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Silicon

...beyond teaching

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Our Mission: "To provide the best of technical skills, professional ethics and human values in enriching the disciplines of Science, Engineering and Technology for social development and Nation building"

Anmol Gupta of CSE 2013-17 batch receiving the Gold Medal in the 9th Convocation of BPUT

Nikita S. Kar of CSE 2014-18 batch receiving the Gold Medal in the 9th Convocation of BPUT

From the Editor's Desk ...

Dear Readers:

It is that time of the year when we welcome our new batch of aspiring engineers. And with the beginning of every new session come new hopes, aspirations and new targets to achieve. Silicon has already completed one year of academic autonomy and with this new batch, celebrating its second year. With every passing year we have been growing in strength, in terms of academic excellence, value-added teaching and well organised mentoring. Every new generation poses new challenges of mentoring them since their demands from the society are so different, and they are born with new set perceptions with which they see the world. So every possible measure has been taken to cater to the changing needs of the new generation of engineers who would very soon be ready to serve their society and their nation.

With this end in view, the Induction Program had been so designed so as to ignite that spark in our students to help them shape their future. To become successful in life one needs to work hard and be prepared, because success comes to those who stay prepared to receive it. A series of guest lectures and activities (sports, music, drama, elocution, and quiz) became a part of this mandatory course of Induction Program. But in every piece of advice that came our way through this program was an insight which academicians and even technocrats shared in common: innovation. Innovative methods are among the most ingenious ways of problem solving. When skills find an innovative manifestation the outcome could always be of a greater beneficial magnitude. All inventions have been innovations of the human brain. So let us deploy our mental faculties towards innovations instead of the mundane trivialities of the rapidly changing society.

Our youth today are so full of energy and potential that there is virtually no dearth of skills. They should now start channelizing their positive energies towards a focus which would be their path-finder in life. But many a times they get trammelled in the technological gimmicks of the virtual world which look so alluring. Easy entertainment should not creep its way into curbing inventiveness among students. A docile acceptance to changes should now be challenged with innovative recipes of science for a flavour that would change the taste of convention. So let us look forward to an innovative society of proactive engineers who would be ready to create history.

All the best!

Ananya Roychoudhury
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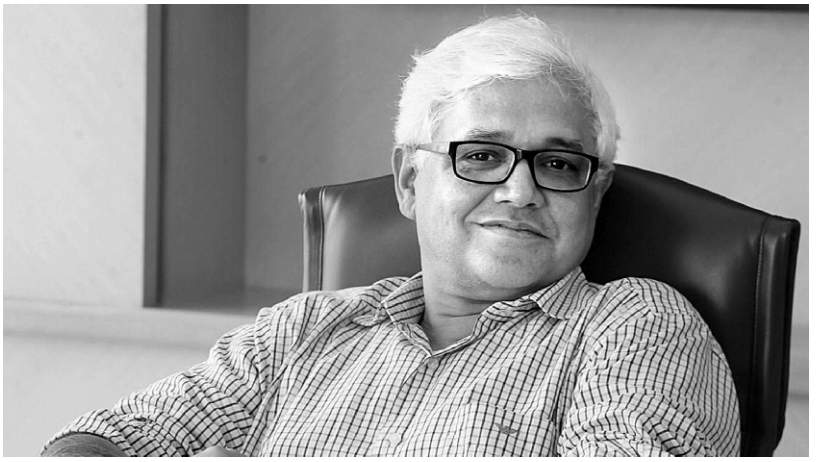
The Jnanpith Awardee - Amitav Ghosh



A professional writer is an amateur who didn't quit.
– Richard Bach

Literature is an art form which reflects the artistic and intellectual value of the writer. Here the world is seen through the writer's perspective. Be it English, Hindi or any other language, literature puts life into it.

To mark the outstanding contribution towards literature, the writers are bestowed with several awards. One such Indian literary award presented annually by the *Bharatiya Jnanpith* is *The Jnanpith Award*.

In the recent past this coveted award was presented to the eminent Indian writer and author Shri Amitav Ghosh. Succeeding the renowned writer in Hindi literature Krishna Sobti, Amitav Ghosh was conferred the 54th Jnanpith Award in December 2018 and he is the first Indian writer in English to have been chosen for this honour.

Amitav Ghosh was born in Kolkata on 11th July, 1956 to a Bengali family. He was educated in The Doon School in Dehradun. During his school days he was a consistent writer and regularly contributed to fiction and poetry to *The Doon School Weekly*. He completed his higher education from St. Stephen's College, Delhi University and Delhi School of Economics. He then won the Inlaks Foundation Scholarship to complete a D. Phil. in Social Anthropology at St. Edmund Hall, Oxford. His first job was at the Indian Express newspaper in New Delhi. Later he joined the Queens College, City University of New York as a Distinguished Professor in Comparative Literature. He has also been a visiting professor at English Department of Harvard University since 2005.

On returning back to India, Ghosh began working on the *Ibis Trilogy* which includes *Sea of Poppies* (2008), *River of Smoke* (2011) and *Flood of Fire* (2015). *The Ibis Trilogy*, set in 1830s just before the Opium war talks about the colonial history of the East. His second volume *River of Smoke* and the third *Flood of Fire* completing the trilogy was published on May 28, 2015. *The Shadow Lines* that won him *Sahitya Academy Award* throws light on the phenomenon of communal violence and the way its roots have been spread deeply and widely in the psyche of the Indian Subcontinent.

His other notable works include *The Circle of Reason, The Calcutta Chromosome, The Glass Palace* and *The Hungry Tide*. Other non-fiction works include *In an Antique Land, Dancing in Cambodia* and *At Large in Burma, Countdown* and many more.

The Circle of Reason won him the Prix Medicis Entranger, one of France's top literary awards. For *The Shadow Lines* along with *Sahitya Academy Award* he was also honoured with *Ananda Puraskar*. *The Calcutta Chromosome* won the Arthur C. Clarke Award. *Sea of Poppies* was short listed for 2008 Man Booker Prize. The Government of India awarded him the Civilian Honour of *Padma Shri* in 2007. He received his Lifetime Achievement award at *Tata Literature Live*, the Mumbai LitFest on November 20, 2016. Recently he has been conferred with the coveted *Jnanpith Award*.

I as a reader would like to share one of his very inspiring quote to conclude. Here it goes:

"To use the past to justify the present is bad enough but it is just as bad to use the present to justify the past."

Malovika Parira
CSE, 5th Sem

Success is a science; if you have the conditions, you get the result – Oscar Wilde

The 2019 Election and the Right To Vote

The ballot is stronger than the bullet.

– Abraham Lincoln

Just because you do not take an interest in politics, does not mean politics won't take an interest in you.

Recently we had the elections held. Let's talk about the current burning issue of India 2019 Elections and The Right to Vote.

The Constitution of India declares the Right to Vote in the form of The Universal Adult Franchise (Article 21) stating, "All Indian citizens above the age of 18 years, who have registered themselves as voters, are eligible to vote. These individuals can vote in national, state, district as well as local government body elections. Every voter is allowed to cast one vote only."

Now, many of us like to step aside from voting, labelling it as "dirty politics" and convincing ourselves to restrain from being a part of this. Or much worse, some of us vote just for a few more likes on Instagram, tagging ourselves as #Proud Citizens Of India.

But this hits us hard, when the results are announced, and the supreme leaders of our country are elected, and we start complaining about "no-proper-election" being held in India. My friend, a great man once said, "If you don't vote, you lose the right to complain."

So coming to the question of casting a vote and its seriousness, why do you think India, being a developing country wastes months of its time and resources on planning and implementing a simple 'Election'?

Let me answer it for you. It's because we, being a developing nation with a majority of its population being youngsters, need efficient people to keep track of us, and act according to our need, to listen to our grief, to give us more than what we demand, to make us proud for being a citizen of India. And the funny thing is, all of this lies in our hand. We do not have a government formed by the majority; we have the government selected by the majority, the majority who shows up to vote. Voting is not just our right, it's our only power.

And being students, I think it's not just our right to vote, it's our duty to spread the awareness against the false votes, the votes which are bought by politicians, its 'our' duty to separate 'politics' from 'dirty politics'. It's our duty to spread the message to vote out of one's choice. There should be no compulsion coming between the ballot box and your choice. Let's make a proper use of the right granted to us, for many have suffered to grant us this right, which we so easily take for granted.

One might ponder on the question, "After all, how much difference can I, a single person, make? I can hardly make my own choice and talk sense to one or at max two persons." Well, let me tell you, the slogan "One vote can create a difference" still stands tall. Let's therefore put an effort to give that one single vote to the candidate we think is the most deserving.

