

# Campus Focus

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**GIET**  
**BANIATANGI**



GANDHI INSTITUTE FOR EDUCATION AND TECHNOLOGY  
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## From The Editor's Desk

### FORTHCOMING EVENTS

- National conference on "SPACE The New Horizon" By Department of BSH

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### Engineering Fact

Nothing makes an Engineer more productive, than the "Last Minute".

The fourth issue of Campus Focus (Vol 8: Issue iv) came to the floor with much celebration & jubilation. It is a quaint of knowledgeable activities by both our kith & kins i.e. our lovely students and intellectual faculties. They have left no stone unturned in putting forth their thought process in the arena of science, technology & socio-behavioural issues. I wish this edition would definitely be informative and educative.

The present issue deals with information of our revered Professors attending International/National/Seminars/Workshops & FDPs. We heartily congratulate them on their success. They all are the true assets of GIET. They burnt their midnight oil in working hard and publishing their research articles in various journals of National & International repute. We are all gratified to have you all in our GIET family. My dear Friends Hats off to your contribution. Do keep it up!!! Well! Construction and destruction are the two facets of civilization; some faculties have left us while some new faces have joined the GIET family. We welcome them with wide arms.

The odd semester examination would

soon start making the college a real place of educational hub. Few months back both staff & students were in a mood of celebration and rejoicing, enjoying Durga puja and Diwali with sumptuous food, family and friends. The campus periphery was reflecting fun n frolic. But now the time is serious my dear students; get ready its exam time! Self confidence and self reliance is what matters. Dear Friends! What is your guiding principle??? Believe in yourself; develop love & compassion for your fellow beings undoubtedly you will be on the top of the world one day. Hard work has no substitute so Try Try Again..... Never Give Up you will certainly succeed in the journey of life. Never ever give up hope becoz Where hope grows, Miracles blossom---Elna Rae.



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"To the optimist, the glass is half full. To the pessimist, the glass is half empty. To the engineer, the glass is twice as big as it needs to be."

## Contents

### • PUBLICATIONS

### • EVENTS

Two days National conference on "RTSCIA"  
Workshop on Search Engine Optimization  
Inauguration of Local Chapter  
Ganesh Puja at GIET  
Viswakarma Puja at GIET  
Independence day at GIET  
Introduction to course curriculum for freshers  
Circuit design competition by EE & EEE Dept.  
Celebration of National Youth day  
Single window entrepreneurship summit (SWES)  
CSR activity by the Intellectuals

### • ARTICLES BY STAFF & STUDENTS

Resonance in Electric... - Dr. P.K. Sahoo  
Concept of Scheduling .... - Prof. Sambit Ku. Mishra  
Electromagnetic Aircraft ... - Prof. S.K. Panda  
Effects of Radiation on Humans - Prof. T. Samal  
Mistakes are the secrets of success - Prof. N. Sahoo  
Time Management skills - Prof. C. Das

Photovoltaic Glass - P. Mohanty (B.Tech 2nd yr.)

God Particle - S.S. Panda (B.Tech 1st yr)

Life & Success - J.Bagh (B.Tech 2nd yr)

Bhubaneswar : The new Smartcity .... - S. K. Kunar (B.Tech 1st yr)

Friendship - A.Panda (B.Tech 1st yr)

Black Panther - D. Singh (B.Tech 3rd yr)

Ebola - S.Nayak (B.Tech 1st yr)

### • PLACEMENT DETAILS

### • GIET IN NEWS

### • LET US KNOW

### • POETRY CORNER

My Mom is the best - G. B. Bernal (B.Tech 2nd yr)

### • NEW FACES

### • HEALTH TIPS

### • JOKES

### • FORTH COMING EVENTS

## PUBLICATIONS

### 1. Prof. Laxman Kumar sahu

Paper Details:- CFD analysis of steady laminar natural convection heat transfer. International Journal of Heat Transfer, Asian-Research, Scopus indexed, published on November, 2017 Page no.- 840 to 862



### 2. Prof. Ankit khare

Khare Ankit, Ashish Prabhat Singh, Mrinmoy Majumder, and Uma Shankar Pande. "Potentiality of Ocean Thermal Energy Conversion Systems and Enriched Evaluation of Selected Locations in Andaman and Nicobar Islands, India." Indian Journal of Science and Technology 10, no. 31 (2017).



Paper published in proceeding of Recent Trends in Soft Computing & Its Applications by CSE faculties in association with International Journal of Engineering and Science of Inventions (IJESI).

1. A Fundamental study on Swarm Intelligence algorithms by Jyoti Prakash Mishra and Anil Kumar Mishra

2. A New Approach For Web usage Mining using Artificial Neural network by Smaranika Mohapatra Kusumlata Jain and Neelamani Samal

3. Security issues related to query phasing using metaheuristic algorithm by Anita Mohanty and Sambit Kumar Mishra

### 3. Prof. Chinmayee Das

Participated in the Faculty Knowledge Sharing Program on "Learner Centric Andragogy" & "Teacher- taught Relationship: A Paradigm Shift", held at Hotel Presidency, Bhubaneswar.



### 4. Prof. Niharika Sahoo

Participated in the Faculty Knowledge Sharing Program on "Learner Centric Andragogy" & "Teacher- taught Relationship: A Paradigm Shift", held at Hotel Presidency, Bhubaneswar



## EVENT

### TWO DAYS NATIONAL CONFERENCE ON "RECENT TRENDS IN SOFT COMPUTING AND ITS APPLICATIONS" CONDUCTED AT G.I.E.T, BANIIATANGI, BHUBANESWAR



A national conference on "Recent Trends in soft computing and its application" was conducted for two days on 15th and 16th September 2017 by Computer

Science Dept. of GIET in association with International journal of Engineering and Science Invention (IJESI). In the Inaugural function Prof. (Dr.) K.R. Srivasthan, IIT, Kanpur graced the occasion as Chief Guest and Prof. Madhabananda Das KIIT University, (Dr.) Nibedita Adhikary, Deputy Director, Exam BPUT adorned the session as guest of honours. Inaugurating the conference Vice Chairman of the Institute Prof. J.P.Mishra reiterated on the application part of the soft computing. Chief Guest and other invited dignitaries stressed on the scope and nature of the soft computing and its use in different fields in our life. Principal Prof. (Dr) Mohan charan Panda and Dean (DSA) Prof. Jibanannda Jena spoke about the importance of soft computing in the present day world. Convener of the conference Prof. (Dr.) Anil Kumar Mishra delivered the welcome address and the meeting was co-ordinated by the co-convener of the conference Prof. Nilamani Samal. On the second day of the Conference Prof. (Dr) Prashanta Kumar Sahoo and Prof. (Dr) Padmalochan Bera from IIT Bhubaneswar were invited as the key note speakers who spoke on the optimization and its link with Soft Computing. The two days conference was attended by a large number of students and teachers from various colleges and universities of Odisha. The conference was a grand success.

