



**GANDHI INSTITUTE  
FOR EDUCATION & TECHNOLOGY**  
BANIATANGI, BHUBANESWAR, KHURDA



# Campus Focus

A Quarterly News Letter  
Volume - 6, Issue - IV, Nov., 2016

## From The Editor's Desk

The Fourth Issue of **Campus Focus** (Volume: 6, Nov.2016) comes with a new fervor. Besides being actively involved in academic and social work, our students as well as teachers have contributed to this issue on different topics of Science, Engineering and Socio-behavioral concerns. More so, our faculty members have worked on, written and published research articles in different National and International Journals. I take this opportunity to congratulate you all. We are delighted to have some new members (both teaching and non-teaching) join our growing Institute. Welcome aboard, our heartiest congratulations to each one of you. We are excited on your onward journey with us at GIET, and look forward to your outstanding contributions ahead.

We have incorporated two new features in Campus Focus in the current issue besides its normal features and if appreciated, plan to continue with the same in its forthcoming issues. The first feature is **'Let Us Know'**: It shall cover interesting information known / unknown to our readers, building curiosity in your young readers'

mind. The other feature is the **'Poetry Corner'**: We shall choose a poem written by one of the modern poets writing in English and shall append minimal helpful notes for its easy comprehension and appreciation of the lyrics and the message imprinted in the poem.

Dear Readers! I am reminded of an important issue that makes *our life stressful and torturous*. It breaks healthy relationships amongst us. It is *envy and jealousy*. They make us a prey to the delusion that *everyone else's life is happier than ours, more productive and even more valuable*. They infect our thinking with the virus of illusion and make us think that everything is better than the one we possess. Herein, we need to train our *emotional Intelligence* to transform jealousy to admiration, to appreciation, to love. Then only our lives shall be healthier, happier and brighter.

Dear Students! The past one month was filled with lots of festivity, good food, family and friend gatherings. Of late, you had



enjoyed Durga Puja and thereafter, the festival of Light, Deepavali. Now it's time to circle back and concentrate on your studies. Time is always limited, be intelligent enough to make the best use of it. Be good, be honest, pray the Lord, never lose temper, do not involve yourselves in wasteful activities. Life is short. Never make it shorter. Work hard, work fruitfully, work sincerely.

*"Success is not a destination, but the road that you're on. Being successful means that you're working hard and walking your walk every day. You can only live your dream by working hard towards it. That's living your dream."*

- Marlon Wayans.

See you again. Thank you.

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### EDITORIAL BOARD

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## PUBLICATIONS :

**Jharana Paikaray**

"Web Mining : A Tool For Information Retrieval From Online Marketing" International Journal of Advance Research And Innovative.Ideas In Education, 2016,2(3), ISSN 2395-4396.

**Neelamani Samal**

"Future Trends In Cloud Computing And Big Data", Journal of Computer Science And Application, 2015, 3(6) , Pg 137 - 142, DOI : 12691/jcsa 3-6-6

" Threats in Cloud Computing and Security Issues", Journal of Environmental Science, Computer Science and Engineering & Technology" , September 2016- November 2016; Sec. B; Vol.5. No.4, Pg. 294-303 , E-ISSN: 2278179X

**Madhuri Pradhan**

Madhuri Pradhan "Optimization of Performance of Operating Parameters by EDM Process based on the 'Taguchi Method' : accepted by the board of 'Blue Eyes Intelligence Engineering and Sciences Publication Pvt. Ltd.' This has been published in 'International Journal of Recent Technology and Engineering (IJRTE)', ISSN: 2277-3878 (Online), Volume-4 Issue-4, Page No.: 1-7, September 2015.

**Laxman Ku. Sahoo**

**Laxman Kumar Sahoo.**"Theoretical Analysis of Steady Laminar Natural Convection Heat Transfer from a Pin Finned Isothermal Vertical Plate" :published on 17<sup>th</sup> October 2016 in "Heat Transfer -Asian Research" (Elsevier & Scopus Indexed)

**Dr. Pradyumna Ku. Sahoo**

(1) "Application of Soft Computing Neural Network Tools to Line Congestion Study of Electrical Power Systems", International Journal of Information and Communication Technology (IJICT), Inderscience, Accepted, In Press..

(2) "Detection and Classification of Transmission Line Congestion by Feed Forward and Radial Basis Function Neural Networks", International Journal of Institution of Engineers (India): Series-B: Springer, Communicated, Under Review.

## ORIENTATION PROGRAMM FOR FRESHERS AT GIET, BANIATANGI

Gandhi Institute for Education & Technology, Baniatangi, Bhubaneswar conducted its 8<sup>th</sup> orientation program for the newly admitted students of B.Tech, Diploma and M.tech classes on the 20<sup>th</sup> of August 2016. All the newly admitted students along with their parents were present on the occasion. Prof.(Dr.) Satya Prakash Panda, Chairman, Gandhi Group of Institutions was present on the said program as the chief guest. He narrated various aspects of technical education and pointed out different good practices to become a successful Engineer. He told that "without hard work there is no other shortcut for getting success." The Vice Chairman of the institute Prof. Jyoti Prakash Mishra also spoke on the occasion and urged the students to have a dream of their own to be successful in life. He shared with the students some of the valuable tips, which may help them to be good human beings. Further, he spoke about the importance of different clubs in the college and advised the students to make the best use of them during their studentship in the Institute. He concluded his speech, urging the students to make GIET proud by their good behaviour, attitude



and efforts. The next speakers, our Director, Prof. (Dr.) B. Pradhan advised the students to be honest, polite, friendly and smart. He further added that 'self confidence' and 'perseverance' are the two mantras of success. Esteemed Principal, Prof. (Dr.) Niranjan Sutar inspired the new entrants with his motivational speech to be regular in their studies and advised the students to attend classes regularly. Principal (Diploma Wing) Prof. Bikash Pattnaik enlightened the rules and regulations of the Institution and wished the fresher's a bright time ahead. Prof. (Dr.) M.P. Sahu, HOD, Dept. of BSH extended vote of thanks. All the staff members of the institute were present on the occasion.