Isha Bharadwaj
CSE, 3rd Sem

AES – Tale of Muzaffarpur

In June, just before the arrival of monsoon, there comes AES 'Acute Encephalitis Syndrome' locally known as *Chamki bukhar* in Muzaffarpur. By the time it passes, it creates havoc in the Muzaffarpur district.

So, what is AES? The term Acute Encephalitis Syndrome (AES) was coined in 2008 by W.H.O. Its symptoms include fever and neurological manifestations such as mental confusion, convulsion or coma. Early symptoms include headaches and vomiting, hypoglycemia (drops in blood sugar levels), but may lead to coma, brain dysfunctions, and inflammation of the heart and lungs. Those who survive this might have long term neurological damage.

Next question, what has it got to do with Muzaffarpur? In the year 1995, the first case of AES was recorded in the Muzaffarpur district. It is quite shocking that the syndrome that haunts malnourished kids, which first surfaced 24 years back, is yet to be identified. T Jacob John, the epidemiologist at the Christian Medical College in Vellore, who investigated the disease during its outbreak, has linked the disease to malnourished children. He opined that the malnourished children often fall into hypoglycemia because of prolonged fasting or sleeping without food. This disease has become an epidemic and has become an annual affair, with underprivileged and malnourished children being the most vulnerable. Another cause which has been linked to AES is consumption of unripened Litchi, incidentally for whose production Muzaffarpur is quite famous.

The table below gives the insight of this deadly disease: -

So far, the story has repeated itself; in summers the

Year	Deaths
2010	24
2011	45
2012	120
2013	39
2014	99
2015	09
2016	04
2017	11
2018	08
2019	121 (Till June 21)

doctors just treat children of their symptoms and forget about it once it disappears when monsoon comes. The disease draws their focus only when it strikes again next year. If we see records of the past few years, children died in the last four years but the number touched a double-digit, just once in 2017 because of proper healthcare awareness. This year, with the administration involved in general election and the health department overlooking this, the awareness drive took a backseat.

Another point to be noted is that children who have been affected are from the poorest of the families. This indicates the cause to be malnourishment, which again shows the sorry status of the government. If we go by the reports after the outbreak of this year, the government has proposed different facilities to be upgraded which is the same as what had been promised five years back, proving their futile promises.

There has been extreme carelessness in the government side but instead of blaming just the government, citizens have to be more proactive in this. By having NGO's and social groups formed, one should spread the awareness about this disease, its causes and preventive measures to give the young ones life to live and contribute in the development of the country.

Vikash Kumar
ECE, 5th Sem

Autism

I think a hero is an ordinary individual who finds strength to persevere and endure in spite of overwhelming obstacles.

– Christopher Reeve

It was said that Sir Isaac Newton had psychotic tendencies because of his abnormal behaviour. It was quite natural for a child, who lost his father before his birth and was left alone by his mother, to behave in this manner. But can someone then imagine that the person whom they were calling 'psycho' will teach the whole world the theory of gravitation? And he deciphered this by just seeing an apple falling down from a tree. Thus, his ability to take up things differently was what made him different from others.

There are other great personalities like the great painter Pablo Picasso, the famous scientist Albert Einstein, who were once humiliated and insulted but later enlightened this world with their ability to think differently. They too showed signs of autism yet achieved what was way beyond imagination for any normal person.

What is Autism?

Autism is a complex neuro behavioral condition that includes impairments in social interaction, developmental language and communicational skills combined with rigid, repetitive behaviours. Because of the range of behaviours this is also known as autism spectrum disorder (ASD). It covers a large spectrum of symptoms, skills and levels of impairments. It ranges in severity from a handicap that somewhat limits an otherwise normal life to devasting disability that may require institutional care. Basically, it is a condition related to brain development that impacts how a person perceives and socializes with others causing problems in social interactions and communication. Although it is hard to diagnose this before 24 months, symptoms often surface between 12 and 18 months. Though the symptoms persist for lifetime, condition may improve over time. It affects about 1 in 68 people. A diagnosis by an experienced professional can be considered very reliable.

Causes of Autism?

Although there is no specific cause of Autism but because of the varied symptoms and complexity of disorder, there are probably many causes which includes both genetical and environmental factors.

The genetical factors are disorder which includes Rett syndrome or fragile X syndrome. Mutation also increase the risk of autism. Some genetic mutation seems to be inherited while others occur spontaneously. While environmental factors include certain viral infections, medication or complications during pregnancy.

Symptoms like abnormal body posture and facial expression, avoidance of eye contact, flat or monotonous speech are a few common among autistic people.

Every year 2nd April is observed as World Autism Awareness Day (WAAD) in order to raise public awareness regarding autism. In India this comes under mental illness where NGO's and government are together working in order to enable people with disabilities to exercise their rights and freedoms. Schools in Japan began offering special education for students with developmental disabilities in 2007. In fact, the WAAD 2019 observance at UN headquarters focused on 'leveraging the use of assistive technologies for people with autism'.

When an autistic child or rather a 'differently abled' child is born, every single moment becomes difficult for him/her along with his/her family. As they have to face the annoying and awkward glare of the people in public whenever, the child shows any kind of discomfort or displeasure. They are not different from us, it's just that they take some time to perceive certain things. But that doesn't mean they are less capable than any other normal person. It is really sad that instead of appreciating them for their talents they are mocked and are regularly attacked by social stigma. We should try and understand them. Parents should teach and train their young kids that everyone in this world are same and that they should respect every living being on this earth. Because if autism is the lock to brain; then empathy is the key to their heart. The specially able people want love, care, affection, understanding like any other normal person needs. It is our duty to make them feel that they are not different rather specially able and are not less than any normal person.

Sushree Priyadarshini
AEI, 5th Sem

Benefits of Drinking Water

How many of us would choose a bottle of water from a refrigerator also containing a can of cold drink and bottle of fruit juice? Not many I guess. Well with the gruelling summer days we have been facing recently, it would be great to know how drinking lots of water would benefit our body and help us to lead a healthy life.

Most of us are well aware of the fact that water constitutes about 70% of the total weight of the human body; this itself sums up the importance of water to our body. The surprising thing is that most of us don't drink the amount of water required by our body. Studies and researches reveal that most of the people are either unaware or neglect the importance of consuming ample amount of water. Water is a gift given to us by nature, drinking water regularly on a daily basis is the best way of treating our body. Let's focus on the major benefits of drinking water.

There are numerous physiological processes like respiration, digestion etc taking place inside our bodies; these processes require steady metabolism; so drinking proper amounts of water can speed up our metabolism. Increased hydration levels facilitate greater amount of oxygen in the blood flow to our cells. The work efficiency of the cells increases with the increases in consumption of water.

Another benefit of drinking a lot of water is healthy skin. Water plays an integral role in keeping our skin replenished and fresh. Our skin looks dry and unhealthy in the presence of toxins; water helps to flush out these toxins from our body and provides a radiant look to our skin. Therefore it becomes extremely important to drink about 10 -12 glasses of water daily to keep our skin healthy.

Whenever we are on a diet or a fitness program, there's a suggestion to drink a lot of water to suppress our appetite; a major reason behind this is that water acts as an active catalyst in burning our body fat, thus, enabling us to lose extra weight. Studies reveal that people with higher consumption of water are likely to be less obese than their counterparts. Getting rid of extra body fat can help us to prevent a lot of diseases.

Keeping hydrated is crucial for health and well-being but many people do not consume enough fluids every day. There are many reasons why our body needs water. It lubricates the joints. Long-term dehydration can reduce the joint's shock-absorbing ability, leading to joint pain. It forms saliva and mucus. It delivers oxygen throughout the body. It boosts shin

health and beauty. It cushions the brain, spinal cord and other sensitive tissues. It regulates body temperature. The digestive system depends on it. It flushes body waste. It helps maintain blood pressure. The airways need it and it makes minerals and nutrients accessible. It prevents kidney damage. It boosts performance during exercise. It helps in weight loss and reduces the change of hangover.

Nearly 80% of our brain is made up of water, amazing fact isn't it? So it shouldn't be surprising that water plays a major role in improving our mental well being. When we are properly hydrated the blood circulation throughout our body increases, thus enabling us to have a fresh and rejuvenated mind.

People who drink less water are often bored and less enthusiastic; meanwhile, people who consume more water are always energetic and full of zeal. Water also helps in relieving the fatigue of our body. So we have realised how beneficial water is for the mind and body. Let's not shy away from hydrating our bodies with plenty of water. Let's beat the heat with the amazing power of water.