### WORKSHOP ON SEARCH ENGINE OPTIMIZATION



The Department of Computer Science in association with Computer Society of India organized two days workshop on "Search Engine Optimization" on 21st and 22nd August 2017 at GIET, Baniatangi. The workshop started with an inaugural meeting on 21<sup>st</sup> where Prof. (Dr.) Mohan Charan Panda, Principal, GIET, Baniatangi, Prof. (Dr.) Jivanananda Jena, Dean (DSA), Prof. (Dr.) Anil Kumar Mishra, HOD, CSE, Prof. Bikash Pattanaik, Principal (Diploma wing), Mr. Deba Prasad Majumdar, GM (Admin), Prof. Raj Kumar Mohanta, Convenor, HODs of different departments, faculty members, staff members and student participants were present. After the formal inaugural meeting, the Technical session-I was conducted in Seminar Hall. Nearly 74 students registered for the workshop. In this session the trainer discussed about Search Engine Optimization for beginners. He mainly emphasized on Search Engine Marketing vs Search Engine Optimization. Technical session-II was conducted in Lab-01 where the trainer discussed on SEO factors like On-page factors, Off-page factors, On-site factors, Social media factors. On 22<sup>nd</sup>, the Technical session-III was conducted in Lab-01 where the trainers gave the practical demonstrations of the factors of SEO and analyzed the problems related to our college official web site and also gave ideas about improvisation. At the end participation certificates were distributed and Prof. Nilamadhav Mishra proposed the vote of thanks.

## INAUGURATION OF LOCAL CHAPTER (GIET FORUM) ON 24TH OCTOBER 2017



The GIET Forum of Gandhi Institute for Education and Technology, Baniatangi inaugurated Local Chapter in association with IJDATS Journal on 24th October 2017. Prof.(Dr.) Jayanta Kumar Pal, IIT Bhubaneswar and Prof.(Dr.) Jibitesh Mishra, CET Bhubaneswar were Guests in the session. Prof. (Dr.) Sambit Kumar Mishra, Professor(Computer Sc.&Engg.) & Head(R&D) delivered the welcome address after introducing the Guests and discussed the necessity of opening the Local Chapter. Prof.(Dr.) Mohan Charan Panda, Principal delivered the inaugural address. Prof.(Dr.) Jibanananda Jena, Dean(DSA) focused about the importance of research activities and benefits of Local Chapter. Finally, vote of thanks was delivered by Prof. Nilamadhab Mishra, Department of Computer Sc.&Engg.

## GANESH PUJA AT GIET



Ganesh Chaturthi, the festival in honour of the God Ganesh, the elephant-headed, removal of obstacles and the celebration for wisdom was celebrated in GIET with much pomp & show, on 25th August 2017. 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 with the gathering of staff members & students. At the end, prasad was distributed among all together with the blessing of the lord Ganesha.

## VISWAKARMA PUJA AT GIET



Lord Viswakarma, the divine architect, a precious thing born of the Samudra manthan, is worshipped all

around. The day was also celebrated in GIET by the students and staffs on 17th Sept, 2017. They joined hands together to celebrate the puja so as to be blessed as good future architects. The idol of Lord Viswakarma was installed in the mechanical workshop which was nicely decorated to bring a sense of festivity all around. Students gathered during the puja to wish for a better working condition of the machines in the labs and a great future ahead.

## INDEPENDENCE DAY AT GIET



FREEDOM is never dear at any price. It is the breath of life. What would a man not pay for living? M. K Gandhi

The 71ST Independence Day of our motherland was celebrated at GIET with great enthusiasm and patriotic fervor, on 15th of August, 2017. Honourable Principal Prof.

(Dr.) Mohan Charan Panda, hoisted the tri-color as the tune of the national anthem reverberated all around, thrilling the hearts of everyone present. The unfurling of the flag was witnessed by the dignitaries like the Dean(DSA)



Prof. (Dr.) Jibanananda Jena, Principal Diploma wing Prof. Bikash Pattanaik, GM(Admin) Mr. D.P. Majumdar, all faculty members and plethora of young students. Speaking on the occasion, the Principal said about some of the true virtues of the Indians. As he said, "shaping the destiny of the nation is always in the hands of its people". Our Honourable Dean(DSA), on this auspicious occasion focused on three basic important qualities of student-hood, which are sincerity, honesty and discipline and impelled the students to bring about a change in their behaviour. Other Dignitaries and faculty members also narrated their views and described the importance of this auspicious day. Some of the students also presented their thoughts on the occasion and inspired their fellow members to feel proud of the glory of our country. A Tree Plantation programme was conducted under the supervision of faculty members. All the students and faculties participated enthusiastically in the event and made it a grand success. The programme ended successfully followed by sweets distribution.