## INDEPENDENCE DAY AT GIET, BANIATANGI

“At the stroke of the midnight hour, when the world sleeps, India will awake to life and freedom. A moment comes, which comes but rarely in history, when we step out from the old to the new, when an age ends and when the soul of a nation long suppressed finds utterance” - so said Pt. Jawaharlal Nehru on the eve of India's first day of Independence way back on the 14<sup>th</sup>-15<sup>th</sup> midnight of 1947.

Students, faculty members and all the staff of GIET, celebrated the 70th independence day in its campus with great enthusiasm and patriotic fervour. Director Prof. (Dr.) B. Pradhan, hoisted the tri-colour to the tune of our National Anthem. The unfurling of the flag was witnessed by the dignitaries like our Principal Prof. (Dr) N.Sutar, faculty members, staff and a plethora of young students. Speaking on the occasion, our beloved Director reminded all present of the true virtues of the Indians. In the beginning, he read a pledge which was ritually repeated by all present. Respected Principal Sir reminded students present on the three basic qualities of student-hood : sincerity, honesty and discipline. He urged the students to bring about a change in their behaviour.



Heads of different departments including Prof S.Panda (ECE), Prof.Suvendu Mohanty(ME) Prof.(Dr)Pradyumna Sahu (EE) Mr.Raghunath Dash (Hr head), faculty members and students of the Diploma Wing, B.Tech Wing spoke on different issues. Senior Professor Dr.S.N Pathi coordinated the event. He concluded the programme and spoke on the responsibilities due on all the Indians for a coordinated growth of the country.

A Tree Plantation programme followed with Director, Principal, faculty members and students planting trees profusely in the entire Institute campus. The programme ended with distribution of sweets.

## TEACHERS' DAY CELEBRATED AT GIET

The students of GIET celebrated teachers' day in the college premises with much fun & fare. Students arranged a nice programme and they greeted teachers in a traditional Indian way by applying vermilion and sandal paste on their forehead. The students chanted guru-vandana and created the atmosphere of a gurukul. Our honourable Director, Vice-chairman, Principal and Professors spoke on the occasion. Students also spoke on the occasion giving their humble respect to the teachers. The session ended with the ritual cake-cutting and a cultural programme organized by the students.



## IMPORTANCE OF SPOKEN ENGLISH

On the 24<sup>th</sup> of September 2016 the BSH Department organized a session on the Importance of Spoken English especially for the upcoming Engineering Graduates with Sri Sayantan Ghosal of the British Council Kolkata as the Chief Speaker. Prof. Dr. B. Pradhan, Director; Prof. Dr. N. Sutar Principal; Prof Dr. M. P. Sahoo Head, BSH Department were on the Dias. Sri Ghosal spoke that English Language is no more the Language of any Country, any Nation but of the entire world. As such we need to use the language as it could be understood by everybody. The program was quite interactive, educative and enjoyable.



## CELEBRATION OF GANESH CHATURTHI



GIET worshipped Lord Ganesh, the remover of all obstacles and the Lord of all Wisdom with great pomp & show, on the 5<sup>th</sup> of September, 2016. The students took all care to make the celebration a grand success. The stage was decorated nicely to bring a sense of festivity in and around the campus. The Puja started at 9 am in the campus on a nicely decorated Pandal with a massive gathering of staff members & students. After the Puja and Puspanjali Prasad was distributed amongst all present. The occasion was specially attended by the Vice Chairman of the institute Prof. Jyoti Prakash Mishra.

## VISWAKARMA PUJA

Lord Viswakarma, the divine architect, a precious thing born of the “Samudra Manthan”, is worshiped all around as lord of all engineering activities, he was worshiped by all the students of GIET in their respective departments with much pomp and ceremony.



## BLOOD DONATION CAMP

In association with the Jiban Bindu, Gandhi Institute for Education & Technology (GIET), Bhubaneswar organised a blood donation camp on the 21<sup>st</sup> of September 2016 in the Institute Auditorium. Students and staff members voluntarily participated and donated blood for the needy. One hundred ninety units of Blood were collected by the Red Cross Blood Division. Students and Staff of both Degree and Diploma wing along with our revered Vice-Chairman Prof. J.P. Mishra, were present in the programme.



## WORKSHOP ON VIRTUAL EVALUATION PERFORMANCE AT G.I.E.T., BANIATANGI

A two days workshop on “Virtualization and Performance Evaluation of virtual machines in Cloud” was organized by the Computer Science and Engineering Department of G.I.E.T., Baniatangi in association with JECET Journal and TCS on 25<sup>th</sup> and 26<sup>th</sup> October 2016. In the inaugural session of the workshop, Director of Institute of Mathematics Dr. A. K. Mishra joined as the chief guest. In house members including Vice-Chairman Prof. J.P. Mishra, Principal Dr. Niranjana Sutar and, Director Prof. B.B. Pradhan and Dean Academics Prof. M.C. Panda were present on the dais. Each one of them spoke about the importance of the workshop. Professors of other universities including Dr. Srinibash Prasad, Dr. B.D.K. Patro, Dr. Padmalochan Bera and Dr. Rakesh Balabantary participated in the programme and presented their papers along with their research findings. They encouraged the students and reiterated about the utility



of cloud computing. In the second day, convener of the workshop Prof. (Dr.)Sambit Mishra gave the welcome address. The Zonal head (Eastern Region) of TCS Dr. Suman Bhattacharya and other invitees discussed the practical applications of cloud computing. At the end of the Session, Certificates were awarded to the student participants. Prof Snigdha Mohapatra conducted the programme beautifully and Prof. (Dr.) Anil Kumar Mishra concluded the session with the vote of thanks to all the members of the workshop.