Ashutosh Bijay Mallik
EEE,5th Sem

The scientist is not a person who gives the right answers, he is one
Who asks the right questions – Claude Levi

Saahas Zero Waste: An Endeavour Towards A Waste-Free India

With the ever-increasing amount of waste being generated every day in the country, the need of efficient management and disposal of waste keeps increasing. Answering the nation's call to this highly alarming problem, Wilma Rodrigues, a former journalist in Bengaluru, India, took up the initiative and founded an organisation with the motive of creating innovative solutions for sustainable management of solid waste in India, that involves all sections of the economy: government, commercial and residential stakeholders.

Saahas Zero Waste is a non-profit organisation with its headquarters in Bengaluru, and fully-functional branches at Surat, Hubballi, Gurugram, Chennai and Ballari. It was founded to promote waste management practices in alignment with the very progressive Municipal Solid Wastes (Management and Handling) rules, 2000. Since then, it has been coming up with innovative waste management programs based on two key principles: Segregation At Source and Decentralised Waste Management. They segregate the generated waste at the source level into four categories: Wet Waste, Dry Waste, Hazardous Waste and E-Waste. This waste then undergoes proper processing and disposal in a way that the environment is not affected adversely, and the final product can be reused in any way possible. The second principle, i.e. decentralised management of waste is about each community managing and processing their waste in their locality instead of sending it all to a centralised large processing facility or land fill. According to them, decentralised management of waste has two principles behind it: 'Waste managed at the source becomes a resource', and 'my waste in my backyard'. The earlier the waste is segregated and processed, the better the resource recovery. As an added bonus, transportation and processing costs come down. According to Saahas,efficient waste management begins when people take ownership of the waste they generate.

Besides collection and disposal of waste, Saahas Zero Waste manufactures new eco-friendly products such as Eco-Friendly Notebooks, Chip Boards and Roofing Sheets (recycled from used tetra-pack cartons). This organisation has conducted various programs to work and create awareness on various waste related issues such as Sustainable Waste Management, Sensitization and Behavioural Courage, Consultancy and Research, E-Waste management and Reverse Logistics Networks. It is partnered by companies like Bosch, Capgemini, TetraPak, Microsoft and many other renowned industries.

Saahas was awarded with the title of winner at the Indian Circular Economy Awards 2019, in the category of 'Non-Profit Organisation' at the FICCI Circular Economy Symposium, 2019. It is continuously striving towards creating a better environment for the human race, at a time when nature is deteriorating faster than ever. It is indeed heartening to know that millions of such minds are working together towards creating a better planet.

Shreya Sarkar
CSE. 3rd Sem.

Anubha Snehal, ECE 7th semester has been a good student as well as a member of Silicon Students' Council for four years. Recently she was elected as the Secretary General of the Council and she happens to be the first Woman SG of the Council. Miss Anubha was interviewed by Miss Preetika Patra of EEE, 7th Sem.

Preetika: Hello Anubha. First of all congratulations on being the first female Secretary General of Silicon's Student Council. How did you feel when you heard about it?

Anubha: Well, first of all thanks a lot Preetika. To be very honest, this was a matter of pride to me. I mean who would not love to be known as a the Secretary General? A thought of this position flashes on everyone's mind whosoever joins the council. But with high position there comes huge responsibilities, so it was a mixed feeling for me.

Preetika: What was the response of your near and dear ones to your achievement?

Anubha: I have been in such leadership roles since 3rd Std. So my family members always saw me as a leader and yes, they were proud of me as well. This could not have been possible without the support of my friends and faculty members. Whenever I questioned my decision of standing for this post I received immense support from them.

Preetika: How well have you managed this huge responsibility so far? Could you tell us about some changes you would like to introduce as a new GS?

Anubha: 4 years in the council itself has taught me how to handle responsibilities but yes those of an SG are somewhat different and I'll try to deliver my duties honestly. As far as changes are concerned, a girl being the SG for the first time is itself the initiation of the changes in the SSC. On the other hand I'll try to bring some positive and possible changes in the council.

Preetika: As a female leader, what has been the most significant barrier in your path? Who inspired you the most in being a leader and why?

Anubha: I never consider my gender as a barrier in my path. For me it has always been my responsibilities and the way I can handle them. I think discharging duties honestly and efficiently has nothing to do with the gender of a person.

Good leaders are those who handle every situation without disturbing their state of mind. And I got to learn these qualities from the former Indian Captain Mahendra Singh Dhoni. He is the person who keeps motivating and inspiring me.

Preetika: What advice would you like to share with young, aspiring women leaders?

Anubha: Competence without confidence rarely takes anyone to the highest levels, so I'll advise future women leaders to have confidence in whatever they do and to believe in themselves. They should never differentiate themselves from others on the grounds of gender.

Preetika: How has Silicon been helpful in your growth so far?

Anubha: Silicon is a unique place. The love and support I have received from the faculty members has helped me to grow in every field, be it education or leadership.

Preetika: What are your future plans?

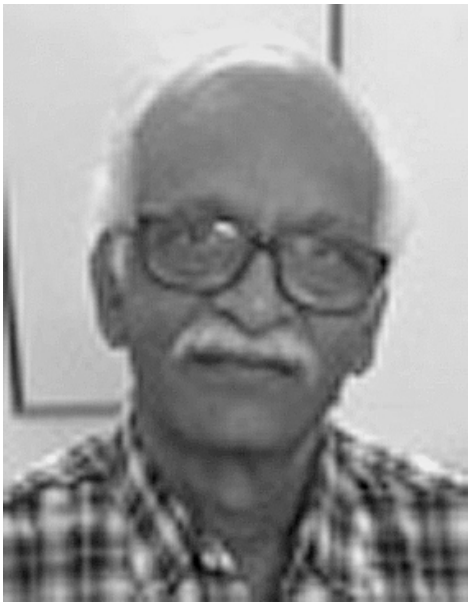
Anubha: First of all, I am planning to get into a good IT company and after gaining some experience I would like to go for higher studies.

Preetika: Any piece of advice you would like to share with our readers?

Anubha: I would like to advise my readers to seek some informal leadership roles because you are always a leader whether you are officially in charge of a team or not. Work in team as much as you can and have confidence in whatever you do.

Preetika: Thank you Anubha for sharing your experience with us. It was nice talking to you. All the best for your future.

Anubha: Thanks a lot Preetika.



Dr. Shaikh Iqbal Hosain is a professor of physics who did his Ph.D in theory of Fibre Optics from IIT, Delhi and Post Doc. at different universities in France for six years. During this period he visited and collaborated with many research laboratories in the U.K. and Switzerland. Prof. Hosain visited Silicon for a special talk during the National Seminar on Functional Materials for Emerging Technologies. He was interviewed by Miss. Disha Kumari of CSE, 7th sem for this special feature.

Disha : Good afternoon Sir, we are privileged to be here. Please tell us how were you motivated to take up research as a career option?

Prof. Iqbal: Oh, a good question!(chuckles). Well, when I was in school, I never thought of studying physics. I was very poor in studies those days, and I used to hide under the bed, whenever the teacher would come. I never wanted to study physics or mathematics, I was interested in Odia literature and I was a good script writer. I secured good marks in Mathematics in my matriculation that made me interested in it. On pursuing science, I took an interest in physics. In physics, I never liked Optics. Then I did my M.Sc and then joined as a research scholar in Utkal University for 2 years. I didn't find interest in particle physics and thus left it. After that I joined as a lecturer, then UGC declared that you need to complete your Ph.D if you want to continue as a lecturer. So I thought of doing Ph.D from somewhere outside Odisha.

It was in 1979, I joined IIT Delhi and was told to contact Professor Ghatak who works in Optics, and I was terribly afraid. I said I can't work in Optics. But he said, "No don't worry, this is not Optics, this is electromagnetic theory, within a small cylinder, it has nothing to do with Optics". When I joined, I thought I'd stay here only for the purpose of PhD, but after that I took an interest in it and thought of going abroad.

Some of my research papers were cited well by scientists abroad. I went and stayed there for 6 months and came back. I got into this, by chance, I would say, not intentionally.

Disha : What challenges did you face in your research and how did you overcome them?

Prof. Iqbal : In those days, computer was a problem, we started from punch cards and now we are using terminals. And in IIT Delhi, we used to stand in a queue, there were big computers, there was one mainframe computer and several terminals. There was one Numerical Algorithm(nag) library, having many volumes, so to solve some coupled differential equations, having equations, we used to develop the program using the algorithm given.

Disha : Any tips sir, that you would like to give to the students of today's generation?

Prof. Iqbal: First, you should attend your classes regularly. If you miss one or 2 classes consecutively, in the 3rd class, you won't be able to understand anything, because the classes are linked, this is science, not arts. A teacher may be a very bad teacher, but you will understand something.

