other agencies... so here in RKGIT also we have created a platform to spread the knowledge of astronomy & astrophysics among every student known as “varahmihir astronomy club “on the name of “varahmihir” who was a renowned astronomer that almost brought a new era in astronomy.

The club is represented by **Ashish Kumar (ece 3rd yr.)** along with 25 other members.

Contact us : ecemagazine.rkgit@gmail.com

Vision of Electronics and Communication

Engineering Department

To develop the department into a full-fledged centre of learning in various fields of Electronics and Communication Engineering keeping in view the latest developments in world.

Mission of Electronics and Communication

Engineering Department

To educate the students in contemporary technologies in Electronics and Communication to meet the Industrial and societal needs.

WELCOME SPRING SEMESTER

The department of ECE gathered on 02nd December 2015 in the departmental library to bid adieu to the autumn semester and welcome the upcoming spring semester 2016. The gathering started with the welcome of the faculty members of the department by the head of the department Dr. Dharendra Kumar.

The following points were also discussed for the upcoming semester:

- Subject allocation of the even semester 2015-16 finalized. The concerned faculty members were satisfied with their respective subjects.
- All the departmental committees were discussed and their members were finalized. There is formation of new committees like maintenance committee, financial committee, etc.
- The library committee along with the handling of library will also deal with the general issues of the department like department level event celebration, etc.
- The lab-in-charge for different laboratories was discussed and finalized.
- Two new laboratories were introduced i.e. R & D Lab, Electronics Workshop & Project Lab.
- All the faculty members were requested by the HOD to submit the project title to guide for the major project.



FACULTY VISIT TO IISF 2015

India International Science Festival (IISF 2015), a joint event of Ministry of Science and Technology (DST, DBT and DSIR/CSIR) and Ministry of Earth Sciences, is being organized during December 04-08, 2015 at Indian Institute of Technology Delhi. Technology Information Forecasting and Assessment Council (TIFAC) have been chosen as the nodal government institution to organize this mega event in collaboration with Vijnana Bharati (VIBHA).

IISF aims to provide a single platform to promote interaction among the people and scientists from South Asian Countries to share and spread scientific ideas and discoveries. Around 3500 participants, delegates, invitees, renowned experts have attended various components of IISF 2015.

The following faculty members of ECE Department have also attended this event as delegates as well as volunteer:

- Dr. Dharendra Kumar, HOD, ECE
- Mr. Ankit Tripathi
- Ms. Vartika Anand
- Ms. Neha Goel
- Ms. Anamika Gupta
- Ms. Hashmat Usmani
- Ms. Renu Rani
- Ms. Rashika Verma

IISF 2015 provided an effective platform for the scientists-students interactions and also provided large-scale practical science laboratory demonstration. Concurrent with the conference, another component of IISF encompasses techno-industrial expo with the participation of

national agencies such as DRDO, BARC, ISRO etc. along with the leading PSUs.



Science communication by effective media interception such as science documentaries, films etc. was another key component of IISF 2015. All of these made IISF 2015 stand apart from other events held in the country.



MOU WITH EFY

A MEMORANDUM OF UNDERSTANDING has been made and agreed upon by and between EFY Enterprises Pvt. Ltd, New Delhi represented by its Editorial Director, Rahul Chopra and Raj Kumar Goel Institute of Technology, Ghaziabad represented by Director, Dr. R.P. Maheshwari on 9th December, 2015. This MOU is basically for establishing a marketing and training tie-up between the two parties.

EFY is a media company and has a portfolio of marketing solutions and knowledge solutions.

This MOU is for the period of one year from the date of signing of this agreement. Through this agreement, the two parties confirm their intent to collaborate with each other.

EFY's mission is to enable students to upgrade their knowledge and skills by developing passion for DIY electronics as a hobby.



EDTIC WORKSHOP

As an initiative towards “Make in India” campaign, a two day’s workshop on entrepreneurship and development was conducted by our EDTIC, RKGIT on 5th & 6th February, 2016. The event was graced by the presence of various speakers and entrepreneurs. They emphasized on the need and development of a successful entrepreneur.