## ARTICLE BY STAFF AND STUDENT

### Multi Objective Optimization On Image Classification with Multiple Features

In a typical image classification task classification performance should be far better. In literature review, the multiple features, e.g., spectral, texture, shape features etc. are employed to represent pixels at different perspectives to solve the issues based on classification performances. So the objective of finding the best feature from the list of all features is considered as a major problem to improve the accuracy level. Also the smallest attribute set and the biggest class set formation are followed for the better classification. In this case, there are more than one conflicting objectives aimed for a problem. In this paper, the Pareto set approach which includes Pareto frontier and Pareto set for the classification is used to evaluate different sets of attributes and classes.

The multi-objective optimization problem and the

low-dimensional representation of the multiple features of images for subsequent classification are solved by using the optimization algorithm such as: Genetic algorithm (GA), Artificial Bee colony (ABC) and Particle swarm optimization (PSO). In this work the system is applied to remote sensing problems and we consider best classification accuracy, the smallest attribute set, the biggest class set and dimension reduction as objectives. And then finds the best compromising solutions and proves the optimization algorithm ABC performs better which is implemented in the working platform of MATLAB.



**Dr. Anil Kumar Mishra**  
Associate Professor, CSE

### Performance Analysis of Software Development in Cloud

Now a days the Software Engineering activities can be easily accomplished through the use of computational, storage in cloud. However it may not be always feasible to transfer existing services and content to external or internal, public or private clouds.

Although cloud computing may have positive aspects, but still there may be several reasons to decide whether to use applications of Software Engineering in cloud or not. It has been seen that cloud development may not be always useful or cost-efficient for all development requirements. Also, all cloud environments may not be intended for wider ranges. It has also been seen that internet-based services may not be considered as cloud computing systems as a whole.

The Cloud users usually require optimizing and processing data at every level of the system in order to minimize software development cost. Software development costs may be divided into various forms consisting of four attributes, i.e. Product, platform, process and personnel attributes. Product attributes usually consist of descriptive variables. The descriptive variables provide relevant information about development type, application type and end-user type. The attributes associated may be used to indicate the complexity of given development task. While evaluating the complete software complexity, it has

been observed that the IaaS cloud approach may not give any economical benefits over software development. And the PaaS services also may not automatically solve the complexity problems. If cloud approach can change the process to be more streamlined and faster than on-premise development then it could be possible that the costs related to management may also be reduced. Cloud may also help small and medium sized organizations to avail better infrastructure in terms of better service, uptime availability with improved efficiency.

Public and private clouds are proved to be the better platforms during software development in specific applications. The efficiency of tasks execution like testing, compiling etc. is improved by using collaborative tools in cloud. The cost for producing entire software generally includes infrastructure and software development. In some cases infrastructure costs can be more than 50% of the total cost of the software development. The cost may be linked to operational attributes and business premises. The operational attributes usually link to three elements, i.e. hardware costs, software costs and license fees.



**Dr. Sambit Kumar Mishra**  
Professor CSE

## GREEN GROWTH

The Green Growth (GG) concept supports the development of green industries, jobs and technologies, whilst allowing for a smooth transition into a green economy. The overall objective is to integrate economic development, environmental sustainability and social equality into all levels of decision making ranging from the government, industry, right down to the consumer. Green Growth can be defined as “economic progress that fosters environmentally sustainable, low-carbon and socially inclusive development”, whilst utilizing fewer resources and generating

fewer emissions in meeting demands for food production, transport, construction, housing and energy (UNESCAP). It integrates key aspects of economic performance, such as poverty reduction, job creation, social responsibility, whilst also improving a nation's environmental performance through the mitigation of climate change and biodiversity loss as well as the security of access to clean water and energy.



**Prof. Rupak Mohanayak**  
Assistant professor, ECE

## LED LIGHTS

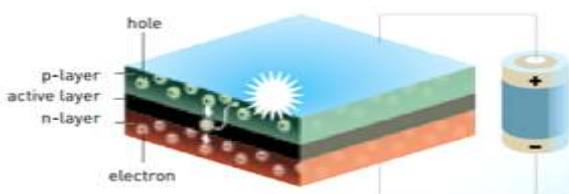
Led lights are no more a new thing in our daily life. The full form of LED is Light Emitting Diode. It is a semiconductor device that emits visible light when an electric current passes through it. The light is not particularly bright, but in most LEDs it is monochromatic, occurring at a single wavelength. The output from an LED can range from red (at a wavelength of approximately 700 nanometers) to blue violet (about 400 nanometers).

Isamu Akasaki, Hiroshi Amano and Shuji Nakamura are rewarded for inventing a new energy efficient and environment-friendly light source the blue light-emitting diode (LED). The white LED lamps are energy-efficient, long-lasting and emit a bright white light. Moreover, and unlike fluorescent lamps, they do not contain mercury.

Red and green light-emitting diodes have been with us for almost half a century, but blue light was needed to really revolutionize lighting technology. Only the triad of red, green and blue can produce the white light that illuminates the world for us. Despite the high stakes and great efforts undertaken in the research community as well as in industry, blue light remained a challenge for three decades.

Akasaki worked with Amano at Nagoya University while Nakamura was employed at Nichia Chemicals, a small company located in Tokushima on the island of Shikoku. When they obtained bright blue light beams from their semiconductors, the gates opened up for a fundamental transformation of illumination technology.

### Theory



A light-emitting diode consists of several layers of semiconducting materials. Electrical voltage drives electrons from the n-layer and holes from the p-layer to the active layer, where they recombine and light is emitted. The light's wavelength depends entirely on the semiconducting material used. They used Gallium

Nitride (GaN) semiconductors to produce blue LEDs.