## INTRODUCTION TO COURSE CURRICULUM FOR FRESHERS



Gandhi Institute for Education & Technology, Baniatangi, Bhubaneswar conducted a program "introduction to course curriculum" for

the newly admitted students of B.Tech, Diploma and M.tech on 18th October 2017. All the newly admitted students were present on the occasion. Prof.J.P. Mishra, Vice-Chairman, GIET was present on the said program as the chief guest. He narrated various aspects of technical education and pointed out the good practices to become a successful engineer. He told that "without hard work there is no other shortcut for getting success". The honourable Principal of the college Prof. Mohan Charan Panda, speaking on the occasion, urged the students to have a dream to be successful in their lives. He shared with the

students some of the valuable tips, which may help them to be good human beings. He concluded his speech, urging the students to make GIET feel proud by their good behaviour, attitude and efforts. The esteemed Dean (DSA) Prof. (Dr.) Jibanananda Jena also reiterated the students to be honest and polite, friendly and smart targeting excellence. He further inspired the new entrants by his inspirational speech and thus motivated the students to attend their classes regularly. Our revered Principal (Diploma Wing) Prof. Bikash Pattnaik enlightened the rules and regulations of the institution and wished the freshers a bright future ahead. Prof.(Dr.) M.P. Sahu,HOD, Dept.of BSH proposed the vote of thanks on the occasion. All the staff members of the institute were present on the occasion to make it a successful one.

### CIRCUIT DESIGN COMPETITION BY EE & EEE DEPARTMENT



A circuit design competition 'WEIRD WIRING' was organized by the student society of Dept. of EE & EEE on 6<sup>th</sup> of August at 2.00 p.m. in the Electrical machine Lab. The event was among the third

semester students of both the branches. The competition had three stages and almost 40 students participated in groups of 6. Students were given clues to design circuits. The fastest group to complete all the tasks was announced as winner. Prizes and certificates of participation were distributed to the winner group by the Honourable Principal, GIET, Dr. Mohan Charan Panda in presence of all the faculties and students of both the departments. The event was a grand success and a lot of enthusiasm was observed among the students.

### CELEBRATION OF NATIONAL YOUTH DAY



As per the UNO declaration GIET, Baniatangi, Khurda celebrated International Youth day on 12th August 2017 in its premisses. Major Khirod Prasad Mohapatra, Ex Vice-

Chancellor, North Odisha University graced the occasion as the chief guest. He spoke about the importance and responsibilities of youth in the present context. Vice-Chairman Prof. J.P. Mishra narrated the significance of international youth day and called the young minds to spread the message of peace and brotherhood. On this occasion, Dean(Academics) Prof. Mohan Charan Panda, Dean(DSA) Prof.



Jibanananda Jena, Principal (Diploma wing) Prof. Bikash Pattnaik, GM(Admin.) Mr. D.P. Majumdar and HOD, BSH Prof. M. P. Sahoo also spoke about the abilities of the young mass. At the end of the programme prizes were distributed to the winners of different events conducted earlier and a cycle club was formally constituted in the college. Earlier in the morning a cycle rally was conducted from college campus to Rotary club, Khurda by the students and staff members.

### SINGLE WINDOW ENTREPRENEURSHIP SUMMIT (SWES) BY BSH DEPT.



Single Window Entrepreneurship Summit was held on 31st August 2017 at Institute Auditorium. All the delegates from different renowned institutions came to deliver their speech on Entrepreneurship and how to set up a business and taking on financial risk in the hope of profit. Moreover, they gave stress on capacity and willingness to develop, organize and manage a business venture. "A good Entrepreneur tends to be good at perceiving new business opportunities and they often exhibit positive biases in their perception" commented by Mr. Samarendra Sahoo (IES), DG, IED, Odisha. In his speech, Mr. Nirakar Sahoo, GM, DIC, Khurda addressed to the student that Passion is the real drive and an entrepreneur possesses an interior fuel and stamina that drives their actions. Moreover, different distinguished persons like Mrs. Sudipta Mishra, Senior Manager UCO Bank Khurda, Mr. Barada Panigrahi, Regional Manager Wadhani Foundation presented their views on Entrepreneurship and how to become a good Entrepreneur.

### CSR ACTIVITY BY THE INTELLECTUALS



On the eve of Diwali, a social activity was done by the Intellectuals Team of GIET. The students and staff of GIET had gone to the SIALIA village and an orphanage to distribute sweets, cloths and crackers to the poor and down-trodden. All the staff and students contributed wholeheartedly to help these poor children. Students had collected old dresses, toys and purchased gifts for the neglected children staying in the orphanage. They undoubtedly proved that "SERVICE TO MANKIND IS SERVICE TO GOD" The Intellectuals Team also came forward to spread the message of Swachh Bharat in the premises of the campus by making handmade Dustbins from waste products. The college corridors look green with their innovation. It was a great experience for both the staff and students those who are in the Intellectuals Team.

ARTICLES BY STAFF & STUDENTS

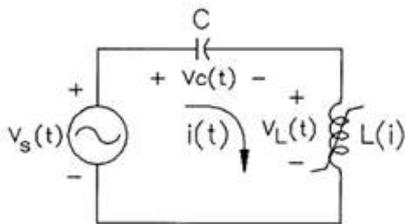
RESONANCE IN ELECTRIC CIRCUITS AND ITS APPLICATION

**Resonance in R-L-C circuits:**

Resonance is a particular operating condition of a system subject to external periodic disturbance, during which the amplitude of the system oscillations become highest in order. During resonance, the resonating frequency becomes equal in magnitude with that of the natural frequency of the system. It is very interesting to note that such behaviour of electrical and electronic circuits is very useful for tuning purpose, as used in communication networks. Besides this, there are also few more industrial applications of resonance, such as, ferroresonance in Transformers and Tesla coil.

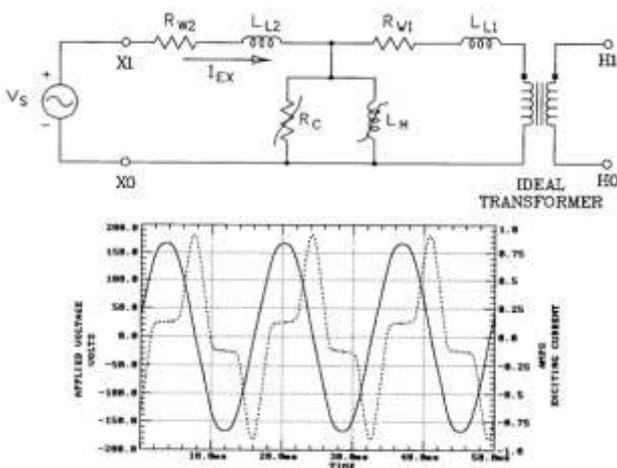
**Ferroresonance in Transformers:**

The first thing to note about Ferroresonance is that it is a nonlinear behaviour. Ferroresonance or nonlinear resonance occurs when a circuit containing a nonlinear inductance is fed from a source that has series capacitance. During Ferroresonance, the circuit is subjected to a disturbance such as opening of a switch. Ferroresonance is possible in a series L-C circuit where the L is a ferro-magnetic (saturable iron core) inductor and C is some form of capacitance (first reported in 1920).