Second, don't always depend upon jobs. You are an engineer, you must go to some remote areas or some semi-urban area where you can start your own enterprise. Also I must say, suppose you are doing B.Tech. or M.Tech., then you should not constrain yourself to engineering services only. You can try for administrative and bank services too. Where your knowledge will help you and you will have scope for public work too.

Dr. Subhankar Bedanta is an Associate Professor in School of Physics, at NISER Bhubaneswar. Dr. Bedanta has done his PhD from Duisburg, Germany and Post Doc at Princeton University, USA. He was interviewed by Miss. Priyanka Mangaraj, 7th sem during his visit to Silicon for the National Seminar on Functional Materials for Emerging Technologies.

Priyanka : Sir since when did you find Physics to be your field of interest?

Dr. Bedanta: I believe Physics took over me during my Masters. Being from an economical & developmentally backward locality we never had such wider vision or idea about opting for higher studies in our career. Undoubtedly it took a lot of troubles to make it up to Utkal university which is one of the best universities in Physics in Odisha. Utkal university invites eminent speakers from various reputed institutions of India and abroad for amazing lectures. After interacting with them I got motivated and found Physics to be more interesting and fun.

Priyanka : What is your role as an Associate professor of NISER?

Dr. Bedanta: Basically I got two vital roles to hold onto. Teaching is primary and the other being research. Teaching is taken very seriously for young brains like you who enroll into NISER for integrated MSc or PhD in order to learn basic science. NISER is all about basic science. Great responsibility lies to keep them motivated.

Few years back most of the students got diverted from basic science. Somehow the scenario is changing its face. Fortunately, the government has now started institutes like NISERs or IISERs along with various paid fellowship programmes to attract people towards science.

Then there's teaching hitting my priority list. It's very important to keep adopting new methods and make science much more interesting. Even I'm young and inexperienced in comparison to my professors which make it more challenging. Providing useful resource and top notch training is the key factor boosting our students confidence to face every competition.

Human training is a big responsibility. I won't say I have succeeded completely but we are always in the process of trying and giving our best.

Priyanka : It was fascinating to see in your lecture how you associated science with mouth watering edibles then explaining the science of it. Could you state any such interesting research paper of yours?

Dr. Bedanta: There are many, well I can point out Organic Spintronics. Recently people have started working on it; very few groups in the world and probably in India we are the only one. We have potential research fellows working on it. Hopefully some new magic of science will be witnessed.

Priyanka : Sir, what's your new vision on any major development in technology which you picture to be evolved in the field of magnetism?

Dr. Bedanta: Magnetism is a very vast topic. There are many areas with jaw dropping possibilities. Employing Topological Insulators is the new talk of the Magnetism world. Insulators which do not conduct electricity in bulk but only at surface it. It sounds so captivating. So, of course there exists a lot amount of possibilities with some challenges too.

Priyanka : Sir, thank you so much for sparing time for our readers.

Dr. Bedanta: You are most welcome.

Entrepreneurs Fest-2019

The Entrepreneurship Development Cell of Silicon organized Entrepreneurs Fest – 2019 during 9th to11th March 2019 in the campus. Prof. Jaideep Talukdar, Principal, Silicon Institute of Technology, welcomed everybody to the program and insisted that academic institutions should focus on creating an entrepreneurial mindset and inspire students to be innovative, think independently and work dedicatedly. The program coordinator Dr. M. P. Agasty briefed the gathering about the objective of the program. The inaugural session was graced by Dr. R. N. Behera, Senior Director NIC, Govt. of India. Speaking on the occasion, he emphasized that this is the right time to become an entrepreneur as the ecosystem is more benign with better connectivity, more disposable money in the hands of people, greater penetration, Govt. focus on creating entrepreneurs on campus. But an aspiring entrepreneur will have to give his/her hundred percent, must learn to navigate through the system and strive for excellence. The speaker Mr. Sanu Rath, Director, Prelude urged the audience to accept entrepreneurship as a way of life and observe every day as entrepreneurship day. He advised the students to dream big, passionately follow it and think excellence. In the second sessions, one workshop on business plan was conducted by Swosti Mishra and Jayanti M. About 70 students took part in this workshop.

On the second day, an idea generation competition (Ideathon) was organized by the Cell. The students from all over the state participated in this competition. About 30 groups presented their business ideas. Three groups were selected for their innovative ideas. The students were given the cash prizes of Rs. 35,000. Mr. Dibya Jyoti Bardhan and group from Silicon and CET, Bhubaneswar won the first prize. Akash Mishra of GIT, Gunpur, and group won the second prize. The prize was won by Pratisha Banarjee of GEC, Kalahandi. Mr. C. R. Pattnaik of EDII and Dr. P. K. Rout were the judges in this competition.

On the third day a Business Quiz competition was organized by the Cell. About 100 students from all over the state participated in the competition and the winners were given the cash prizes of Rs. 15,000. The program was supported by NSTEDB, Govt of India.

Blissful Dusks

The members of ISKCON Youth Forum organized a motivational program "Blissful Dusks" for the students of Silicon on 29th March evening in which more than 150 students participated. There were singers, performers and speakers who entertained and motivated the students. Mr. Asish Garg, a TEDX speaker and motivator delivered a powerful speech about the supremacy of Indian spiritualism all over the world and how the people from different parts of the world are attracted towards Indian spiritualism. Before the completion of this programme, Hare Krishna Hare Ram DJ was also performed. In the end, delicious snacks were distributed to the participants and written feedback was collected from them. It is a novel way of the ISKCON Youth Forum, Bhubaneswar, to attract the students to the path of spiritualism which will help them in fulfilling their predetermined objectives. The program was enjoyed most by students.

Device Workshop by Department of EEE

The Electrical and Electronics Device (EED) workshop for this academic session was conducted on 9th of March 2019 by the EEE Department in the various laboratories of the department. The workshop had a display of twenty-two Electrical and Electronic

gadgets along with the description of its working and applications in the real world. The objective of the workshop was to enhance the basic technical knowledge of the students in real-time applications as well as to provide a platform for effective information sharing. The 8th semester students of EEE were guided by their respective project guides to demonstrate various devices.

The number of registered students for the workshop was sixty-six. The students gyrated around the displayed gadgets and had an interactive session with the final year students. Er. P. K. Pattnayak from OPTCL was the external expert who evaluated a Technical Quiz and a demonstration of the students. Almost all the projects were appreciated by the external judges. Er. Pattnayak suggested that some of the gadgets could be used for significant improvement of societal and environmental aspects and they should be made successful on larger scale applications. The winners of the quiz and best gadget display were awarded cash prizes and certificates. All the registered participants also received a participation certificate.

Formation of Students Council and its Induction Program

The Students Council for the academic year 2019-20 was formed during April 2019. This was done to have the Council ready for activity from the beginning of the academic year. Ms. Anubha Snehal, from final year ECE was elected as the Secretary General of the Council. She is the first woman Secretary General of the Council. The Induction Program for the Council was held on 30th April 2019. The Council members were addressed by the Principal, Deans and other senior members both in the forenoon and afternoon sessions.

Farewell Function MCA

The Farewell Function for MCA 2019 passing out batch was held on 17th April 2019. Mr. Harshit Singh was presented the Best Student Award. The passing out students shared their experiences during the function. There was a photo session followed by dinner.

Skill Project Exhibition

A Skill Project Competition was organized by Silicon Circuit Club on 18th April 2019 for 4th semester ECE and EIE students at Analog Circuit Lab I&II. Hardware Projects related to various fields like communication systems, automation and control, embedded and IOT were implemented and demonstrated in the exhibition. Dr. Saroj Kanta Mishra, Dr. Debabrata Kar, Dr. Jaideep Talukdar & Dr. Saroj Rout were the internal experts. The Winning team members were Goutam Kumar, Kirti Srivastava, Amrita Behura and the 1st Runners-Up team members were Deepak Kumar, Kiran Kumar, Punyadeep Pattnaik, Udeshya Saran. 2nd Runners-Up team members were Padmalochan Sahoo, Anurag Mohanty, Sriyash Behera and Subhasmita Sahoo. The event was coordinated by Mr. Satish Kumar Das, Mr. Sudhansu Mohan Biswal, Mr. Bodhisattva Dash & Mr. Sushant Pattnaik.

MIC – IIC Leadership Talk – Prof. Anil D. Sahasrabudhe

An MIC – IIC Leadership Talk show was arranged by the Entrepreneurship Development Cell at Remote Center on 22nd April 2019. Prof. Anil D. Sahasrabudhe, Chairman, AICTE addressed the young minds of the country and provided career orientation on the topic Future of Technical education in India. Many students attended the talk.

