



Department of Electrical Engineering

From HOD's Desk

Prof. Mrs. Archana Shirbhate
Head of Department

“Success comes to those who work hard and stays with those, who don't rest on the laurels of the past.”

It was quite inspiring to watch and witness the potential of our students unfolding at various stages and situations each day. Trying and testing times during the hectic semester system have elicited our students to put forth their best. The management and the staff have been supportive of the various activities that were undertaken by the students in view of helping them reach the pinnacle of perfection and professionalism in whatever task they took on, thus strengthen our journey of achieving excellence.

The “e-Spark-16” newsletter exemplifies the voyage transverse and exhibits the literary skills of our students. The “e-Spark-16” newsletter is a forum which could aptly be used for recording events, fond memories and creative writing. I am sure that this Newsletter will be informative and resourceful. On this occasion, I convey my good wishes to students, faculty and staff of the department in their endeavors. The “e-Spark-16” newsletter, the measure of progress, is edited by Prof. Shabnam Rukhsar. We are thinking to have student contribution in the newsletter.

Message from EDITOR...

**“Only as high as I reach can I grow,
Only as far as I seek can I go,
Only as deep as I look can I see,
Only as much as I dream can I be”**

Being the Editor In charge of the “e-Spark-16” newsletter, it gives me great pleasure to bring to you this issue. This newsletter highlights events, activities and academic prowess and achievements. In this edition, I have tried to capture last year excitement and activities. I do hope that this newsletter encourages many more including students to use it as a platform to express their creativity. I sincerely hope that this edition makes for an interesting read.

Happy Reading!

Ms. Shabnam Rukhsar,
Assistant Professor



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Achievements



Faculty Achievement:

Prof. Ahmed Irfan M.F. was awarded PhD by Electrical Engineering Department of **Visvesvaraya National Institute of Technology (VNIT)** recently in this year. The topic of research was "Simplified Space Vector Modulation Techniques for Cascaded H-Bridge Multilevel Inverters". He gives the credit of his success to his guide Dr. V.B. Borghate family, friends and colleagues and Dr. Sajid Anwar, Principal of ACET.

Academics:

The effort and dedication of these student reflects in their result. A hearty congratulation to all toppers of RTMNU Winter 2013 Examination.



Aafsha Ruhi,
III Sem SGPA 9.15,
84.00% University
Rank 2nd



Amrin Ayyub Khan
III Sem SGPA 8.89,
81.4% University
Rank 4th



Abhishek Waghmare
III Sem SGPA 8.41,
76.6% University
Rank 9th



Nahid Qureshi
VII Sem SGPA 8.70,
79.5% UNIVERSITY
Rank 6th



Tejaswini Gawande
VII Sem SGPA 8.70,
79.5% University
Rank 6th



Narshima Murti
VII Sem SGPA 8.57
University
Rank 8th

Extra-curriculum:

Students from eight semester electrical department won 1st prize in paper competition in four colleges in national level paper presentation competition. The names of the students are Tejaswini Gawande, Komal Kaur Khokhar, Naveen Verma, Tushar Sahare, Bhupesh Metangale and Naved Bakhtiyar. They have won first prize in S.B. Jain College of Engineering & Management, Suryodaya College of Engineering & Technology, Vidya Niketan Institute of Engineering & Technology and Priyadarshini College of Engineering. They have won cash prize along with the certificate and momento. The topic of their paper presentation was "To Study Voltage Stability Using PSAT".

They have also published their paper in "International Journal of Advanced Research in Electrical, Electronic and Instrumentation engineering" and "International Journal of Innovative Research in Science, Engineering and Technology". Students achieved this success under the guidance of Dr. Altaf Badar.



Dr. Altaf Badar with wineers from L-R (Tejaswini Gawande, Naveen Verma, Naved Bakhtiyar, Bhupesh Metangale, Tushar Sahare and Komal Kaur



Tejaswini Gawande

Tejaswini Arun Gawande student of electrical department eight semesters won 1st prize in "Quiz Competition" and also in "Mock Campus". These national level events were organized by K.D.K. College of Engineering, Nagpur under the banner of Electrofest-2K16. She won cash prize, momento along with the certificates.

Tejaswini Arun Gawande student of electrical department eight semesters won a fair & lovely scholarship award in 2015. She has won this award second time consecutively in 2014 and 2015.

She received the amount of 40,000 Rs. along with the certificate and momento. This is the national level scholarship test conducted by Hindustan Uniliver Limited only for girls. Scholarship program was organized all over India, only 35 girls were selected for renewal process of scholarship, she is one of them to proud our city and college.

Sheikh Sohail Iqbal, 3rd Yr. EXPO

- Participated in intercollege speech competition on topic 'Stop saying "I Wish" , Start saying "I Will"' organized by OCA in co-operation with Adv. Sundeeep C. Raghatare Memorial Trust held on 13th March 2016 and secured 2nd Runner up position.

- Participated in Abhyudaya 16 (A tribute to Kalam Sir) in event 'My point' (Speech Competition) held on 7th Feb 2016 and secured 1st consolation Price.