### Advantages of LEDs

#### 1. Cost Savings

Replacing light bulbs and fluorescent tubes with LEDs will lead to a drastic reduction of electricity requirements for lighting. LEDs can create an equivalent number of lumens (unit of light measurement) with less than 25% of the watts (unit of energy) required by incandescent bulbs. In other words, a 23 watt LED bulb will be as bright as a 100 watt incandescent bulb. This means a 75% reduction in hydro costs.

#### 2. Energy Savings

Not only does a 75% reduction in hydro mean lower costs, it has a positive impact on the demands made on municipal power grids.

#### 3. Everyday Lighting

All you need to do is pick up an LED bulb and fit it into your existing fixture to start saving money and energy.

#### 4. Light Temperature

Incandescent light bulbs have a light temperature of approximately 2700 Kelvins this rating sits



**Prof. Sanjaya Ku. Parida**  
Assistant Professor in Physics

squarely in the yellow zone of the spectrum. Being in this zone means the light is warm, welcoming and flattering. The higher the Kelvin rating, the cooler the light temperature. Most LED bulbs will have a Kelvin rating on the packaging, or at least say “cool” or “warm”. As most of us prefer warmer light for our living environments, choose the warm bulbs for between 2700-3000 Kelvin.

### 5. Reliable

LED technology is versatile and reliable. Most LEDs are dimmable and don't flicker. LEDs require no warm up time and are therefore at maximum brightness as soon as you switch them on.

### 6. Long Lasting

LED bulbs cost significantly more than incandescent or even Compact Fluorescent (CFL) bulbs; this is because LEDs will last up to 50,000

hours. That's about 22 years of use if the bulb were in use for six hours a day, everyday of the year.

### Conclusion

The good news continues because LED bulbs are still coming down in price, making the value proposition one of increasing returns. The invention of the efficient blue LED is just twenty years old, but it has already contributed to creating white light in an entirely new manner to the benefit of us all.

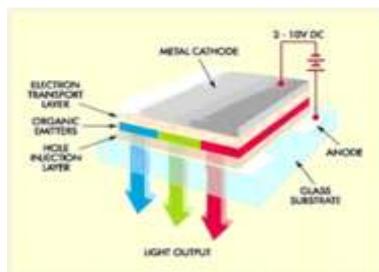
### Articles

1. Zheludev, N. (2007) *The life and times of the LED a 100-year history*, Nature photonics, vol. 1, April
2. Savage, N. (2000) *LEDs light the future*, Technology Review, vol. 103, no 5, p. 3844, September/October

## OLED

### The Future of Technology

An OLED (Organic Light Emitting Diode) is more of an LED which consists of very fine films of organic compounds in the electro-luminescent layer. These organic compounds which are being used in OLEDs have a very significant property of creating light when electricity is passed through them. The most commonly used organic compounds are polyfluorene, polyaniline, etc. The thin layer of organic compound is placed in between two electrodes.

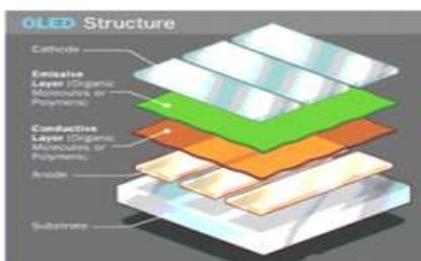


### OLED Comparison with LCD and LED :

An OLED has the ability to work without a backlight unlike LED. Thus, it can display deep black levels and can be thinner and lighter than an LCD.

### Primary look at the working of an OLED:

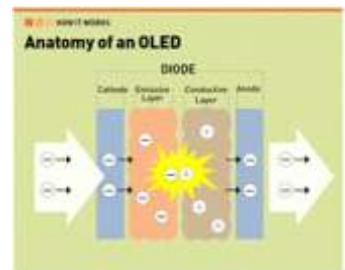
A layer of organic material is sandwiched between two conductors (an anode and a cathode), which in turn are sandwiched between a glass stop plate (seal) and a glass bottom plate (substrate). When electric Current is applied to the two conductors, a bright, electro-luminescent light is



produced directly from the organic material.

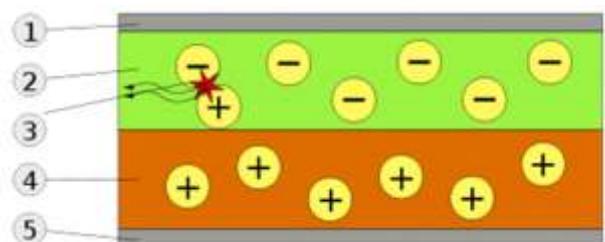
When a current is applied across the OLED, the electrons move from cathode to anode

The cathode in turn passes the electrons to the emissive layer, where the anode withdraws these electrons from the conductive layer. The emissive layer becomes rich in negative charge whereas the conductive layer becomes more positively charged. The two opposite charges get attracted towards each other which leads to their recombination in the emissive layer. This recombination creates a drop in the energy levels of the electrons. The drop in energy levels results in radiation that is on the visible spectrum thus emitting light.



### Schematic of a bilayer OLED:

1. Cathode (-),
2. Emissive Layer,
3. Emission of radiation,
4. Conductive Layer,
5. Anode (+)



Prof. Subrat Ku. Panda  
Professor & HOD, ECE

## Types of OLEDs:

There are several types of OLEDs:

- Passive-matrix OLED
- Active-matrix OLED
- Transparent OLED
- Top-emitting OLED
- Foldable OLED
- White OLED



Each type has different uses.

## Advantages of OLED's

The manufacture of OLED is highly economical and is more efficient than LCD and flat panel screens.

There is much difference in watching a high definition TV to a OLED display. As the contrast ratio of OLED is very high (even in dark conditions), it can be watched from an angle of about 90 degrees without any difficulty.

No backlight is produced by this device and the power consumption is also very less.