Ferroresonance became a noted problem in the 1930s when series capacitors were being used to improve voltage regulation in distribution systems. Let us compare the effect of Ferroresonant in transformers.

**A transformer at no-load without "C"**



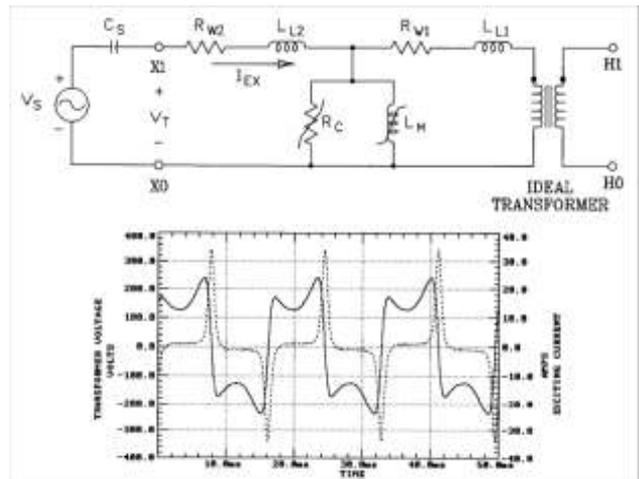
**Observation:**

With rated 120-V excitation, without capacitor, peak current is less than 1.0A. There is no Ferroresonance



Dr. Pradyumna Kumar Sahoo  
HOD, Dept. of EE

**Same transformer at no-load with "C"**

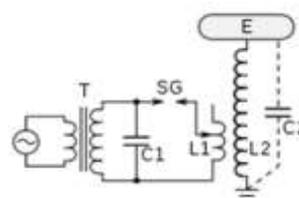


**Observation:**

With rated 120-V excitation, and  $C_s = 75 \mu F$ , peak current is 34 A. Here, Ferroresonance takes place due to main interaction is between  $C_s$  and  $L_M$ .

Ferroresonant transformer is also known as Constant-Voltage Transformer (CVT) is a type of saturating transformer used as a voltage regulator. These transformers uses a tank circuit composed of a high-voltage resonant winding and a capacitor to produce a nearly constant average output voltage with a varying input current or varying load. The circuit has a primary on one side of a magnet shunt and the tuned circuit coil and secondary on the other side. The regulation is due to magnetic saturation in the section around the secondary.

Tesla Coil: The Tesla coil is an electrical resonant transformer circuit designed by inventor Nikola Tesla in 1891. It is used to produce high-voltage, low-current, high frequency AC. Tesla coil consists of two or three, and coupled resonant electric circuits. Tesla coil uses a simple spark gap to excite oscillations in the resonant transformer. Tesla coils can produce output voltages from 50 kilovolts to several million volts for large coils. The alternating current output is in the low radio frequency range, usually between 50 kHz and 1 MHz. The common spark-excited Tesla coil circuit is shown below



**Major components of Tesla coil:**

A high voltage supply transformer(T), to step the AC mains voltage up to a high enough voltage to jump the spark gap. Typical voltages are between 5 and 30 kV.

A capacitor(C1) that forms a tuned circuit with the primary winding L1 of the Tesla transformer.

A spark gap(SG) that acts as a switch in the primary circuit.

The Tesla coil (L1, L2), an air-core double-tuned resonant transformer, which generates the high output voltage.

Optionally, a capacitive electrode (top load) (E) in the form of a smooth metal sphere is attached to the secondary terminal of the coil.

The specialized transformer used in the Tesla coil circuit, called a resonant transformer, oscillation transformer or

radio-frequency (RF) transformer, functions differently from an ordinary transformer used in AC power circuits. While an ordinary transformer is designed to transfer energy efficiently from primary to secondary winding, the resonant transformer is also designed to temporarily store electrical energy. The primary and secondary circuits are tuned so they resonate at the same frequency; they have the same resonant frequency. This allows them to exchange energy, so the oscillating current alternates back and forth between the primary and secondary coils.

Usually Tesla coils are used for X-ray generation, high frequency alternating current phenomena, electrotherapy, and the transmission of electrical energy without wires (wireless transmission). Today their main use is for entertainment and educational displays, although small coils are still used today as leak detectors for high vacuum systems.

**CONCEPT OF SCHEDULING INTENSIVE DATA IN CLOUD**

Usually in the cloud, the computing unit is virtual machine based .So it is very much essential to project the applicability of intensive data on virtualized data centre. Although virtualization is advantageous in many ways as it has number of benefits like resource utilization and isolation, but due to interference of virtual machine, sometimes it may face challenges to predict in large-scale virtualized environments. Therefore it is very important to focus on quantitative analysis on the impact of interference on the system fairness.

It is understood that cloud is an economics-based distributed system and the concept of pricing fairness is adopted from micro economics. So, the current pay-as-you-go is neither personally nor socially fair. Accordingly, to solve the unfairness caused by interference, new pricing scheme (pay-as-you-consume) may be very much essential. In the pay-as-you-consume pricing scheme, users may be charged according to their effective resource consumption excluding interference. The key idea behind the pay-as-you-consume pricing scheme is a machine learning based prediction model on the relative cost of interference.



**Prof.(Dr) Sambit Kumar Mishra**  
HOD Research & Development

Due to its wide adoption, the performance of Hadoop in particular (and MapReduce in general) has received much attention in system research. Accordingly, virtual machines have become increasingly important for supporting efficient and flexible resource provisioning. By means of this technique, cloud computing provides users with the ability to perform elastic computation using large pools of virtual machines, without facing the burden of owning or maintaining physical infrastructure. Performance in data-intensive cloud computing is contributed by many factors including data locality, application types and the underlying cloud infrastructure. The effects of performance interference between two virtual machines hosted on the same hardware platform may be measured by looking at the system-level workload characteristics. Through subsequent analysis of collected characteristics, the performance of new application from its workload characteristic values successfully within an average error of approximately 5%.