Sheikh Sohail Iqbal

Sports:



Ankit Yadav



- Ankit Yadav student of 2nd year Electrical Department had participated in Marathon 7 km (Men's), National level event which was held on 12-03-2016 at K.D.K. College of Engineering Nagpur and secured 1st position by completing the race in 19 min 35 sec.

- Mosim Khan, Monis ur Rahman students of 3rd year and Sagar Mishra student of 2nd year electrical department had participated in National level inter engineering football tournament which was held in MIT Pune from 10-09-2015 to 14-09-2015. They are also participated in inter college RTMNU football tournament and secured 2nd position. Their team secured the 1st position. in ACET Engineer's cup.

Parents Meet:

A parent-teacher conference is a short meeting which is organized in each semester to discuss student's progress and weakness in academics of each

individual subject. Student's attendance is shown to the parents. Feedbacks are taken from the parent's as well as students.



Session W-2015



Session S-2016

Blood Donation Camp



Principal Dr.Sajid Anwar along with H.O.D of each department and staff during Blood donation camp

Industrial Visit & Tour



Industrial Tour to Delhi, Shimla, Manali, Amritsar



Hydroelectric Power Plant Totladoh



Load Dispatch Centre Ambazari



Solar Power Plant Chandrapur



Thermal Power Plant Khaperkheda



HVDC Terminal Chandrapur



SEMINAR

Seminar on
ELECTRICAL SYSTEM
in Buildings



Seminar on Elevators



Seminar on Speed Maths Calculation



Workshop on Energy & Environmental Problems
facing with 3rd World and their Probable Solution
for Sustainable Development



Seminar on Power Quality

Workshop

Two day workshop on “Substation Design & Transformer Testing”



Prof. Archana Shirbhate addressing the workshop

Electrical Engineering Department organized a workshop on “Substation Design & Transformer Testing”. Chief Guest Md. Ahfaz inaugurated the workshop and delivered key note address. Prof. Dr. Sajid Anwar, Principal, ACET appreciated student’s enthusiasm in attending the workshop. Prof. Archana Shirbhate, Head of Electrical Dept, Dr. Irfan Ahmad convener of workshop, Prof. P. M. Gadge, Dr. Altaf Badar, Prof. Sayyad Naimuddin and Hod’s of other department were present. The workshop continued till the 7th of April 2016 and ended with the valedictory session. Faculties of the department and student committee members had taken efforts to make the workshop successful.

Forum Installation Phoenix and ECC

Department has installed student forum “PHOENIX” and “ECC (Energy Conservation Cell)” on 6th October 2015. This Installation Program was inaugurated with the hands of Prof. Dr. Sajid Anwar, Principal, Anjuman College of Engineering & Technology, Sadar, Nagpur. Prof. Archana Shirbhate head of the department and Prof. Dr. Altaf Badar student Coordinator and Prof. Yasmin Ansari student Cocordinator congratulated the students. On this occasion two Technical workshops “Electrical System in Bulding” by Mr. S. L. Talewar Executive Engineer MSEB and “Power Sector Scenario in India” by Prof. N. M. Deshkar R.C.O.E.M were organized. The workshop was conducted in an interactive manner and students were curious to know about various fact related to power sector. Prof. N. M. Deshkar cited some of the good examples to motivate the students. Mr. S. L. Talewar told the students that how they can build their future in



Dignitaries sitting on the dais with newly installed forum member team heads

Electrical Industry. The function was successfully arranged with the support of teaching and non teaching staff and students.

Technical Articles

ENERGY FROM POLLUTION

Center for Biotechnology at The Biodesign Institute at Arizona State University are developing an amazing new technology which will potentially have the ability to extract electricity from pollution and organic waste products. Currently, fuel cell energy requires heat and a fuel source in order to produce energy. Bruce Rittmann, Director of the Center for Environmental Biotechnology at the Biodesign Institute and his team of researchers are developing microbial fuel cells (MFC) that can oxidize organic pollutants and create electricity from pollution. There are plenty of organic materials, especially waste

materials, around that have energy value.

The problem is the energy is in an inconvenient form. Microorganisms can convert organic material into one of three energy sources: methane, hydrogen, or electricity. “Using the microbial fuel cell we can get energy value out of organic stuff and convert it into electricity”. The microbial fuel cell is powered by bacteria growing as a biofilm on an conductive solid surface serving as an electrode in a bath of organic waste. The microorganisms oxidize the organic pollutants for example pig manure “transferring the electrons to the electrode, into an



hydrogen derived from fossil fuel as its energy source. "Microbial fuel cell can solve the entire problem, converting organic waste directly into energy. Further, because biological fuel cells operate at room temperature there is no need to waste energy on heating or use expensive catalysts like platinum.

Finally since there's no combustion involved, biological fuel cells produce no pollution – in fact they actually help reduce pollution since organic pollution is their fuel source". Nevertheless, that have a lot of potential. "Microbial fuel cells are

electrical circuit, and eventually to oxygen at the cathode." The current of electrons flowing through circuit are electrical energy the microbial fuel cell offers several advantages over conventional hydrogen based fuel cells. "Most fuel cells are currently limited to using just

all natural. They operate at natural temperatures using simple naturally occurring microorganisms to convert waste into energy. It's the ultimate sustainable energy system.

