Electrikus...

Issue 2
June 2018

As the chiefs say

From an initiative 3 years back to a tradition now, The e-newsletter has explored all limits of knowledge. I extend my heartfelt greetings to all participants, authors, faculty staff and students associated in this endeavor.

Er. DC Jain
Chairman
(Gyan Ganga Group)

It is a matter of great happiness to me to know that the students have continued the e-newsletter for such a long time with great efficiency. Each edition comes out better than the previous and I have similar hopes from this one.

Mr. Rajneet Jain
Secretary
(Gyan Ganga Group)

I am very pleased to know that our college team is coming out with another issue of the e-newsletter. I heartily congratulate the editorial team. We expect to put a lot of technical knowledge to the readers from this e-newsletter.

Mr. Pankaj Goyal
Executive Director
(Gyan Ganga Group)

This effort of the students will be surely appreciated by one and all. Along with academics, the different activities in college are the keys that will unlock the hidden talents and thoughts in students.

Mr. Apurva Singhai
Executive Director
(Gyan Ganga Group)

It is joyous to know that the students are continuing the legacy of the e-newsletter as it shall help in spreading the activities being conducted by the institute to the public. I wish the team good luck.

Dr. Maneesh Choubey
Group Director
(Gyan Ganga Group)

It gives me immense pleasure to know that another edition of Electrikus is coming out. I wish all the success to the team of the EC branch involved and hope that this edition will also benefit the students in a great manner.

Dr. Vinod kapse
Principal
GGITS, Jabalpur

This new edition of Electrikus has lots of exiting updates. Technology and time never stop and the updates here keep account og the latest developments. My warm wishes to the Gyan Ganga Group for the publication of this e-newsletter.

Dr. Preeti Rai
H.O.D. EC Dept.
GGITS, Jabalpur

so many incredible issues previously. I congratulate the editors on handling the pressure well and coming out with yet another brilliant edition of Electrikus. We truly are "Commited for Excellence".

Prof. Pankaj Sahu
Faculty in-charge
Electrikus

Editors of this issue

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VISION

"To be centre of excellence in teaching-learning and employability in various fields of Electronics and Communication Engineering to produce globally competent, innovative and socially responsible citizen."

HOTTEST GADGET

3D Printer

We're already able to 3D print a lot more than you might think, from Frankenstein foods to gun parts to Eiffel Tower figurines. What makes 3D printing THE hot story of 2013 is what we'll soon be able to do with it, producing trainers, drugs, human organs and Moon bases.

The machines are becoming faster, better and more affordable. The one we netted for this shoot, the MakerBot Replicator 2, is under two grand in UK money, resembles neither a 1980s office photocopier or a violent metal loom – both very much last season's look in the 3D printing world – and is compact enough to sit on your desk.

Source-www.t3.com

Mission

1. To offer high quality graduate and post graduate programs in Electronics and Communication with strong fundamental knowledge and to prepare students for professional career or higher studies.
2. To foster spirit of innovation and creativity among students, faculty and staff, promote environment of growth, participation in conferences, technical and community services and lifelong learning for all.
3. To discover and disseminate knowledge through learning, teaching, sharing, training, research, engagement and creative expression.