**ELECTROMAGNETIC AIRCRAFT LAUNCH SYSTEM**

The Electromagnetic Aircraft Launch System (EMALS) is a system under development by the United States Navy to launch carrier-based aircraft from catapults using a linear motor drive instead of conventional steam pistons. This technology reduces stress on airframes because they can be accelerated more gradually to takeoff speed than with steam-powered catapults.

The induction motor requires a large amount of electric energy in just a few seconds more than the ship's own power source can provide. EMALS' energy-storage subsystem draws power from the ship and stores it kinetically on rotors of four disk alternators.



**Subrat Kumar Panda**  
Professor & HOD  
Dept of Electronics & Communication Engineering



Other advantages includes lower system weight, cost, and maintenance; the ability to launch both heavier and lighter aircraft than conventional systems; and lower requirements for fresh water, reducing the need for energy-intensive desalination. The EMALS uses a linear induction motor (LIM), which uses electric currents to generate magnetic fields that propel a carriage down a

track to launch the aircraft.

Compared to steam catapults, EMALS can control the launch performance with greater precision, allowing it to launch more kinds of aircraft, from heavy fighter jets to light unmanned aircraft. The EMALS will also be more efficient than the 5-percent efficiency of steam catapults.

## EFFECTS OF RADIATION ON HUMANS

Radiation is energy in transit. The energy travel as sub- atomic particles of matter (i.e electrons, protons, neutrons, alpha-particles) and photons, which are packets of electro magnetic energy (i.e visible light, UV-light, radio waves, micro-waves, gamma radiation, X-radiation).

The sources of ionizing radiation are galactic cosmic radiation (GCR) from exploding stars, solar cosmic radiation (SCR) from sun. Other sources include radioactive substances released in to the atmosphere from a detonated nuclear reactor or a nuclear weapon as a result of an accident or terrorist attack, lightening and terrestrial gamma ray flashes (TGFs).

Ionizing radiation is a sub-atomic particle or photon sufficiently energetic to directly or indirectly eject an orbital electron from an atom. Photons and electrically-charged particles ionize directly by means of electromagnetism, Neutrons cannot ionize directly, but they can ionize indirectly. On imparting the nucleus of an atom (e.g. atmospheric nitrogen or oxygen), a neutron can induce emission of a gamma-radiation photon by nuclear excitation or by breaking apart the nucleus and release photons which can ionize directly, neutrons which can decay into protons and electrons.

Visible light, UV-light, Radio-waves and micro-waves are non-ionizing radiations. A photon of non-ionizing radiation or a sub-atomic particle insufficiently energetic to eject an orbital electron may interact with an atom by electron excitation. This process forces an orbital electron to a higher energy level. An electron, so affected is in an unstable energy level, releasing energy in the form of non-ionizing photons. The photons released include thermal photons and light photons of different wave lengths.

Living materials consists of molecules composed of atoms held together by electron bonds. Ejection of orbital electrons can break the bonds that combine atoms as molecule. Particularly, harmful to a biological system is the breaking up of molecules of deoxyribonucleic acid (DNA), which carries information required for the function and reproduction of an organism. Improper repair of DNA damaged by ionizing radiation may lead to cancer. Free radicals are also believed to have a role in the etiology of atherosclerosis, rheumatoid arthritis, and other diseases. A free radical is an electrically neutral atom or molecule containing one or more unpaired electrons in the valence shell, and this makes it very reactive. Ionizing radiation particles produce free radicals when they react with the water in cell and with some cellular components. Radiation damage to living organism is divided into two

categories i.e. somatic and genetic.

### **Somatic Effects:**

Somatic damage by radiation is damage to any part of the body except the reproductive organs. Somatic damage directly affects the individual exposed to the radiation and does not deal with after effects in future generation. Skin that is damaged by excessive radiation may develop cancer later on. Irradiated bone marrow can cause anemia (low red blood cell count) and therefore fatigue and muscle weakness. Large doses of radiation cause hair loss and dryness of skin. Overtime, large doses of radiation can cause cancer and the formation of cataracts on the lenses of the eyes

### **Genetic Effects:**

Radiation that causes genetic damage directly damages the reproductive organs, and therefore affects any offspring that individual may have after the damage has occurred. Radiation damage is done to genes and chromosomes, which can be passed onto future generations. Studies of survivors of the Hiroshima and Nagasaki bombings have shown that there are increased rates of still births, miscarriages, and infant deaths. If the children survive past the first few years of life, they tend to develop leukemia or microcephaly (slower cranial development), have birth defects (limbs missing, large growths), or menral impairments.

All living organisms are affected by radiation. The damage caused to human body depends on the dose (amount of energy absorbed by a given mass of an organism), the dose rate and the part of the body exposed.

- ? Exposure to low doses (100 250 rads) does not cause the death of the men but the dose can impair the functioning of body organs causing fatigue, vomiting, nausea and loss of hair. However, the recovery is possible.
- ? Exposure to high doses (400 500 rads) affects the bone marrow, reduces blood cells and natural resistance capacity against germs, causes blood clotting failure and ultimately causes death of the irradiated person due to infection and bleeding.
- ? Exposure to higher doses (10,000 rads) kills the organisms by damaging the tissues of heart, brain etc.