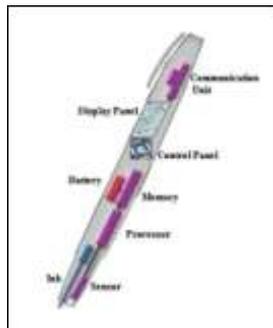
Military application OLED

## Applications of OLED:

OLED technology is used in commercial applications such as small screens for mobile phones and portable digital audio players (MP3 players), car radios, digital cameras and high-resolution micro displays for head-mounted displays. Such portable applications favor the high light output of OLEDs for readability in sunlight, and their low power drain. Prototypes have been made of flexible and rollable displays which use OLED's unique characteristics. Since OLEDs can be designed in any shape (even irregular shapes) and very thin, they can be integrated with walls and ceilings offering a wide array of lighting de-sign possibilities. As they are flexible, they fit into any corners of a room offering a new concept to the interior designer.

## Smart Note Taker

The "smart note taker" is a very helpful product which satisfies the needs of people in today's fast technological life. This product can be used in many ways. The smart note taker provides taking fast and easy notes to people who are busy and quite involved



in something. With the help of smart note taker, people shall be able to write notes on air, while being busy in their work. The written note will be stored in the memory chip of pen, and will be able to read in digital medium after the job is done. This will save time and facilitate life.

There will be an additional feature of the product which will monitor the notes which were taken before, on the application program used in the computer. This application program can be a word document or

image file then the sensed figures that were down onto the air will be recognized and by the help of the required software program will write as a result of which the desired character will be printed in the word document. If the application program is a paint are related program, then the most similar shape will be chosen by the program which will be printed / displayed on the screen. The smart note taker is a very helpful product for blinds by using this instrument they could think and write freely. The subscriber is apart from each other, while their talk and they may want to use figure or texts, to understand themselves better. It is also very useful for instructors during presentations. Hence this product has many advantages over digital pen, since the smart note taker is a device that can store visual recordings and thus can be used widely. Humanity thanks for being blessed with such creative invention.



**Abhishek Singh**  
ECE, 4<sup>th</sup> Year

## Nanotechnology in Electronics

Nanoelectronics refer to the use of nanotechnology in electronic components. The term covers a diverse set of devices and materials, with common characteristics they are so small that inter-atomic interactions and quantum mechanical properties need to be studied extensively. Some of these candidates include: hybrid molecular/semiconductor electronics, one-dimensional nanotubes/nanowires, or advanced molecular electronics. Recent silicon CMOS technology generations, such as the 22 nanometer node, are already within this regime. Nanoelectronics are sometimes considered as

disruptive technology because present candidates are significantly different from traditional transistors. For example, single electron transistors, which involve transistor operation based on a single electron. Nanoelectromechanical systems also fall under this category. Nanofabrication can be used to construct ultradense parallel arrays of nanowires, as an alternative to synthesizing nanowires individually.



**Subhashree Patra**  
ECE(4<sup>th</sup> year)

Besides being small and allowing more transistors to be packed into a single chip, the uniform and symmetrical structure of nanotubes allow a higher electron mobility (faster electron movement in the material), a higher dielectric constant (faster frequency), and a symmetrical electron/hole characteristic. Also, nanoparticles can be used as quantum dots.

Single molecule devices are another possibility. These schemes would make heavy use of molecular self-assembly, designing the device components to construct a larger structure or even a complete system on their own. This can be very useful for reconfigurable computing, and may even completely replace present FPGA technology.

Molecular electronics is a new technology which is still in its infancy, but also brings hope for truly atomic scale electronic systems in the future. One of the more promising applications of molecular electronics was proposed by the IBM researcher Ari Aviram and the theoretical chemist Mark Ratner in

their 1974 and 1988 papers *Molecules for Memory, Logic and Amplification*.

This is one of many possible ways in which a molecular level diode / transistor might be synthesized by organic chemistry. A model system was proposed with a spiro carbon structure giving a molecular diode about half a nanometre across which could be connected by polythiophene molecular wires. Theoretical calculations showed the design to be sound in principle and there is still hope that such a system can be made to work. Current high-technology production processes are based on traditional top down strategies, where nanotechnology has already been introduced silently. The critical length scale of integrated circuits is already at the nanoscale (50 nm and below) regarding the gate length of transistors in CPUs or DRAM devices.

## Flexible thinking: how far it is important in your life?

Flexibility in psychological terms is the same as in physical terms; it means to be elastic or pliable. But how far you can say that it is important to change your life style? We are often faced with situations where things don't turn out quite the way we wanted. The best way to survive these "unwanted" variations is to be flexible. Adapt to the change. Run with the change. Adjust to the change. In today's economic climate, the people & organizations that are most likely to endure are those that will adjust & adapt to the situations accordingly. There is a true saying "The Reed That Bends Will Survive the Windstorm, While the Mighty Oak Will Crack. Be Flexible". Anything that has the ability to bend doesn't break. A flexible character will be conscious enough to know when he needs to be rigid, but a rigid character will probably not be conscious enough to know when he needs to be flexible. By being flexible you have the ability to change yourself when needed. This permits you to face varied challenges those may

come in one's life. It makes one more successful & most importantly, one becomes more effective with changes. Each "problem" in life worries you if you can't adapt to it. So if you are flexible, you shall be able to mould yourself easily and shall be able to overcome all the problems of life. It shall reduce stress and shall give peace of mind. Flexible people never give up. They keep struggling, adapting, changing, doing whatever it takes, until they succeed. That is the power of flexibility. Like water, the flexible are able to overcome the adamant and the yielding are able to overcome the forceful. So yes, Flexibility is important in our life at every situation. Last but not the least; I would like to say "Be Clear About Your Goals but Be Flexible about the Steps Necessary to be taken to achieve them".



**Prof. Parimita Panda**  
Assistant Professor, ME

## Increasing Crimes against Women in India

Over past few decades, there have been advances in science and technology. But, along with that the crimes against women have also increased to a large extent in our society. Without women world cannot exist as we all have taken birth from a woman, and in the present scenario they are the one who have been suffering the most.