Earth Hour

On 23rd April 2019, Silicon Green Club (SGC) observed "Earth Hour" in the college campus for 15

Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important – Bill Gates

minutes from 7.30 PM to 7.45 PM as respect to nature & to create awareness regarding saving energy in all form. The event completed successfully due to cooperation from all members of Silicon.

Faculty Training Program on How to Write Effectively

A two-day Faculty Development Program(FDP) on "Effective Writing Skills" was organized by the HR Cell on 26th & 27th April 2019. The trainer was Ms. Ranjana Padhi. She is a writer, editor and trainer by profession with about 15 years of varied experience imparting training in the education domain. She is a post graduate in English from Delhi University. The objective of the workshop was to enhance the writing skills of selected faculty members at Silicon. 30 faculty members participated on both the days.

The session basically covered the Five C's of writing viz Clarity, Conciseness, Consistency, Cohesion and Correctness. The participants learned the importance of MSTP techniques in technical writing, few refresher portions from grammar & punctuation were covered, common errors in writing were also discussed during the program. There were practice worksheets and group activities like role play conducted during the session. Each team gave a small presentation on day 2 too. The session was quite interactive and participants' feedback was good, though some areas of improvement were suggested by a few participants for future. At the end of the program, on day two, participants appeared for a test/assessment covering all aspects of the training program covered over the two days. The outcome/results of the same were shared by the trainer with HR later for records. The participants have also submitted a "Learning Diary" to HR in order to assess their understanding/learnings gained from the training program.

CGCRI Personnel's Visit

A faculty interaction with Dr. Palas Biswas, Senior Scientist, Fiber Optics and Photonics Division from CSIR - Central Glass & Ceramic Research Institute, Kolkata, India was conducted on 6th June 2019. Dr. Palas Biswas was accompanied by his Research Assistant Mr. Tanaya Dey. They presented the capabilities of Fibre Bragg Grating (FBG) sensor and Interrogation methodology in a wide variety of applications. The FBG sensors are widely used to solve problems associated with Steel Plants, Railways, Large scale electrical power transmissions and power generators, Avionics and explosive testing. They demonstrated the FBG sensor bonding technique in a Physical Suspension Bridge model which was made at our institute workshop. The signal recording was also performed at 2KHz sampling rate with different external loads. The interaction was concluded with the future scopes of FBG sensors, the real-time signal processing at a high-speed data rate, software development of FBG sensing applications and IoT integration with the FBG systems.

RCC Presentation Series

A presentation series is initiated by the Research Coordination Committee to grasp the knowledge on the research activities going in different fields by our campus experts. The first talk was delivered by Dr. A. G. Mohapatra from E&I department on ICT infrastructure and decision support system for precision agriculture. The interactions were fascinating.

International Yoga Day

Silicon observed the 5th International Yoga day on 21st June 2019. Silicon Yoga Teacher Mr. Prashant Mallik guided some Yogic Postures, Asanas and Pranayam to participants. Faculty members &

students participated in great numbers.

Interaction with Prof. Ashok Srinivasan

Prof. Ashok Srinivasan from the Dept. of Computer Science, University of West Florida visited our Institution and interacted with our students and faculty members on 26th Jun 2019. He spoke to the students about higher studies and career opportunities.

CII Innovation 2018

The Confederation of Indian Industry (CII) organized its annual event CII Innovation 2018 on 29th June 2018 at ITC Sonar, Kolkata where top thirty projects were exhibited from different CII innovation clubs across India. Three projects from our college were demonstrated which were highly acclaimed by the jury members. The participants were Anish Sarangi, Somya Ranjan Ray, Monidipa Ghosh, Tushar and Debashis Kar. Anish's project was published by Times of India as one among the four best projects.

Talk on "HAPPINESS"

The Staff Welfare Committee of Silicon organised a talk on "Happiness" on 29th June 2019. Mr. Krushna Chandra Dash, An NLP Trainer Spoke to all our staff on HAPPINESS, YOUR IDENTITY AND YOUR LIFE. One of his mentioned points was Vitamin O(Optimist), M(Meditate), S(Smile).

Institution Innovation Council (IIC) Awarded Golden Star by MIC

Silicon Institute of Technology has established the Institute Innovation Council (IIC) as per the norms of Innovation Cell, Ministry of HRD, Govt. of India on 21st November 2018. The council has been organizing a number of talks, competitions both online and offline.

The council recently has earned Second Golden Star by MHRD Innovation Cell, Govt. of India based on the Idea Generation Competition organized at the institution and submission of Innovative Ideas by our students in Smart India Hackathon 2019.


MIC

CERTIFICATE

This is Certify that

SILICON INSTITUTE OF TECHNOLOGY

has established Institution Innovation Council (IIC) as per the Norms of Innovation Cell, Ministry of HRD, Govt. of India on 21st November, 2018.

Prof. Anil D. Sahasrabudhe, Chairman, AICTE

Shri. R. Subrahmanyam, Secretary, MHRD

Dr. Abhay Jere, CIO, MHRD, Innovation Cell

By far the greatest danger of Artificial Intelligence is that people conclude too early that they understand it – Eliezer Yudkowsky

Mphasis Recruitment

Mphasis conducted a pooled campus recruitment drive for CS, IT, EC, EE, AI and MCA students from 2019 graduating batch students on 24th and 25th April 2019 at KIIT. The recruitment was for selected nine engineering colleges from Odisha. Out of five selected in the drive, Silicon had two winners one each from ECE and EEE.

Capgemini Recruitment

Capgemini, a global leader in consulting, technology services and digital transformation, conducted a pooled campus drive for the 2019 graduating B.Tech. students from selected colleges in Odisha on 28th and 29th May 2019 at KIIT. Out of twelve selected in the drive, Silicon had two winners from EEE.

ESSPL Recruitment

Enterprise Systems Solutions Private Ltd. (ESSPL), a leading software solutions provider with extensive experience in logistics & supply chain, business intelligence, application services & software testing, conducted a recruitment drive for the 2018 and 2019 graduating students at KIIT on 17th June 2019. Out of twenty-two selected candidates, Silicon had three winners from ECE branch one from 2019 and two from 2018 graduating batch.

Industry Readiness Program (IPR)

The Industry Interface Cell organized the following Industry Readiness Programs (IRPs) during April to June 2019 primarily for the 2020 graduating batch students:

- Campus Connect Foundation Program (CCFP) from Infosys that covered Object Oriented Programming (OOPs), Database Management Systems (DBMS), Structured Query Language (SQL) and Python Programming language with Hands-on Projects.
- Wipro Talent Next (WTN) Program from Wipro that included Object Oriented Programming (OOPs), Database Management Systems (DBMS), Structured Query Language (SQL) and HTML with JAVA Programming Language.
- Hands-on Course on "Data Science" which had a break-up of sixty percent theory and forty percent industry relevant project under the guidance of the Industry Professionals.
- Hands-on course on "Python for Experts"
- Hands-on Course on CMOS VLSI Design for ECE, EEE and EIE branches.
- Certificate Course on PHP and MySQL
- Workshop on Data Science and AWS
- A two-days Refresher Course on Python

Summer Internship

The Industry Interface Cell co-ordinated the following Summer Internships for the Autonomous 1st year students at Silicon from 26th May to 16th June 2019. Hands-on Training on Electronic Circuit Design, Fundamentals of MATLAB & Simulink with Applications, Basic Simulation Techniques for Solving Engineering Problems, Implementation of Electronics Hobby kit + Hardware kit, Make Yourself Skilled in Object Oriented programming using C++, Embedded Systems and IoT, PYTHON for Beginners and JAVA for NOVICE.

Dr. Soumya Ranjan Samal is a faculty in the dept. of ECE who has completed his PhD from the Technical University of Sofia, Bulgaria on the topic 5G Cellular Communication. He talks elaborately about his research to Miss Disha Kumari, 7th Sem. CSE in this interview.

Disha : Sir, Congratulations on completion of your research. Please tell us about your research area.

Dr. Samal : Thank you very much Disha. Regarding my research work, I am working on 5G cellular communication. More precisely the work mainly focuses on supporting "green communication", i.e. Interference management in highly dense Device-to-Device (D2D) communication network in an energy efficient way. The idea behind the work is to optimize the mobile base station transmission power and antenna tilt angle to find the best trade-off between coverage and capacity with a significant reduction in interference to the other users/cell. The optimization of base station transmission power reduces gratuitous power consumption and CO_2 emission, which facilitates the green communication.

Disha : What made you choose the Technical University of Sofia for your research purpose?