**Prof. Trilochan Samal**  
 Dept:- BSH, GIET, BBSR

## MISTAKES ARE THE SECRETS OF SUCCESS



**Niharika Sahoo**  
Dept. of BSH

In the process of making mistakes, there is an opportunity to learn a lot, but not just for the person or team making the mistakes but for everyone. Most of us have heard the saying “learn from your mistakes,” but how many of us actually do. Making a mistake is one of the best opportunities you have to learn about yourself. Another reason to try to learn from your mistakes is because they are less likely to occur again if you learn a lesson from each one. The next time you make a mistake take a minute to think about it. Mistakes are the stepping stones on which man builds the foundation of his life. They are essential for the condition of humanity. If men were not to commit any mistakes, they would no longer be men they would become God Themselves. It is true that God made man in his own image, but images are inverted reflections. They are never perfect. Mistakes are a necessary part of one's life. Mistakes empower us by becoming the guiding lights in the darkest of times. They ensure that we keep trying in order to improve our lives for a better and brighter future. It is important, however, to keep in mind that one should not

play foolhardy and keep committing the same mistakes repeatedly just for the sake of committing them. It is imperative to understand that we live only once and a single lifetime is too short to commit all mistakes oneself and then try to improve upon them. Instead, we should try and endeavor to learn from the mistakes of others too because in this way, we gain valuable experience which stays with us forever. It can be gauged that mistakes are an important part of every individual's life. The only people who do not have to face any challenges are the ones who lie peacefully in their graves, with no worries to preoccupy their minds with. To err is human, and to forgive is divine. But to err and learn from the mistakes is indeed, an invaluable lesson, which can only be learnt first-hand.

**“Experience is the name everyone gives to their mistakes.”** Oscar Wilde

## TIME MANAGEMENT SKILLS



**Prof. Chinmayee Das**  
Dept of BSH

Time and Tide Waits for none.....is the famous proverb; highlighting the essence of time. We have to perceive time, filter it and symbolize about it in order to give meaning to it.

Now-a-days, we see “TIME MANAGEMENT” covered in popular magazines and offered by business consultants. The term time management is a misnomer. We cannot manage time; rather we manage the events in our life in relation to time. How we use the time depends on skills learned through self-analysis, planning, evaluation and self-control.

People who practice good time management techniques often are more productive; energetic; lively; accomplish their desires; more enthusiastic & optimistic, procrastinate less and have more time to relax which helps further decrease stress and anxiety and eventually they feel enlightened about themselves.

Finding a time management strategy; depends on our own personality ability to self-motivate and level of self-discipline. By incorporating these tips; we can manage our time more effectively.

**Analyze How You Spend Your Time:** Keep a time log which would be helpful to determine how you are using your time. Identify your most time consuming tasks and determine whether doing justice to the most important activities.

**Prioritize Your Tasks:** One of the easiest ways to prioritize is to make a “to do” list. Rank the task in order of priority. Time management experts recommend using a personal planning tool like electronic planners, pocket diaries, calendars, computer programs, index cards, notebooks etc. Write down your tasks according to the need and urgency.

**Schedule Your Time Appropriately:** Scheduling is making a time commitment to the things you want to do. Plan your most challenging task for when you have the most energy. Implement a system that allows you to handle information only once.

**Delegation:** Delegation means assigning responsibility for a task to someone else, freeing up some of your time for tasks that require your expertise. Select someone with appropriate skills, experience, interest and authority needed to accomplish the task. Stop procrastinating, rather break down the task into smaller segments that require less time commitment and result in specific, realistic deadlines.

**Avoid Multi-tasking:** Doing two things at a time hampers the efficiency of both is a well known saying. Multitaskers often seem to think they get more accomplished, but it's not always the most productive or efficient route. Our minds work better when we are truly able to focus and concentrate on one thing.

## PHOTOVOLTAIC GLASS

Photovoltaic glass or PV glass is a technology that enables the conversion of light into electricity. To do so, the glass incorporates transparent semiconductor based photovoltaic cells, which are also known as solar cells. The cells are sandwiched between two sheets of glass. Photovoltaic glass is not perfectly transparent but allows some of the available light through it.

Building incorporated photovoltaic coating can help structure to produce their own particular power, by transforming the entire building envelope into a sun powered board. Organizations, for example, polysolar gives straight forward photovoltaic glass as a basic building material, shaping windows, facades and

rooftops. Polysolar's innovation is effective at creating vitality even on North-board, vertical dividers and its elite at raised temperatures implies it can be two fold coated or protected specifically. And in addition saving money on vitality charges and procuring encourage in levy incomes, its cost is just negligible over customary glass, since development and structure costs remains, while cladding and shading framework expenses are supplanted.



**Priyankaree Mohanty**  
Civil 3<sup>rd</sup> sem

## GOD PARTICLE THE HIGGS BOSON

In 1964, the British physicist Peter Higgs wrote a landmark paper hypothesizing why elementary particles have mass. He predicted the existence of a three-dimensional "field" that permeates space and drags on everything that trudges through it. Some particles have more trouble traversing the field than others, and this corresponds to them being heavier. If the field later dubbed the Higgs field really exists, then Higgs said it must have a particle associated with it: the Higgs boson.

Fast forward 48 years: On Wednesday (July 4), physicists at the Large Hadron Collider (LHC), the world's largest atom smasher in Geneva, Switzerland, announced they had discovered a Higgs-like particle at long last. If the new particle turns out to be the Higgs, it will confirm nearly five decades of particle physics theory, which incorporated the Higgs boson into the family of known particles and equations that describe them known as the Standard Model.

The search for the Higgs gained a level of public attention unusual for physics partly thanks to the physicist Leon Lederman's 1993 book "The God Particle" (Dell Publishing). Lederman gave the Higgs its godly nickname because the particle is "so central to the state of physics today, so crucial to our final understanding of the structure of matter, yet so elusive," he wrote in the book. However, he quipped that the second reason was that "the publisher wouldn't let us

call it the Goddamn Particle, though that might be a more appropriate title, given its villainous nature and the expense it is causing."

Indeed, the Higgs boson eluded detection through the construction and shutdown of two expensive high-energy particle colliders built partially for the purpose of detecting it. In these colliders, particles are accelerated through a tunnel and then smashed together, producing an excess of energy that sometimes takes the form of new and exotic particles. Only the Large Hadron Collider at CERN Laboratory, the most powerful particle collider ever built, turned out to probe energies high enough to generate a Higgs particle, which is roughly 125 times the mass of a proton.

But what does the Higgs particle actually do? How does it, and the Higgs field associated with it, give things mass?