India over the years has turned out to be a huge market in terms of diversified needs. It has been disappointing that rather than channelizing the cycle of demand and product within our country, we are dependent on foreign products for our demand. Here the ideology of ‘make in India’ comes into being which is focused on turning our human resource as an asset rather than a liability as it has been the case for past years.

The first day of the workshop commenced with the welcome speche by Dr. R.P. Maheshwari (Director) and Shri. H.G. Garg(Dean). They explained the need and significance of organizing such an event in the college. Dr. Laxman Prasad (Director R&D) expressed his view regarding the significance of entrepreneurship and summed up quite efficiently by talking about India as a developing nation. One of the main guest speakers invited to the event was Mr. H. P. Singh, NIESBUD. He gave lots of

examples of famous entrepreneurs as Indra Nouyi, Dhirubhai Ambani, L.N. Mittal, J.R.D Tata, Narayan Murti, etc and tried to explain how an entrepreneur can find solution to social problems.



The post lunch session started with Mr. Sam Basla from I Lead Corporation who himself is a young entrepreneur. He presented quite an interactive session by discussing the meaning, need and psychology of being an entrepreneur. His ideas like “Being comfortable in being uncomfortable”, “Don’t watch the watch” etc. motivated the young engineers a lot. It was a very interesting and enlightening session that marked the end of the first day of the workshop with mementos presented to all the speakers and guests who attended the session and made it a success.

The second day of the workshop, started with an interaction with the alumni working as entrepreneurs in their respective fields. They explained to the students how to start-on with the idea of one’s own business and making it work. They emphasized and explained the importance of thinking out of the box and chasing one’s satisfaction rather than job security in life, taking calculated risks and carrying on despite of all odds. It was quite an interesting session overall. Students put up their doubts forward and were answered accordingly.

The last speaker of the day was Mr. Anurag Mittal. He discussed the ways to start the business in terms of arranging finances and training work with the help of policies set

up by our government under the newly propositioned ‘start up programme’. He mentioned about the credit guarantee scheme, the PMEGPE scheme as an effective and amenable way to set up finances for starting one’s own business. The ways to register as an entrepreneur under NSIC and MSME websites set up by the government were thoroughly discussed and students were made aware as how to go on with their idea of developing their business and shaping their ideas into reality.



The workshop was quite a success and it provided the much needed outlook towards perceiving things a little bit differently and in a way, being of significance in developing country’s portrayal as a self-made entity rather than being a dependent one. It encouraged students to bring about their creativity, believe in paving new paths and sailing towards uncharted territories with determination, perseverance and an attitude that honors and respects creativity above following a blind race that has been and always will be concentrated towards reaching safer sides, avoiding the current.

The student coordinators in EDTIC from ECE Department are:

Prakhar Shukla (3rd Year)

Shivam Singh (3rd Year)

Dipanshu singh (3rd Year)

EFY HOBBY CLUB

The department of ECE inaugurated EFY Hobby Club & Centre of Excellence on 5th February, 2016 by Mr. H.P. Singh, Project Manager, NIESBUD along with Mr. H.K. Sahajvani, Mr. Prajatantra Ji from Vijnan Bharti in presence of Dr. S.C. Gupta (Director Academics), Mr.H.G Garg(Dean), Dr. Dharendra Kumar(HOD, ECE).



This club has been developed for the students as a start-up to make project using tool kits provided by EFY. The students also demonstrated some project kits including fire alarm, smoke alarm, anti theft alarm for vehicles, automatic night lamp with morning alarm, automatic school bell, etc.