In our male-dominant society, women are treated

as inferior beings. They suffer all kinds of violence from rape, murder, kidnapping to domestic violence. Majority of the men believe that women deserve to tolerate violence and are being beaten up for the sake of dignity of family and society. Is this the thinking that makes us modern and developed? In January 2011, the



**Prof. Madhuri Pradhan**  
Assistant Professor, ME

International Men and Gender Equality survey reported that 24% of men have committed sexual crime once in their lives. And we say we are the most cultural and emotional people in whole world.

In past few decades, there has been increase in the cases of sexual harassment and rapes. According to a survey, there was an increase of 7.5% cases of sexual crimes against women between 2014 and 2015. In most of the cases rapes are committed by family members, relatives, friends or other acquaintances of the victim. They eve tease, harass sexually and also murder them mercilessly. They reason on the provocative women wear and make up. They demand themselves to be correct and justify such activities as a lesson to the erring women. Really ? Who gave them the right to judge a girl and teach her lessons based on her clothes and make ups?

Other violent activities towards women are the domestic violence and the dowry system. Women are beaten up, burnt and killed by a group of greedy and inhuman people called in-laws, for the sake of money and materialistic properties. Also, there are cases of domestic violence where the only reason is the frustration of husband and hence the wife is beaten up to drain out the frustration of the husband. Another topic that is not raised frequently in cases of domestic violence is the marital rape. Any kind of forceful act in attempt to make sexual relations with someone is called rape, but in India if the husband forcefully has sex with his wife then it is not rape. Why so? Does marriage give men the license to rape at their will? Any man has no right to make sexual contact with any woman without her will, even if they share the relationship of husband-wife.

Another thing that has been significantly noticed is the increased acid attacks. If a guy likes someone, and the girl does not respond him and rejects him, then for taking revenge, the guy, better call him a stalker, throws acid to burn, disfigure the girl. Is

that the way to prove love or is the girl is someone's property? Women have always been the victim of such heinous activity. Even sometimes the rejection leads to kidnap and rape of the girl. Does she need to get forced to feel for someone forcefully just for her safety?

Yes it is a fact that crimes to against women have increased, but women are also to be blamed for their sufferings also. And the only reason is their tolerance and silence. If you are suffering also through such problems and becoming victim of any of the activities you must raise voice. If you are not willing to fight for your own rights and freedom then how can you blame the society and the government for your sufferings? Most of the rape and harassment victims keep silent and don't share their suffering with anyone to save the dignity of themselves as well as their family. They should understand that they need not be ashamed of the torture, rather the criminal should. Women should learn to say no. Sometimes the close male friends of girls take advantage and touch girls awkwardly and mostly the girl tolerates it just to save a poor friendship. Also the parents of the girls should understand that in-laws' home is not always the new home of the girl, sometimes it is hell for her. They should help her fighting back against rude activities of domestic violence towards her instead of sending her back to her in-laws to suffer again. Also, government should make stricter laws to punish and penalise the crimes towards women. If the criminal is not bothered about his age while committing such crime then the law should not lessen his punishment based on his age.

Only way to fight these crimes is to raise voice against the very act of sexual harassment irrespective of the thing that who the criminal is. He can be a stranger, a relative or a close friend. Girls, Ladies, Women Folk: Be a Durga, Be the Creator as well as the Preserver. Stand erect and fight.

### Set your Spirit Free!

Life is a mystery as many will believe, and for others it's just an unanswered question. Since a child is born, the people associated with him paint a picture of life as they understood and project the same to the child. This shapes his belief, his psyche and eventually his life, for as the age old saying goes "WE ARE WHAT WE BELIEVE". There are bends in the road of life when the child gets disturbed and is perplexed as to what meaning she has to give to his life. In those times, expert guidance would of course help to broaden his view but the best guidance would be that would

come from within his self. At times you have to explore yourself, you have to look carefully at the bundle of varied possibilities which is you!

Throughout life people have an image of self that is dependent on what others think or feel about them; rarely comes the moment of enlightenment when they look within, boost their own self esteem and choose their own calling. Lord Budhdha says "Be



**Prof. Pratiksha Sonkar**  
Assistant Professor, English

your own lamp". Now, this sentence is enriched with the secret of a happy and fulfilling life. Once we try to break all the shackles and set our spirit free we can lead a much more meaningful existence. Life after all is not what happens to us, but it is something we create with what happens to us. Our Life is the consequence of the choices we make which are in turn influenced by the thoughts we create.

Dear Individual, believe it for sure that you are the creator of your thoughts which eventually guides you through your actions and shapes your destiny. At any given point, don't indulge in the blame game; do not be heavily dependent on others in making your choices. Be your own sunshine; try out an alchemy- transform your life with the power of positivity. Go beyond the limitations that you have imposed on yourself because you are your own Miracle!

## Eco-scan

Can you imagine that the fresh human waste can be converted to sweet smelling compost? Seems improbable. Then read the following. Mr.Paul Calvert, a British Scientist has devised a pioneering ecological sanitation tool named "Ecoscan" toilets in many homes in rural Kerala in India recently. The toilet consists of slab constructed over two vaults. The slab has a hole over each vault for the faces to drop in and a funnel for the urine to collect. Washing is done separately so that the wash water does not mix with the solid waste. Before use, the vault is covered with straw to facilitate decomposition. After use some ash or saw dust is sprinkled on the faces. After six months the hole is closed and the second one is put into

use. The fecal matter in the first hole begins to decompose and in six more months the fertilizer is ready for collection. The urine is collected separately it is first diluted and then used as fertiliser. Some basic benefits of ecoscan are:-

1. It prevents diseases by removing pathogen-rich excreta from the immediate environment.
2. It does not contaminate ground water resources.
3. It creates a valuable resource that can be recycled back into the environment. These types of eco-friendly toilets need be replicated throughout India.