Dr. Samal : Well, the journey had started in the year 2012, when I met Prof. Ramjee Prasad in a conference who is currently the Director of the Center for TeleInfrastructure (CTIF) at Aalborg University, Denmark and Professor, Wireless Information Multimedia Communication Chair. Prof. Prasad is the Founding Chairman of the Global ICT Standardisation Forum for India. During my preparation from 2012-2015, I was guided by Prof. K. P. Patil and Prof. V. M. Rohokale, two Indian guides (PhD from Alborg University) and was able to clear all the tests in September 2015, but didn't get admission in Alborg University, Denmark. Fortunately I got selected in Technical University of Sofia (TUS), Sofia, Bulgaria.

Disha : Would you like to share the experiences and challenges you had faced during your research aboard?

Dr. Samal : The first challenge for me was to work with international people according to their standard of expectations. I was assigned the mentor Prof. Vladimir Poulkov, about whom I didn't know much. Just by googling about him I found that he was the Vice-chancellor of European Telecommunications Standards Institute (ETSI), Chairman of Bulgarian cluster communication and was the ex-dean of TUS, Sofia, Bulgaria. Now I realize that I couldn't have got a better guide than him.

Disha : What are your suggestions to the interested students who are planning for doctorate degrees?

Dr. Samal : My suggestions is that, first of all they should also begin thinking about what they want to do after their PhD. Career opportunities for doctoral graduates are more varied (and flexible) than you might assume, but there's still a fairly clear difference between academic and professional doctorates.

Disha : Thank you Sir for sharing your experiences with us.

Notification

Submission of different feature articles for SLATE and Digital Digest can be made through soft copy and sent to the e-mail ID: publication@silicon.ac.in. Students' Corner, Stories, Poems, Short Essays, Compilation of Interesting Facts, Scanned Copies of Sketches or Paintings can be sent for SLATE. For Digital Digest articles on DD Features, Profile of a Scientist, Space Technology and Environment Awareness Concepts are invited.

If we continue to develop our technology without wisdom or prudence,
our servant may prove to be our executioner – Omar N. Bradley

Have you ever given a thought to what you do first when you get up in the morning?

You want to know what I do? I pick up my smartphone, check the WhatsApp messages, Facebook, LinkedIn updates, professional and personal emails and all push notifications. After spending those 5-10 mins, I start with my daily chores. Do you exhibit a similar habit? If yes, this article is for you. If you look at this approach, there is a competition between the different feeds to occupy one's mind space early in the day. In case you want someone to act upon that important email first thing in the morning and that someone could be your customer, your boss, your team member, it's important that the message gets conveyed in the most optimum mode. There are many ways to write an effective email, but I would like to share one approach, which I found to be quite simple yet focused.

Very much like a speech, an email needs to have a subject, a body and finally the conclusion. I used to write emails, which happened to run into at least half to a full page on an A4 sheet. Few years back, I came across an email from a colleague, which was interesting to read. Moreover, not once, twice or thrice, each time I had an email from him I noticed a pattern in it. It was actually very simple and succinct. When I read it for the first time, I was happy, in fact excited. I analyzed my writing style, was I over-communicating on emails? One fine day, I casually asked him about this over a cup of coffee. He mentioned that the theme is known as 5 sentences. Has anyone heard about it? Let me state it:

It states that we should treat all email responses like text messages, using a set number of letters per response. Since it is too hard to count letters, we count sentences instead.

I can see some questions popping in your mind. How do I structure such an email?

All you need to do is answer 5 questions which are:

a. Who are you or what is the context?

   If the email is sent to someone you want to meet or have not interacted with earlier, a personal introduction needs to be included here. In case the recipient is someone you knew earlier or have interacted with the context plays a role and needs to be stated.

b. What do you want?

   This is where we state our objective, is it a problem that needs a solution, is it the budget that you are requesting for, or it could be some information that you are seeking.

c. Why are you asking me?

   Here the person reading the email is important. You assign the ownership here.

d. Why should I do what you are asking?

   This is the most important statement. The expectation-synchronization happens here. You connect your needs with the unsaid needs of the audience. I would say it is the inflection point of your email. Either the person is on-board here or you lose his/her attention.

e. What is the next step?

   This is the last step and chalks out what we do together as a team to achieve the end objective.

Did you notice how simple it is? The key point, all these questions need to be answered in one sentence. Initially, it is difficult as we would have at least 2/3 responses for each of these questions. We need to practice it in such a way that we are able to capture that best response and then send it out.

Do you think you would benefit? As per a study carried out by McKinsey, an employee spends around 30-40% of their working hours in responding to or reading emails. Just imagine if you can bring it down to 20%, you will free up almost an hour of your productive time.

So, to sum up, less than five sentences is often perceived as abrupt and rude, more than five sentences wastes time.

Are we going to try this out?

Suchi Sangeeta
HR Executive

Aspiring and Achieving the DREAMS: A Psychological Perspective

"It takes courage to grow up and become who you really are"

– E.E. Cummings

The above quote is an appropriate explanation of aspiring and achieving the dream of young minds. They have many plans and strategies to attain their ambition which act as a strong motivator. Aiming for something always creates path for a new beginning which always demands some changes. The process of change demands efforts, to come out of the comfort zone. The adolescents and the young adults are the ones who face maximum changes in their life as they have different roles and responsibilities.

The above mentioned situation is apt for the fresh batch of Silicon. This is a completely new beginning of the professional life as this is the specialized education and training for future work life. In this preparatory phase, the following aspects need to be taken care of with patience and courage.

- **Forming firm Self-concept**: Self knowledge is the stepping stone for any new venture. Therefore, a positive Self-concept is the foundation of work life. But the flip side is that the young minds are constantly compared and compelled to be like another person especially in terms of academics and selection of jobs. The continuous impositions to be like anyone make their Self-concept and self-belief very fragile. Research has indicated that many of the adult behavior and personality are the result of the self-concept and self-understanding formed at the time of adolescence. So, support and help should be provided to form a firm and positive Self-concept.
- **Celebrating the uniqueness**: Each individual is born as an independent person and s/he is different. This difference needs to be recognized as each one of us has tremendous possibilities in many different aspects. So the individual differences and uniqueness needs to be valued and celebrated.
- **Adapting the novelty**: To get into this professional course, lots of efforts ranging from one's personality type, aptitude, interest, competency, to clearing of examination, selection procedure and feasibility etc have been given. But sustaining it there successfully is the major concern.
  - More focus and attention in classroom learning and remaining alert in these are the base for the future.
  - New friends and interaction with seniors will enrich the experiences in the academic life. The "Social self" will be groomed. Independence along with responsibility for one's own decisions and activities will make one psychologically stable.
  - Hostel life is a new phase to be cherished. Those who leave home may face homesickness or "Separation anxiety". The anxiety is mainly for a fear of unseen. Therefore, transition needs to be planned with proper understanding and based on individual preferences.
- Problems are inevitable: Life is never a smooth and straight line for anyone. Feeling low, depressed, anxious, indecisive, helpless, isolated etc are acceptable but suffering these silently is not at all tolerable. So difficulties will be there, but one should face them with courage and if it remains unresolved then one must seek professional help for mental health and well-being to function effectively.

Psychological research says, thoughts are the main predictors of human beings. Thoughts affect one's emotions and emotions push one to behave in a certain way. Therefore, be positive and accept your own "Self" and start the journey with all enthusiasm, interest, exploration and commitment.

ALL THE BEST.

Dr. Saswati Jena
Counselling Psychologist
saswati.jena@silicon.ac.in

Believe

The world is full of challenges,
lets rise from the slumber,
Relish all opportunities;
let's have a journey to remember.
In the plethora of darkness, let's shine.
We'll fall, we'll stumble,
but somehow we'll be fine.
Amidst all hurdles,
let's strive for glory.
Be our own inspiration,
create a beautiful story.
Failures will be plenty,
but within us let's keep the fire burning,
Because aspiring success demands a strong desire.
Let there be dedication,
Work hard with all our might.
Never regret later,
that we didn't put up a fight.
Life is a battlefield,
but let's not surrender.
Never stop believing,
because each one of us is a wonder.

Ashutosh Bijay Mallik
EEE, 5th Sem

The Big Bang

Ever since we humans have gained the ability to think and contemplate, we have had a single question stuck in our minds. The infamous question of "How did we come to be?" Agreed, at first glance this question seems to originate from the broader, philosophical point of existence. But upon careful observations made during the last century, we have finally come to a stage where we can begin to answer the oh-so-important question about our existence and the answer isn't philosophical at all. Our existence owes its credibility to some extremely important and perfectly timed scientific events of the universe.

The year was 1929, when Edwin Hubble made the famous discovery of the red shift of the galaxies through his telescope. In a nut-shell, he found out that light coming from every galaxy that was visible to the naked eye shifted towards the longer wavelength of the frequency spectrum. Now, what did this mean? Considering the Doppler's effect, this essentially meant that all the galaxies were actually moving away from each other. Now, Georges Lemaitre, a Belgian catholic priest, extended this theory and proposed that since all the galaxies, including ours were moving away from each other, then we must have had a common origin in the universe.