The following students have given their contribution to make this event successful:

Shyam Narayan Gupta
Ruchir Srivasatava
Brijendra Singh
Shalini Pandey
Aakarshi Mehrotra
Nimisha Dwivedi
Shubhangi Yadav
Shivali Saxena
Pragati Pandey
Aayushi Sharma
Rishabh Kumar
Rajan Mishra
Piyush Giri
Rahul Singh
Shubham Gupta
Mayank Pandey
Narudeshwar Chaubey
Anshul Senger
Mukul Singh
Ajit



ZONAL FEST

This year AKTU started with a new idea of organizing technical, cultural and sports competition zone-wise. R.K.G.I.T was the host to conduct a two days zonal level cultural and art fest on February 19, 2016 and February 20, 2016. The extravaganza comprised of 20 events. Various competitions like solo singing, duet singing, group singing, solo dance, duet dance, group dance, mimicry, skit, battle of bands and fashion show graced the stage. In the category of arts rangoli making, t-shirt painting, bouquet making, single colour painting, collage making, poster making, face painting, mehndi competition, tattoo making and green card making were there.



More than 15 colleges from Ghaziabad –Modinagar zone participated in the event. The event was inaugurated in the esteemed presence of Dr. B.K.Gupta(Group Advisor), Dr. Laxman Prasad (Director R&D), Prof. V.K.Singh (officiating director), Shri H.G. Garg (Dean) , principals and H.O.Ds of various departments, dignitaries, faculty members and students of various colleges.



The second day of the event was graced with solicit presence of Mr. Ashu Kumar Verma, Mayor, Ghaziabad. He motivated the students with his kind words.



Many students of ECE department also participated and bagged various prizes in cultural events. We heartly congratulate them:

- ❖ Saurabh Shukla(ECE) in singing.
- ❖ Krystal Spark (comprising Harshit Singh, Sanjoli Mehrotra, Suchita Paul, Gaurav Ajit,Dheeraj, Anshika, Kritika, Harshita, Aniket) in group dance.
- ❖ Deepmala Chauhan(ECE) and Varsha (ECE) in single colour painting
- ❖ Aditi Vishnoi (ECE) and Maneesha Jhunjunwala (ECE)in T-shirt Painting
- ❖ Ridhi Tiwari (ECE)in Face Painting



VIGYANAM-2016 "A TECHNICAL PAPER PRESENTATION COMPETITION"

RKGIT organized vityanam-2016 on 25 & 26 February -2016. Vityanam-2016 was an inter college technical paper presentation competition. In this event papers were invited from students of different engineering colleges of Ghaziabad/NCR region.



The objective of this event was:

- To promote the culture of research and innovation among the engineering student

- To improve communication skills of students
- To generate awareness about latest development in technology among students.

61 teams of 160 students from 16 different colleges participated in the competition. Students presented their research papers in the field of Electronics, Mechanical, Computer science, Civil, Information technology. Dr.B.k.Gupta (Advisor), Dr.R.P.Maheshwari(Director) motivated the students for research work. Dr. Rajeev Tripathi (NIIT) was the judge for session -1.

The following students presented technical paper from ECE department on topic “5G technology”.

Shyam Narayan Gupta (3rd Year)

Ruby Singh (3rd Year)

Sachin Mishra (3rd Year)



STUDENT FRAME

Hollow Flashlight based on thermoelectric effect

BY- Rachna Paul (B Tech IIIrd Year)



Ann Makosinski is a 16 year-old student who competed against thousands of other young inventors from around the world to win first prize and a \$25,000 scholarship at Google's International Science Fair.

She invented a battery-free flashlight. An energy free device that is powered by the heat in your hand.

While visiting the Philippines, Ann found that many students couldn't study at home because they didn't have electricity for lighting.

Unfortunately, this is a common problem for developing regions where people don't have access to power grids or can't afford the cost of electricity. Ann recalled reading how the human body had enough energy to power a 100-watt light bulb.

This inspired her to think of how she could convert body heat directly into electricity to power a flashlight.

She knew that heated conductive material causes electrons to spread outwards and that cold conductive material causes electrons to condense inwards.

So, if a ceramic tile is heated, and it's pressed against a ceramic tile that is cool, then electrons will move from the hot tile towards the cool tile producing a current

This phenomenon is known as the thermoelectric effect. Ann started using ceramic tiles placed on top of each other with a conductive circuit between them (known as Peltier tiles) to create the amount of electricity she needed for her flashlight.

Her idea was to design her flashlight so that when it was gripped in your hand, your palm would come in contact with the topside of the tiles and start heating them.