In physics, when particles interact with fields, the interaction must be mediated by a particle. Interactions with the electromagnetic (EM) field, for example, are mediated by photons, or particles of light. When a



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1st semester btech

negatively charged electron is pulled by the EM field toward a positively charged proton, the electron experiences the EM field by absorbing and emitting a constant stream of "virtual photons" photons that momentarily pop in and out of existence just for the purpose of mediating the particle-field interaction. Furthermore, when the EM field is "excited," meaning its energy is flared up in a certain spot, that flare-up is, itself, a photon a real one in that case.

Along the same lines, the Higgs particle mediates interactions with the Higgs field, and is itself an

excitation of the Higgs field. Particles are thought to trudge through the Higgs field (thereby acquiring mass) by exchanging virtual Higgs particles with it. And, the thinking goes, a real Higgs particle surfaces when the field becomes excited, flaring up with energy in a certain spot. Detecting such a flare-up (i.e. the particle) is how physicists can be sure the field itself exists. At the LHC, they managed to bash atoms together hard enough to generate, for a fleeting instant, a 125 giga-electron-volt excitation of what was likely the Higgs field. The flare-up had all the trappings of a Higgs boson

## LIFE & SUCCESS

Life is beautiful but not always an easy, it has problems too, and the challenge lies in facing them with courage, letting the beauty of life act like a balm, which makes the pain bearable, during trying times, by providing hope. Happiness, sorrow, victory, defeat, day-night are the two sides of the coin. Similarly life is full of moments of joy, pleasure, success and comfort punctuated by misery, defeat, failures and problems. There is no human being on Earth, strong, powerful, wise or rich, who has not experienced, struggle, suffering or failure.

No doubt, life is beautiful and every moment a celebration of being alive, but one should be always ready to face adversity and challenges. One who has not encountered difficulties in life can never achieve success.

Difficulties test the courage, patience, perseverance and true character of a human being. Adversity and hardship makes a person strong and ready to face the challenges of life with equanimity. So, there is "no gain without no pain". It is only when one toils and sweats it out then that success is nourished and sustained.



**Jyotiprakash Bagh**  
B.Tech 2nd Year (Civil Engg.)

Thus, life is not just about a bed of roses; thorns are also a part of it and should be accepted by us just as we accept the beautiful side of life. The thorns remind one of how success and happiness can be evasive and thus not to feel disappointed and disheartened rather remember that the pain of thorns is short-lived and the beauty of life would soon overcome the prick of thorns.

Now, for better future we have to sacrifice something for that because we all know without any sacrifice we don't get anything better which we have. As we are students, we have to sacrifice our comfortable life and work hard for the best we aim. A.P.J Abdul Kalam rightly said "Man needs difficulties in life because they are necessary to enjoy the success"

## BHUBANESWAR : THE NEW SMARTCITY OF INDIA

Bhubaneswar is known as city of temples. The city got its name from Tribhubaneswar, which literally means "the lord of the three worlds" (Eeswar of Tribhuban) as in "Lord Shiva"(Lingaraj).

Today in the race to become a smart city, Bhubaneswar has traded its lush green canopy for wider roads and paved sidewalks, so much so that not a blade of grass now grows by the side of the road. The city has been a hub of academic and cultural icon of India over the past



**Suraj Kumar**  
B.Tech 1<sup>st</sup> year

few decades. Today it has become a hub of educational institutions like the IIT,AIIMS,NIFT,XIMB,NISER,KIIT ,SOA universities and many more. Students from different corners of the country are coming here to pursue their careers.

Bhubaneswar also offers Tourism Education. The secondmost centre of (Eastern Regional Centre) of IITTM (Indian institute of Tourism &Travel Management) after

Gwalior .The headquarters of the OSRTC(Odisha State Road Transport Corporation)is in Bhubaneswar.

A proximity to world class educational institutes and research environments, comparatively lower operational costs and exposure to the global markets are what propels the city as a startup hub. The presence of Information Technology(IT)giants likeInfyosis,Wipro,Mindtree,and TCSetc, in Bhubaneswar also acts as a catalyst for the fast growing startup culture.Within no time our historical city would turn into a smart city.

## FRIENDSHIP

“Good Friend Are Hard To Find,Harder ToLeave,And Impossible To Forget”.

We all know,a true friend is hard to find .So when you do find one, hang on tight! It also doesn't hurt to let your best friends know every now and just how much then mean to you. Friendship is such a thing where fight, crawl, happiness, sorrow everything is scared within themselves. Friendship has dual traits, a bad one who takes you to the wrong track and other who brings you out from the wrong track. It is very much necessary to find a friend who will be with you forever in a positive track. Hence choosing a good friend is very essential. There is a well known saying A Friend In Need Is A Friend Indeed.



**Abhiraj Panda**  
Btech 1st year (CSE)

Friendship's other meaning is that of sharing. There are certain moments and things which you can't speak to your parents at that moment a friend is only there for you to help you and to come out from the worst situation. Friendship is a relationship of mutual affection between people. Friendship doesn't mean to be connected everyday if you are far away still can have a close contact .Friendship is done from heart and it will be done forever. So, try to make a good friend who will help you in every situation.

## BLACK PANTHER

A black panther is the melanistic colour variant of any panther species. Black panthers in Asia and Africa are leopards and black panthers in America are black jaguars.

The panthers tend to be dark brown to black in colour and are otherwise identical to the feline species to which it belongs. The only real exception to this is the Florida panther found in the south east region of the USA that is believed to be a subspecies or cougar and is quite rarely dark brown in colour .It tends to have more of a speckled appearance. Unlike leopards and Jaguars, the panther has no spots on its long body or tail, but instead has a shiny coat of dark fur.

The panther is an incredibly intelligent and agile animal that is seldom seen by people in the wild as they are generally very quiet and cautious animals. Their dark brown fur camouflages the panther both into the surrounding forest



**Debabrata Singha**  
B.Tech 3rd yr. (Mech. Engg.)

and makes them almost invisible in the darkness of night. The panther is a solitary animal that leads a nocturnal lifestyle, spending much of the daylight hours resting safely high in the trees. It is a carnivorous animal and one of the most feared and powerful predators throughout its natural environment.

Over the past couple of years black panthers are hunted by people for their cardinal desires. There is a drastic decline in the number of their species. Hence it is our foremost duty to save this endangered species from being extinct. Today only 600 black jaguars are left.