This single idea laid the foundation stone of the 'Big Bang theory', the only plausible scientific theory that explains the origin of the entire universe. If we trace back the path of all galaxies, they seem to meet at an infinitely dense point in universe, i.e., all of them must be in a state of singularity at the beginning of time. Then at some point, this particle of infinite mass, must have instantaneously expanded from an infinitesimally small point to the entire universe that we so graciously adore today. Now this, is essentially the gist of the Big bang theory. This small article is, at best, a small introduction to the entire theory. There were a chain of events that took place after the explosion, but the most important thing to notice is that everything fell perfectly in place to form the perfect universe for us humans to evolve and exist. Some believe that this would not have been possible without some sort of divine intervention and some believe that everything that happened had a scientific explanation behind it. Now, no matter what each one of us believes in about our existence, at the end of the day it all boils down to a single fact that we should be thankful that all of these events were perfectly timed and synchronized or else you, me or anyone else for that matter would be mere characters in an alien's sci-fi novel.

Swaraj Baral
CSE, 3rd Sem

Unravel Me

Don't judge me by what I do for a living,
Try to get into my depths and explore what I yearn for.
I'm not what I speak with my actions or my words.
I'm what I conceal from you even when I'm yours.

Don't judge me by the company I keep,
Try to infiltrate into my comrade shell and learn of the unspeakable truths I share.
I'm not what I wear or how I carry my heart.
I'm what sustains myself from within when everything else falls apart.

Don't judge me by the uncanny things I do which breaks the stereotypes,
It's the fantasies of my heart which at that instance takes flight.
I'm not what I do routinely in life.
I'm what I do once in a while seeming like a fool for the adventure of being alive.

Prachi Mallick
CSE, 7th Sem

PARTING WORDS

The 2015-19 batch bade adieu to its alma mater on 27th March 2019 . The ambience became emotional as the students grew nostalgic. Here we publish memories shared by them.

A journey so different...

Most journeys can be defined by age, by time, by destination. But my journey is different. I still remember how in my young adulthood I entered this institution with tears in my eyes and wanted to run back to my home. But gradually when college came to an end, I realised that I had fallen in love with this place. How fast these four years have vanished with joy, sorrow, fun and love! Time really flies.

We came here from different places with different cultures and Silicon taught us how to live together. Silicon has helped me to realize my best potential by giving me opportunities to work for *SLATE*, participate in national level oratory contests, help and guide my juniors by giving them evening tutorial classes along with managing my own studies.

I will always cherish the memories of my life here. I think I left a piece of myself behind while leaving the campus. With a heavy heart I promise myself to comeback soon.

Akampan Gupta, *ECE*

A roller coaster ride...

These four years have been a roller coaster ride for me filled with highs and lows, ups and downs, yeses and nos. There are lot of memories and moments to cherish. Starting from the togetherness in various clubs including IEEE, Robotics Club, ED CELL, Cinemax every weekend, Meta Academics in the final year and Students' Council which played really an important role. How can one forget musical sessions in the Music Club! Apart from that the time spent with my friend groups has a very soft place in my heart which I would never forget especially Core committee and Your Highness group (the way we called ourselves). I would like to place gratitude to all the faculty members whose selfless guidance and invaluable teachings made B. Tech. possible. Thanks college management for supporting me in helping me realising my projects and taking it to the national stage at various occasions.

I am more than happy that Silicon helped me in getting friends who made each and every chapter filled with enjoyment in the book named "My BTECH LIFE".

Anish Sarangi, *EEE*

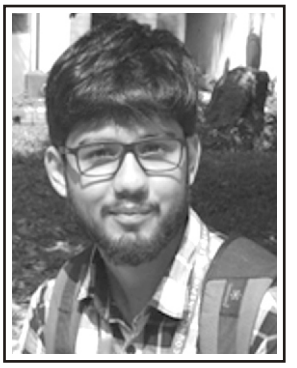
The most special phase...

In the journey of life, Engineering is said to be one of the most special phase. The amount of exposure one receives at this phase moulds their personality and career. I feel fortunate to have chosen Silicon for this chapter of my life.

Besides having an excellent academic learning experience with the faculties and the curriculum, I was able to grow a lot as a person being in Silicon in the last 4 years. I got the chance to be part of the clubs and explore the artist in me. Learnt so much through organizing and participating in events, be it the Music club or the Theater club. The caring seniors and the sweetest juniors made life in Silicon easier than ever. All in all I found support in every aspect one can need from this college and that is what makes it so difficult to leave Silicon now. Thank you so much Silicon for everything, you will be missed terribly.

Ayush Khandelwal, *CSE*

Years of transformation...



Four years at this college, how to sum up? I still cannot believe how fast time went by. These years gave me a good chance to experience a very special and unique culture. There were so many memorable days for me in this college, Zygon, Noesis, Rythmnova and many more, specially those that are spent with my friends.

2nd year was the year when we were introduced to the world of Information Technology. It was the year when we feel what Computer Science tasted like, like OS, COA etc. Those days were not about good grades but were about survival to the end.

We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run – Roy Amara

When I recall my 3rd year, the word comes to my mind is making memories. This was the year when we make most of our memories.

It is the college where we learn how to face the real world, how to handle different situations. It is the college where you are actually transformed form a teenager to an adult.

The most precious things that this college has given to me is my friends. I want to say that "Goodbyes are not the end. They simply mean I'LL miss you. Until we meet again!"

Nitesh Agarwal, *IT*

New experience...

It was the night before our induction program, my heart was pumping at a rate twice more than normal. There were sundry feelings of situations like leaving home for the first time ever, and other states of affair. Amidst everything else there was a solace of chancing on a totally new experience. First day transpired to be the toughest, I could not let go off my dad's hand. From that day till today, I must say every day has been a roller coaster. An over pampered and choosy girl like me made a family here. A lot to assimilate from the life of a Siliconite. Silicon concocts you not just for graduation but for a lifetime. The atmosphere, faculties & staff, I would thank everyone of them to have contributed to a better Me.

Saisweta Mohanty, *EEE*

Wish to relive the years...

I wish to relive the beautiful 4 years of B.Tech. life. When everything is going to end, I want to sit in those classes and appear the tests. It was a privilege for me to be a part of Silicon Student's Council and also working as a core member of the most active Club Silicon Music Club. I must mention that these 4 years were the best part of my life. I will miss organizing the events and dancing in the DJ nights.

Thanks to all faculty members for educating us by tolerating our tantrums. The memories I have shared with my friends will always be worth cherishing.

"PROUD TO BE A SILICONITE"

Thank you Silicon.

Sanjana Sabat, *CSE*

Beautiful memories...

Silicon Institute of Technology... the beautiful journey of four years has been the most fulfilling and eye opening one.

As the college name says "Beyond Teaching", so beyond academics the institute gave scope for all extracurricular activities. To be the member of almost all the clubs gave me the opportunity to learn a lot. I was most privileged to be the part of Silicon Students Council.

The faculty members had been very friendly and co-operative. When the time has come to bid Good bye I feel like I am leaving behind tons of beautiful memories.

With these I would like to say all the Siliconites "All the best". Make your parents proud.

Satya Prada Nayak, *CSE*

The precious four years...

August 8, 2015 the day when the beautiful journey started but nothing was beautiful at that time.

I still remember terribly suffering from homesickness. But the day has arrived when we have to leave the college and the emotions have changed completely.

It feels like it was yesterday when everything started. When I go through the four years of memory lane it reminds me of the journey from a girl to a lady. I would like to say to the juniors that enjoy these four years of life. It is something which can never be substituted by anything. I will miss all my batch mates. All the best to everyone, hope everyone will achieve a lot of success in their lives.

Subhangi Nayak, *IT*

Internet Addiction Disorder (IAD)

Internet Addiction Disorder (IAD) also known as Compulsive Internet Use or Pathological Internet Use or Problematic Internet Use has widely affected the general population and the millenials in particular. Though IAD hasn't got a formal definition yet, it has been compared to Pathological Gambling many a time. Simply put, it's the excessive and obsessive use of Internet that interferes with our day to day activities at physical as well as mental level. It also affects the person's ability to fulfill his/her personal and professional obligations. When we talk about IAD it's about the symptoms which help diagnose IAD, the types of IAD, the causes of IAD, treatment of IAD and of course startling facts related to IAD. Here we will focus on the symptoms to diagnose IAD and briefly the assessment techniques. The symptoms may manifest themselves physically or emotionally.