To ensure the underside of the tiles would be cooler, she had the tiles mounted into a cut out area of a hollow aluminum tube.

This meant that air in the tube would keep the underside of her tiles cooler than the heated topside of the tiles. This would then generate a current from the hot side to the cold side so that light emitting diodes (LEDs) connected to the tiles would light up.



But although the tiles generated the necessary wattage (5.7 mills watts), Ann discovered that the voltage wasn't enough. So she added a transformer to boost the voltage to 5v, which was more than enough to make her flashlight work.

Ann successfully created the first flashlight that didn't use batteries, toxic chemicals, kinetic or solar energy, and that always works when you picked it up.

ALUMNI SPEAK

NAME - SIDDHARTHA

BRANCH -ECE

2011 - 2015

Placements -

- 1) CSS CORP. CHENNAI
- 2) AMERICAN CYBER SYSTEM
- 3) LIVE TECHNICIAN.COM
- 4) ERICSON

Working -



I have been working in American Cyber System, Noida as a Technical Recruiter from July, 15 to Jan, 16. Last week I have been selected by Ericson which is a core ECE company as Graduate Engineer with a descent package of 6Lpa.

So will join Ericson the joining location is yet to come most probably it will be in Bangalore.

Blessings -

Dear friends, life is full of enormous opportunities it may happen that u don't get it at certain required time so never get upset from that, you have to explore it and plunder it by yourself.

I followed my own inspirational quote sharing it with you guys - "I never lose either I win or learn".

Experiences:

I would like to give credit of my success to my faculties particularly Ankit Tripathi Sir, Puneet Srivastava Sir, Anamika Ma'am, Ramendra Sir, Vartika Ma'am and Riju Jindal Ma'am as they always guided me scolded whenever required mentored me and paved a path for my success.

It was also not possible without my batch mates namely Shishir Dwivedi and Tanya Srivastava who remained my healthy competitor and advised me always.

Last but not least my beloved juniors who always respected me and have always expected much more from me helped me in Fest, RTGAMIS etc. I couldn't write all of their names but some of them are Gyanesh, Ashutosh bhardwaj, Ashutosh Kishore ,

Ruchir Srivastava, Shubham mishra , Shyam narayan Gupta , Niharika Singh , Arpita Rai , Sonangi Shankar , Shubhangi Shankar , Rajat shukla and Swaraj.

I wish you all a great success in your life. Always keep trying, never give-up as we are engineer and if we can end a semester exam in one night study nothing is impossible.

Thanks and regards,

Siddhartha

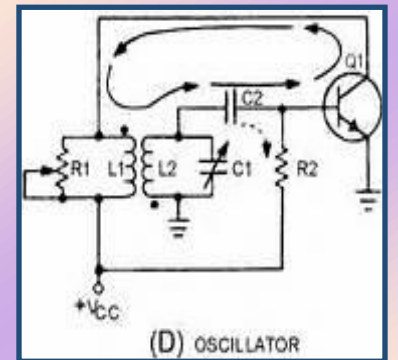
COROLLARY

1. **Alligator Clip** - Spring clip on the end of a test lead used to make a temporary connection.



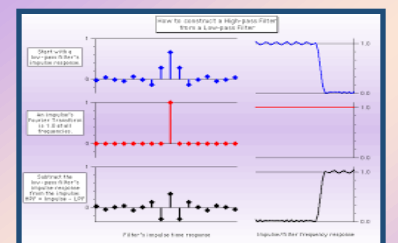
2. **Armstrong oscillator** - An oscillator that uses an isolation transformer to achieve positive feedback from output to input.

3. **Colpitts Oscillator** - An oscillator with a pair of tapped capacitors in the feedback network.

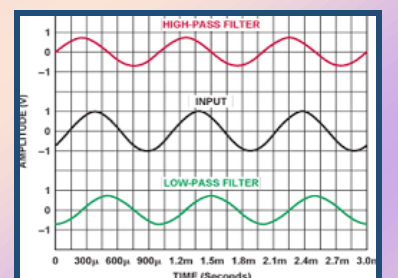


4. **Voice Synthesizer** - Synthesizer that can simulate speech by stringing together phonemes.