“SAVE BLACK JAGUARS”

## EBOLA

There are four types of the Ebola virus, three of which cause illness in humans. The exact origin, locations, and natural habitat of this virus remain unknown, but researchers believe it is normally maintained in an animal host that is native to the African continent.They believe that the virus is zoonotic(animal borne). Person-to-person transmission occurs through direct contact with people who have Ebola, or direct contact with their body fluids. Ebola virus is a type of RNA virus that causes the disease known as Ebola hemorrhagic fever (also known as just Ebola).



**Sourav Nayak**  
B.Tech 1<sup>st</sup> Sem



Ebola virus got its name from a river in the Democratic Republic of the Congo (formerly Zaire) in Africa, where it was first recognized. Ebola virus is one of two members of a family of RNA viruses called Filoviridae.

Ebola-Reston, which was isolated from infected cynomolgus monkeys that were imported to the United States and Italy from the Philippines. The Ebola virus is not known to be native to other continents, such as North America. Ebola outbreaks typically appear sporadically. Cases have been reported in the Democratic Republic of the Congo, Gabon, Sudan, the Ivory Coast and Uganda. In the United States, there have been no reported cases of Ebola virus in humans.

Just as scientists are unsure of the animal host for the Ebola virus, they are also unsure how an outbreak occurs; however, researchers have hypothesized that the first patient with Ebola becomes infected with the virus through contact with an infected animal.

Once transmission of Ebola virus occurs to the first human, scientists do know that transmission of Ebola occurs through direct contact with infected people, or direct contact with their body fluids (such as blood or secretions). Transmission occurs most often when an infected person is in the late stages of the illness.

In the aftermath of the events of September and October 2001, there is heightened concern that the Ebola virus might be used as an agent of bioterrorism. The deliberate release of the virus is now regarded as a possibility, and the United States is taking precautions to deal with this. The Centers for Disease Control and Prevention (CDC) considers the Ebola virus a Category A agent. Category A agents are believed to present the greatest potential threat for harming public health, and have a moderate to high potential for large-scale dissemination (spread). So awareness should be created to curb the spread of this dead disease.

## PLACEMENT-B.TECH AND DIPLOMA

GIET Baniatangi khorda has record placement of its students of the 2014-18 batches. They all are from Diploma and B.Tech wings and the records are during the month of Aug-Oct 2017. For details of the company in which our students got placement could be seen in our **Website: [www.gietbbsr.com](http://www.gietbbsr.com)**.

### STUDENTS PLACED FROM B.TECH PROGRAMME

Branches	Civil	EE	CSE	ECE	EEE	MECH
Students Placed	0	7	0	1	6	1

### STUDENTS PLACED FROM DIPLOMA PROGRAMME

Branches	Civil	MECH	EE
Students placed	0	15	21

“Great teachers engineer learning experiences that put students in the driver’s seat and then get out of the way.”

*- Ben Johnson*

## LET US KNOW

Venkatraman Ramakrishnan is a Chidambaram, Tamil Nadu born American citizen. He is currently the President of the Royal Society. He shared the Nobel Prize in Chemistry with Thomas A. Steitz and Ada Yonath in 2009 for studies on the structure and function of the ribosome.

The Zika virus disease has reached India with the World Health Organisation (WHO). Zika virus is a virus related to dengue, West Nile, and other viruses. Zika virus may play a role in developing congenital microcephaly (small head and brain) in

the fetus of infected pregnant women. The viral disease was first noted in 1947 in Africa and has spread by outbreaks to many different countries, with an ongoing outbreak in Brazil and Puerto Rico; the first diagnosis of. The virus is transmitted to most people by a mosquito (Aedes) vector; the risk factor for infection is a mosquito bite. The Zika virus' incubation period is about three to 12 days after the bite of an infected mosquito. The vast majority of infections are not contagious from person to person; however, it may be passed person to person during sex.

### POETRY CORNER



**Mr. Golak Bihari Bernal**  
Semester-3<sup>rd</sup>  
Roll no-161022  
Regd.No-1601326035

#### MY MOM IS THE BEST

*Thank you.....  
For standing by me through thick and thin  
For not giving up on me when I didn't win  
For your patience when I kept pushing you away  
For caring when I said I didn't need you anyway.....*

*I am grateful knowing  
I can count on your strength  
Ask for your support, and know you'll go to any length  
When I lose my way  
You help me get back on track  
When in pain  
Your comfort soothes and brings me back.....*

*Mom, Thank you.....  
For your guidance and the faith you have shown  
For giving me a safe place where I've grown  
For showing how to strive  
And because of your love,  
I will survive.....*

**GIET  
in News**

**NEW FACES**



**Chittaranjan Mallick**  
Teaching Asst.  
Civil Dept



**Pritam Malakar**  
Asst. Prof. Civil Dept



**Baroda Prasan Sahoo**  
Asst. Prof. Civil Dept



**Rosalin Panda**  
BSH Dept

**JOKES**

Ladki:  
Mein Shaadi Ke Baad Tumhare Sab Dukh Bant Lungi..

Ladka:  
Par Mein Dukhi Kahan Hoon?

Ladki:  
Mein Shaadi Ke Baad Ki Baat Kar Rahi Hoon...

New Finance Way To Propose  
Boy: Tumne mujhe koi Loan diya tha kya..?  
Girl: Nahi Toh... Kyun...?  
Boy: Pata nahi kyun teri taraf Interest badhta he jaa raha hai...

# The Health Benefits of Carrots



- ? Carrots are rich in vitamin A.
- ? Improve your skin quality.
- ? Act as a natural cleanser that helps with removing dirt and plaque from your teeth and gums.
- ? Decrease the probability of developing Cancer.
- ? It reduces the risk of a stroke, high blood pressure, and Anxiety.
- ? Improves Digestion, Kidney function, Liver function.
- ? Great for eyes.
- ? Anti-bacterial & viral.

## PAST PHOTO GALLERY



**B.TECH :** Mechanical, Electrical, Electrical & Electronics, Computer Science, Civil & Automobile

**M.TECH :** Structural, Mechanical System Design, Communication System & Power Electronics & Derives

**DIPLOMA :** Civil, Electrical & Mechanical



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