**Dr. Laxmi Shankar Rath**  
Professor, Chemistry

## LIFE: A big Confusion !!!

"Life" : Really it is a big confusion. Questions arise on the very concept of Life: what is life? How can it be spent? Happily or with difficulty? My brief effort is to find answers to these questions.

I think life is like a food where all types of tastes are present i.e. sweet, bitter, sour, salty etc. Each one of us likes to eat dishes where verities are present because taste of a regular item bores us. Similar is the situation in life. Happy moments give us sweet taste and unhappy situation make us sad. But life

in its true colour is both a mixture of sweet and sour experience. I should better conclude with the observation on that Life could be made delicious and charming if it is a mixture of both sweetness and bitterness. So never pine over the difficulties only, bank on the vibrant sunshine. Life shall be enjoyable and lovable.



**Prof. Manohar Singh**  
Assistant professor, ME

## The Aim of Education

In this Globalised world the very objective of Education has metamorphosed in to a different connotation. It is now measured in terms of money, profit. If a person can earn a lot of money with the help of his Education, then it is presumed the goal of his education he said to have completed. Education has become commercialized and is now a Business. The fabric of Education has lost its

originality. Students are marching towards a dangerous goal. They have forgotten the basic features of Education .As it is mentioned in our scriptures, Education enlighten an individual's that helps him to develop his character.

If ones education fails to shape the character and



**Prof. Tapan Ku. Panda**  
Assistant Professor, English

social behavior of a person then the value of learning is of no use at all.

Earning a lot of money and amassing wealth is not the sole aim of the Education. It must create a humane human being. An individual without the quality of compassion and sympathy for others is not at all considered a perfect human being. Education must instill a ray of hope on the mind of the depressed, poverty stricken and down trodden. It must help them to lead a dignified life. The motto of Education should be to create complete man fit for the society. As Sri Aurobindo has said the very motto of our Education should be to create integrated Education. An Education that can teach them to face the challenges in the society. An Educated man should have the

capacity to meet the tribulations and vicissitudes of life. The omnipotent God has sent us to spread the message of peace and harmony in society. Nobel laureate, Nelson Mandela, once remarked that "Education is a powerful weapon that can change the whole world"

The life and spirit of Education is to think about the welfare of society. Students at large must understand the value of Education and try to sprinkle the message of bonhomie and peace among the people. It is my earnest appeal to all my pupils not to run after power and pelf which will certainly one day take them to the world of dungeon. They will feel their life to be useless and miserable at the end. It will never ever make them happy, It will rather destroy the true salt of life.

## Few Important Things That We Miss In Our Lives

Every day we rush for our daily busy schedule, but we all miss a number-of, simple things in life. We wake up late in the morning and rush for bathroom, sometimes we fight for that, but forget to thank God for the new day? We care for the one who are not with us but don't even have time for the one who are with us. We do laugh to the cheap jokes but forgot to smile. We rush to go to Temple but forget to meditate; we proceed for social work, but forget our responsibility. We participate in long unnecessary debates but forget our personal problems. We look for others fault but forget our

own. We blame others for their insincerity but forget to review our own work. We show formality to others but lack respect for them. We all do so many silly things missing our principal job do! Fail to find what we missed.



Prof. Neelamani Samal  
Assistant Professor in CSE

Is not it the right time to retrospect on everything what we have done and what we do every day?

## Let Us Know

### (A) Engineering

(As a lay man Understands the term):

Originally engineering meant the art of managing engines. In its modern and extended sense engineering means the art and science by which the mechanical properties of matter are made useful to man in structures and machines.

**The occupation and work of an engineer:** In a comprehensive sense, engineering includes architecture as a mechanical art, in distinction from architecture as a fine art. It was formerly divided into military engineering: art of designing and constructing offensive and defensive works, and civil engineering: relating to other kinds of public works, machinery, etc.

- **Civil engineering** : in modern usage, is strictly

the art of planning, laying out, and constructing fixed public works, such as railroads, highways, canals, aqueducts, water works, bridges, lighthouses, docks, embankments, breakwaters, dams, tunnels, etc.

- **Mechanical engineering:** relates to machinery, such as steam engines, machine tools, mill work, etc.
- **Mining engineering:** deals with the excavation and working of mines, and the extraction of metals from their ores, etc.

Engineering is further divided into steam engineering, gas engineering, agricultural engineering, topographical engineering, electrical engineering, electronics engineering, telecommunication engineering, chemical engineering, computer science engineering etc.

## (B) The Nobel Prize : Physics (2016)

The prestigious **Nobel Prize** named after **Alfred Nobel** is a set of **Annual International Award**, awarded for outstanding contributions for humanity in chemistry, economics, literature, peace, physics, physiology or medicine. It was established in the year 1895 and was given from 1901.

The three personalities in pictures were awarded the Nobel Prize in Physics (2016) **“for theoretical discoveries of topological phase transitions and topological phases of matter”**. The secrets of exotic matter opened the door on an unknown world where matter can assume strange states.



**David J Thouless**  
Emeritus Professor of Physics,  
University of Washington, Seattle (USA)  
PhD 1958 Cornell University, Ithaca, NY (USA)  
Born 1934 in Bearsden, UK  
(Half of the prize money)



**F. Duncan M. Haldane**  
Eugene Higgins Professor of Physics,  
Princeton University, NJ (USA)  
PhD 1978 Cambridge University (UK)  
Born 1951 in London, UK  
(1/4th of the prize money)



**J. Michel Kosterlitz**  
Harrison E. Farnsworth Professor of Physics,  
Brown University, RI (USA)  
PhD 1969 Oxford University (UK)  
Born 1942 in Aberdeen, UK  
(1/4th of the prize money)

They have used advanced mathematical methods to study unusual phases, or states, of matter, such as superconductors, super fluids or thin magnetic films. Thanks to their pioneering work, the hunt is now on for new and exotic phases of matter.

The three Laureates' use of topological concepts in physics was decisive for their discoveries. Topology is a branch of mathematics that describes properties that only change step-wise.