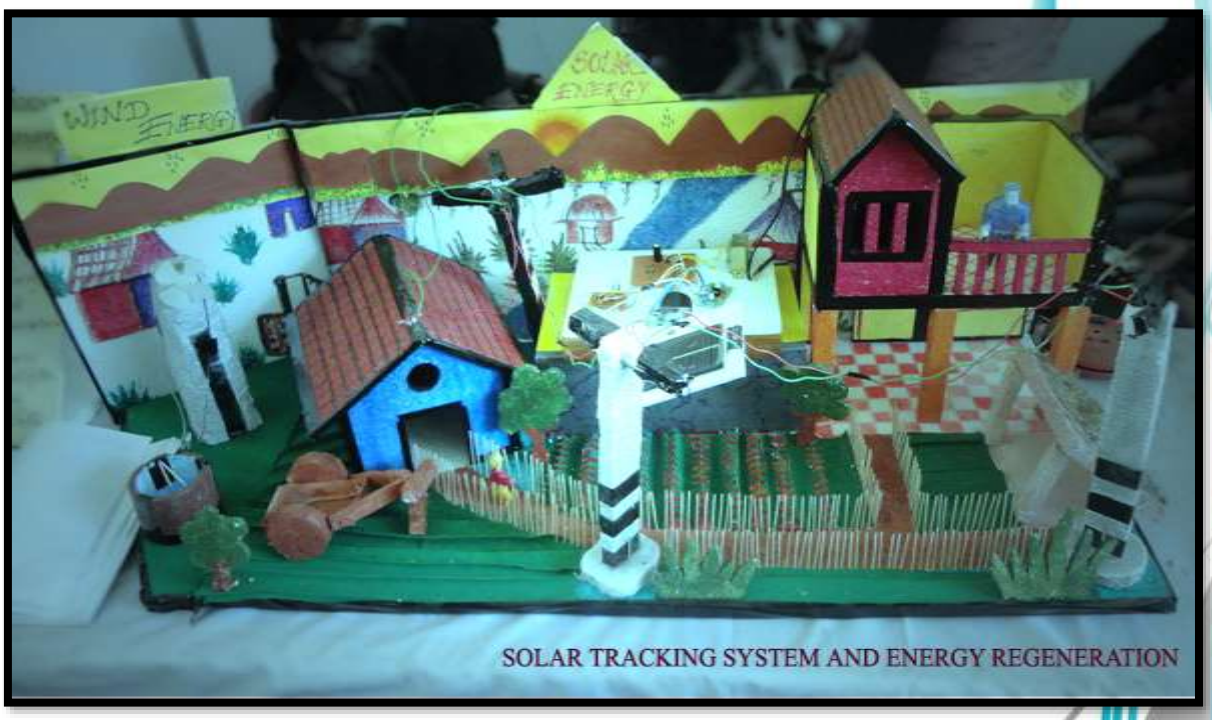
Vigyaan Mela

The end of february brought another refreshing experience for the tronics students of the college as the buzz of Vigyan Mela started. The Vigyan Mela is an annual event organized by the Madhya Pradesh Government which gives a platform to budding engineers to unleash their imagination and demonstrate a working model of possible new revolutions in various technical fields.

After very succesful 2 years, This year the exitement among the students was already building before the news arrived. Almost everyone was ready, and as soon as the dates were finalized, the feet was on the pedal. The students were informed and every semester participated brilliantly. 5 projects were shortlisted and were put to a three day exhibition in February.

A well designed Solar tracking system, By EC 6th sem students was the highlight of the 3 day period. What the hell is that you say?? Lets check it out...

Solar tracking system is an electrical tracker which tracks the sun as it moves from east to west covering 180 degree but leaving 15 degreees horizon of east and same at west. 150 degree effectively is the range this tracker does its magic in. As the sunlight falls on the solar plate, the LDRs will sense the light and the plate will rotate in the direction of sun thereby always inclined at the maximum angle of absorption of light. this technique improves the efficiency of energy conversion from solar to electrical by about 75%



SOLAR TRACKING SYSTEM AND ENERGY REGENERATION

Featured

Electronic Nose

Researchers are developing an exquisitely sensitive artificial nose for space exploration.

Onboard the space station, astronauts are surrounded by ammonia. It flows through pipes, carrying heat generated inside the station (by people and electronics) outside to space. Ammonia helps keep the station habitable.

But it's also a poison. And if it leaks, the astronauts will need to know quickly. Ammonia becomes dangerous at a concentration of a few parts per million (ppm). Humans, though, can't sense it until it reaches about 50 ppm.

Ammonia is just one of about forty or fifty compounds necessary on the shuttle and space station, which cannot be allowed to accumulate in a closed environment.

And then there's fire. Before an electrical fire breaks out, increasing heat releases a variety of signature molecules. Humans can't sense them either until concentrations become high.

Astronauts need better noses!

That's why NASA is developing the Electronic Nose, or ENose for short. It's a device that can learn to recognize almost any compound or combination of compounds. It can even be trained to distinguish between Pepsi and Coke. Like a human nose, the ENose is amazingly versatile, yet it's much more sensitive.

"ENose can detect an electronic change of 1 part per million," says Dr. Amy Ryan who heads the project at JPL. She and her colleagues are teaching the ENose to recognize those compounds -- like ammonia -- that cannot be allowed to accumulate in a space habitat.

Here's how it works: ENose uses a collection of 16 different polymer films. These films are specially designed to conduct electricity. When a substance -- such as the stray molecules from a glass of soda -- is absorbed into these films, the films expand slightly, and that changes how much electricity they conduct. Because each film is made of a different polymer, each one reacts to each substance, or analyte, in a slightly different way. And, while the changes in conductivity in a single polymer film wouldn't be enough to identify an analyte, the varied changes in 16 films produce a distinctive, identifiable pattern.

Electronic Noses are already being used on Earth. In the food industry, for example, they can be used to detect spoilage. There's even an Electronic Tongue, which identifies compounds in liquids. NASA's ENose needs to be able to detect lower concentrations than these devices. Right now, Ryan is working on a stand-alone version of ENose.