Global Bids for Gurgaon Pod Taxis



Tushar Sahare
VIII Sem, Elect. Engg.

RIDE SMART, RIDE SMOOTH A lowdown of the PRT plan for Gurgaon

- Cost ₹850cr
- Construction period 1 year
- Contract period 25 yrs

SPEED
1 min per docking system

Around **30K commuters** per hour in one direction

MODE OF TRANSPORT
Hanging **1,100** pod cars
Each can carry **5 passengers**

PILOT STRETCH 13 km
Gurgaon Border-Rajiv Chowk-Sohna Road (Badshahpur Mod)

REQUIRED LAND
29 acres available with NHAI & Haryana government

LIKELY TICKET FARE
On a par with Metro

Pod taxis, an idea with which Indian states have flirted for years, will finally debut in Gurgaon. The National Highways Authority of India has laid the groundwork to roll out India's first personal rapid transit (PRT) network and will invite global bids for the project within the next fortnight. The pilot project will span a 13km stretch from the Gurgaon-Delhi border to Badshapur Mod on Sohna Road and is estimated to cost Rs 850 crore.

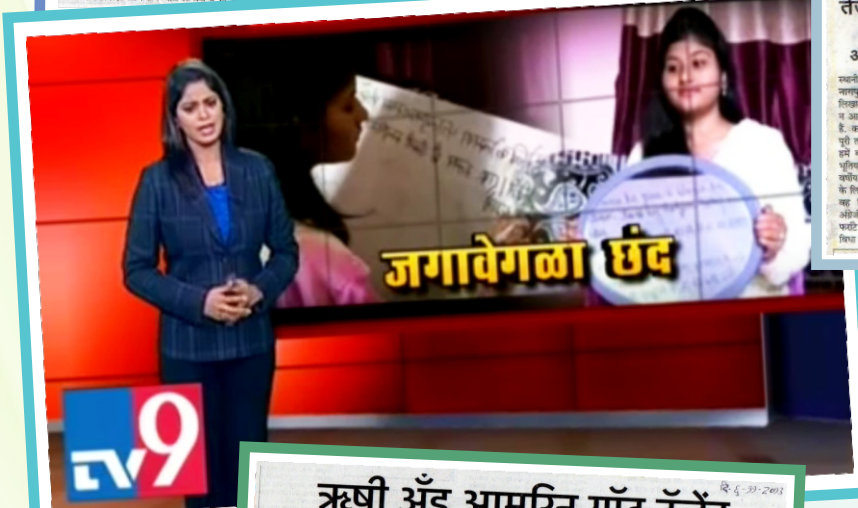
A project called the Metrino (in pic) a PRT system in which pods are suspended from an overhead rail has been under consideration for a while. Every pod can take up to five passengers. For the pilot project route, 16 stations have been planned, starting near Ambience Mall. A personal rapid transit (PRT) network is made up of small automated vehicles running at close intervals on a guide way with docking stations for passengers to get on and get off. While a pod can accommodate up to five people, there is also an option to hire an entire pod that will take a passenger straight to the destination, skipping the scheduled stops. The average speed of the pods is 60kmph.

A senior NHAI official said the network would be built within a year of the contract being awarded. "Pod taxi systems are best suited for this. We are keeping our options open, though, so that private players can come up with best system, including skyrail," the official said. A skyrail is also a PRT system, but is more similar to a ropeway .

The NHAI official said land required for the project is already available with it and Haryana government agencies. The project does not need forest and environmental clearance. As for financing, the entire investment will be made by the private company that sets up the PRT. Under the terms of the agreement, the company will recover its investment in 25 years through tickets.

The Punjab and Haryana governments had, in the past, announced a rollout of pod taxis in Amritsar and Gurgaon, but these never came to fruition. According to estimates prepared by the NHAI, while building a kilometre of Metro costs at least Rs 250 crore and of monorail Rs 200 crore, the Metrino system can be built with just Rs 70 crore. It's lighter as well.

MIRROR WRITING - A UNIQUE TALENT



Amrin Ayyub Khan student of IV Semester is known as "Mirror Writer". Mirror writing is a type of art in which when she write in mirror language you can only read it by mirror. This is very unique art. She has command on English, Hindi, Marathi, Sanskrit, and Arabic. She write it in dictation speed. Now for this different & innovative talent she is going to be awarded with "Asia Book of Record" and "India Book of Record".

She has got many prizes for the same talent. She has won National award of "Yuva's got Talent" in 2013-14 and got 1st prize of Rs. 25,000/- and momento. Almost every newspaper her talent is appreciated. She is felicitated by Hon'ble High Court Justice Bhushan Gavai and also by Ex-Mayor Shri Anil Sole. Her interviews is also broad costed on BCN Channel and she has got many awards and rewards for the same from respective societies, and institutions.