Using topology as a tool, they were able to astound the experts. In the early 1970s, *Michael Kosterlitz* and *David Thouless* overturned the then current theory that superconductivity or supra fluidity could not occur in thin layers. They demonstrated that superconductivity could occur at low temperatures and also explained the mechanism, phase transition that makes superconductivity disappear at higher temperatures. At around the same time, *Duncan Haldane* discovered how topological concepts can be used to understand the properties of chains of small magnets found in some materials.

We now know of many topological phases, not only in thin layers and threads, but also in ordinary

three-dimensional materials. Over the last decade, this area has boosted frontline research in condensed matter physics, not least because of the hope that topological materials could be used in new generations of electronics and superconductors, or in future quantum computers. Current research is revealing the secrets of matter in the exotic worlds discovered by this year's Nobel Laureates'.

## (C) Queen of Katwe :

Queen of Katwe is a 2016 award winning American biographical sports drama film directed by Mira Nair and written by William Wheeler, produced by Walt Disney Pictures and ESPN Films. This English film is adapted from an ESPN magazine article and a book titled, *The Queen of Katwe: A Story of Life, Chess, and One Extraordinary Girl's Dream of Becoming a Grandmaster* by Tim Crothers. The film depicts the life of Phiona Mutesi, an Ugandan girl living in a slum in Katwe who learns to play chess and becomes a Woman Candidate for Master after her performances at World Chess Olympiads. This is a story of a poor African teenager with few opportunities. She meets a teacher who helps her see a life beyond her provincial world. On the path toward a breakthrough, she had to overcome emotional and family difficulties. Queen of Katwe, for its plot uses an alluring and inspirational story of a young girl, Phiona who used to help her widowed mother, Harriet earn

money by selling maize. One day during this routine business, she wanders into a chess club for local children

started by Robert Katende, a Christian missionary. Robert was part of the outreach sports program for his missionary and was there to teach soccer. But he discovered that some children weren't allowed to play soccer, as an injury would mean significant financial hit to families and thus chess club was born. Phiona encountered this chess club by accident. Although, reticent to join in at first, it soon became clear she had an extraordinary talent for the game. Phiona progressed fairly fast through the competitive games. It is captivating and gratifying to think that a champion can come from anywhere.



## POETRY CORNER

### The Roman Colosseum

The Colosseum  
Pinnacle of achievement  
In engineering and architecture  
Of the  
Roman Empire  
A symbol of might  
Where triumphs were celebrated  
The masses (50,000 of them)  
Entertained often brutally  
Through Gladiatory Contests (ancient MMA)  
Re enactments of battles (? propaganda)  
Feeding the Christians  
To The Lions (? paranoia)  
And strangely  
Theatre (? classical mythical propaganda)

The Empire did Fall  
But the Colosseum  
Can Still Be Seen  
Nothing but a shell  
And a lesson to us all

Change is inevitable  
And all Things  
Have a  
Beginning  
And an  
End

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*(Colosseum : It is a vast amphitheater in Rome constructed by Vespasian during 75-80 AD. Gladiatory Contests: Refers to armed combatant who entertained audiences in Roman Republic and Roman Empire in violent confrontations with other gladiators, wild animals and Condemned criminals. Gladiator is "swords man" from Gladius meaning "sword." Paranoia: One suffering from mental disorder.)*

## New Faces in GIET



**Dr. Mohan Panda**  
Dean (Academic)



V.K. Mahakur  
Asst. Professor, Mechanical



R. Paul  
Asst. Professor, Mechanical



M. Pradhan  
Asst. Professor, Mechanical



R. C. Pradhan  
Asst. Professor, Mechanical



M. Singh  
Asst. Professor, Mechanical



S. Sahoo  
Asst. Professor, BSH



P. Panda  
Asst. Professor, Mechanical



L. S. Rath  
Professor, Chemistry



R. K. Das  
Asst. Professor, EEE



P. Sonkar  
Asst. Professor, English

## Health Tips

**TOP NATURAL PAINKILLERS**

<b>GARLIC</b> made into a special oil for earache	<b>CLOVES</b> toothache / gum inflammation	<b>APPLE CIDER VINEGAR</b> heartburn	<b>GINGER</b> muscle pain
<b>CHERRIES</b> joint pain, headaches	<b>TURMERIC</b> chronic pain	<b>PEPPERMINT</b> sore muscles	<b>PINEAPPLE</b> stomach bloating, gas
<b>WATER</b> general injury pain	<b>HORSERADISH</b> sinus pain	<a href="http://rawforbeauty.com">rawforbeauty.com</a>	
		<b>BLUEBERRIES</b> bladder / urinary tract infections	

## Jokes



## FORTHCOMING EVENTS

1. CSR PLANTATIONS
2. Invited Talk by Mr. Siddharth Shankar Choudhury (chief manager) ACC CEMENT
3. Guest speech/ Seminar by TATA AND NALCO
4. Skill development programme by Mr. Suresh Pattnaik (Facility Manager- Infosys)
5. Guest speech on "Safety" by the Senior Instructor of East Coast Railway.
6. Workshop on PCB designing

## Corporate Mentors



## FEEDBACK:

To improve the quality of the Newsletter "Campus Focus", your views and suggestions are highly solicited. Please send the same to the Editor, through mail id. : [cf@gietbbsr.com](mailto:cf@gietbbsr.com)

## Courses Offered :

### B.TECH :

Civil Engineering  
Electrical Engg.  
Mechanical Engg.  
Computer Sc. & Engg.  
Automobile Engg.  
Electronics & Comm. Engg.  
Electrical & Electronics Engg.

### M.TECH :

Structural Engg.  
Power Electronics & Drives Engg.  
Mechanical System Design  
Communication Systems Engg.

### DIPLOMA :

Civil Engineering  
Electrical Engineering  
Mechanical Engineering



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