5. **Flow Soldering** - Flow or wave soldering technique in large scale electronic assembly to solder all the connections on a printed circuit board by moving the board over a wave of molten solder.



6. **High-pass Filter** - A tuned circuit designed to pass all frequencies above a designated cut-off



frequency. Frequencies below the cut-off frequency are rejected or attenuated.

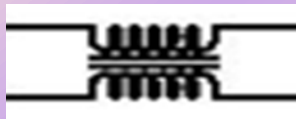
7. Mismatch - Term used to describe a difference between the output impedance of a source and the input impedance of a load. A mismatch prevents the maximum transfer of power from source to load.

8. North Pole - Pole of a magnet out of which magnetic lines of force are assumed to originate.

9. Capacitor Microphone - Microphone whose operation depends on variations in capacitance caused by varying air pressure on the movable plate of a capacitor.

10. Zeroing - Calibrating a meter so that it shows a value of zero when zero is being measured.

11. Saturable reactor

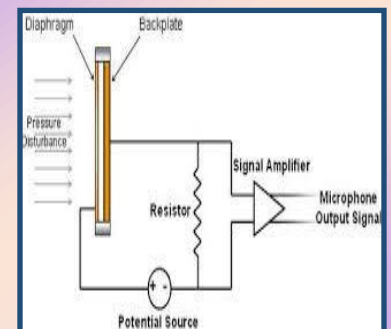


12. Transformer, Iron core



By: Shashank Bindal

ECE 2ND YR



ONGOING PROJECTS

1. Project with BSNL

The following final year students of ECE are involved in projects with ALTTC, Ghaziabad.

Gaurang Omar

Girvvansh Chaurasia

Swayam Srivastava

Ashish Yadav

Divyansh Chaudhary

Atul Kumar

Vishwajeet Samal

Himanshu Srivastava

Abhishek

Abhishek Mishra

Himanshu Nigam

Dheeraj Kumar

Raghav Pandey

Lokesh Kumar

Ayush Kumar

Rish Dixit

Suraj Saroj

Mahesg Chandra

Sunil Kumar Chaurasia

Prince Gupta

Akhilesh Kumar Yadav

Ashish Yadav

Krishna Kumar Gupta

Abhay Tiwari

2. Project with MRDC

The following final year students of ECE are involved in projects with MRDC:

Aparna Mishra

Kumara Anjali

Aashi Gupta

Kumar Anshu

Mohit Grover

Paurush Varshney

Puneet Kumar Rai

Prabuddha Gautam

PLACEMENT NEWS

Following Companies visited to RKGIT for placement.

QA Infotech

IBS

Nmtronics

Aon Hewitt

Westin Electromech

- Rashmi Pandey of ECE 4th year was placed in *Aon Hewitt*.
- *Prashant prabhakar singh in Fab 2U*
- *Avinash kr.Singh in Fab 2U*
- *Avinash kr.Singh in Aon Hewitt*
- *Gaurang Omar in Emicon*
- *Rajat Garg in Emicon*
- *Giri Vansah in QA Infotech*
- *Keshav Singh in Aon Hewitt*
- *Priya Srivastava in FUTIQ Technologies*
- *Mohd. Asif in AARON co. pvt . ltd.*
- *Richa Agnihotri in Team Computers*

BIRTHDAY CELEBRATION

The Department of ECE wishes a very happy birthday to

Dr. Dharendra Kumar – 17th December

Ms. Neha Goel – 17th December

Mr. Alok Tyagi – 17th December

Ms. Anamika Gupta – 25th December

Mr. Gaurav Jain – 2nd February

The Department of ECE also wishes a very happy birthday and healthy life to our honorable **Director Sir, Dr. R.P. Maheshwari on 25th Decemeber.**

ECE Department celebrated birthday of Dr. Dharendra Kumar on 17th Dec 2015.



UPCOMING EVENTS

1. *Holi Celebration*
2. *Enterpeneurship awareness programme with NIESBUD*
3. *Training on Microwave Technology by Industry Expert*

-----BEST WISHES-----