Emotional Symptoms of IAD: Procrastination, defensiveness, isolation, mood swings, agitation, restlessness, sudden sense of euphoria, fear and lack of prioritization.

Physical Symptoms of IAD: Sudden weight gain or loss, insomnia, carpal tunnel syndrome(CTS), back ache, dry eyes, spondolysis, unhealthy eating habits and poor personal hygiene.

How to diagnose IAD?

Several articles and research findings (Beards article on Cyber psychology & Behavior, Dr.Youngs modified criteria for Pathological Gambling,) have laid down certain common characteristics of Internet addicted individuals, as mentioned below:

- Uses Internet to relieve dysphoric mood.
- Lies to family members and therapists to hide about the usage of Internet
- Risks job and personal relationships to the extent of losing them.
- Remains preoccupied with the Internet and needs to use it for increased time.
- Has mood swings or becomes irritable when asked to control or stop the use of Internet
- Loses track of time when on-line

Some assessment tools that are currently being used to diagnose IAD are

- Young's Internet Addiction Test
- The Problematic Internet Use Questionnaire (PIUQ) by Demetrovics, Szeredi, and Pozsa
- The Compulsive Internet Use Scale (CIUS)

IAD has already been added to the Diagnostic and Statistical Manual of Mental Disorders as a disorder that needs more research to establish the findings and come up with other unknown facets of the disorder.

- IAD Trivia: As per survey reports from the US & Europe 1 in 5 people will wake up in the middle of the night to check their Facebook account.

Though the prevalence of IAD has increased manifold, the diagnosis process is yet to be standardized.

Dr. Sushree Samita Rout
Associate Professor, Dept. of CSE

The best way to deal with the changes brought about by emerging tech is to make human experience more meaningful – Kate O'Neill

Dealing With Uncertainties with Certainty

Hi All,

"For what I was good at never came to me, and what I never thought of earlier is now my Destiny!"

You might be surprised at the title of this write-up but that's what I would like to share with you all who are still to make it to the harsh and practical world beyond the boundaries of college.

It has been quite some time since I left college. So, please allow me to take a few lines to introduce myself as most of the audience for this write-up may be a complete stranger to me.

My name is Honey and currently I am pursuing my MBA from IIM Tiruchirappalli (Batch of 2018-20). I was a student of Electrical and Electronics Engineering from the Batch of 2012-16 (EE124245) in SIT, Bhubaneswar. For those who don't know me, as students, I along with my friend and roommate (Manish Kumar, now a Project Engineer at IOCL) were a real challenge for most of the teachers at college, constantly asking doubts and claiming better alternatives for solutions of questions and lab experiments. Both of us were GATE aspirants and Manish converted IOCL in his first attempt only. I on the other hand got a decent rank of around 3000. So, instead of dropping a year and being unemployed, I preferred taking one of the Jobs at IT sector companies (Infosys or Wipro). Finally, I chose Infosys for the reason they were first to offer a joining date.

Those who don't know what Infosys training in Mysore is like, in a single line, it's the best time you could ever have in any corporate throughout your career. I completed the 1st phase of my training with really awesome percentage and suddenly a person who rarely coded in engineering life got an interest in becoming a hard-core developer. But, this didn't last long as the stream allocations of Infosys are done via the so famously called "as per Business requirements" rule which pushed me to the Mainframe Technology (an obsolete technology) followed by Reskilling in Automation testing. Till now I was dealing with all these with a certain mind but heavy heart. And after that I was tricked into a Manual testing project at Hyderabad DC, where my patience hit the threshold. So, I think you can get a glimpse of what I was referring to by the title of this write-up.

By this time, I was really bored of the kind of mundane work I was asked to do in my project, so, I started preparing for something that could get me out of there. Finally, CAT came to my mind as most of the portions could be covered in a span of around 6 months (if you have a prior knowledge of Quant and Logical Reasoning). I mostly took out 2-3 hours on daily basis after my job on weekdays and 6-8 hrs on weekends to prepare through online courses and YouTube videos (except alternate Sundays where I used to hang out with my friends). Just two months prior to CAT exam date, I fell really ill, due to which my exam results got hampered a bit, but,I still managed to get a decent percentile and got calls from all new IIMs and IIM Kozhikode. But, one of the biggest reasons for this was the friends I used to live with in Hyderabad (again Siliconites only from my Batch) who constantly supported me till the time I finally converted to IIM Trichy.

Currently, I have completed my Summer Internship at UItratech Cement Limited on Operations profile and looking forward for my final placements by the end of this year.

Hope you will be able to get something out of this and all the best for your future endeavour. Feel free to reach out for any help regarding CAT/GATE preparations.

Cheers!

Honey Kumar
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Solution to the Problem of last issue: The problem of the last issue was like this: You and two other people have numbers written on your foreheads. You are told that the three numbers are primes and that they form the sides of a triangle with prime perimeter. You see 5 and 7 on the other two people, both of whom state that they cannot deduce the number on their own foreheads. What number is written on your forehead? Solve this problem under two different conditions, first if the numbers written on the foreheads are different and the second if some of them can be equal, like isosceles triangles or equilateral triangles (can it be equilateral?).

Solution: The number on your forehead cannot be 12 or more and it has to be prime number and the sum of the three numbers i.e. 5, 7 and your number also a prime. Hence it can be 5 or 7 or 11 to give sum 17 or 19 or 23.

If you have a 5, then person A with a 7 sees (5, 5) and concludes that he must have 3 or 7. But if he has then he reasons that person B sees (5, 3) and would know his number is 5 or 3. B can eliminate 3 because anyone seeing (3, 3) would immediately know he had 5. Since B doesn't know his number, A would conclude that he has a 7. Since A doesn't draw this conclusion you know you don't have a 5.

If you have a 7 then person B with a 5 sees (7, 7) and concludes he has 3 or 5. But if he has 3 then he reasons that person A with 7 sees (7, 3) and would know his number is 7. Since A doesn't know his number, then B would conclude he has a 5. Since B doesn't draw this conclusion you know you don't have a 7. Therefore you have 11 on your forehead.

Which comes first? : In every branch of science we study many definitions, principles, laws, theorems and processes. When we study these following a certain course of study or syllabus or a book there is a sequence or an order in which we get all these concepts. However in reality these concepts are never developed in the same order or sequence. Sometimes we ask which comes first.

Different concepts of a subject are developed at different times and when organized to single compilations are kept in an order which is different from the order they are developed. For example the zeroth Law of Thermodynamics is the most recent development and it was developed much later to 1st, 2nd and 3rd law of Thermodynamics.

In calculus we study the limit, continuity, differentiation and integration of functions in this order. However in reality the concept of differentiation of a function was developed much after integration. The method of integrating a function was there long before for finding the area or volume of irregular shapes. Of course the method was not using the anti-derivative rather by dividing the things in to small parts, then finding the area and then summing it up, the way we start the process of Riemann Integration. This process was there along with the concept of limit. Archimedes calculated the value of pi correct up to two decimal places by approximating the circumference of the circle by the perimeter of an n-gon circumscribing the circle and then increasing the value of n. He had used the concept of limit here without making a mention of the same. The concept of derivative came only in 17th Century when Newton started studying the rate of change of physical quantities.

It is a sweet coincidence that the differentiation and integration of a function, though studied from different academic angle, finally got related, which is stated as the Fundamental Theorem of Integral Calculus, and we are now able to compute integration using derivative of a function.

Problem of this issue: 26 packets labeled A to Z with different shapes and volumes are known to each weigh whole numbers of kilograms in the range 1 to 26. There is two-pan balance. One can determine the weight of each packet by using four weights of 1, 3, 9 and 27 kilograms. This can be done by using the weights, sometimes on both pans along with the packets. For example the packet with weight 2 kg can be identified by majoring it along with the weight 1 kg on one pan and the weight 3 kg on the other pan. The packet with weight 16 kg can be identified by keeping it along with the weights 3 kg and 9 kg on one pan and the weights 27 kg and 1 kg on the other pan. Now the question is how to do it with only three weights.

Dr. Saroj Kanta Misra
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Modern digital technologies bring unprecedented convenience for people to learn and work, improve their productivity, learning agility, and innovativeness – Pearl Zhu

Earth Hour; Connect2Earth

Earth Hour: Connect2Earth is the world's largest grassroots movement for the environment. In this event individuals pledged their support for the planet, challenging world leaders to push the preservation of nature up the global agenda.

This is an hour dedicated to our Earth; as a symbol of commitment to the planet, known as Earth hour. Earth Hour is a worldwide movement organized by the World Wide Fund(WWF) for Nature. The event is held annually encouraging individuals, communities, and businesses to turn off non-essential electric lights, for one hour, from 8:30 to 9:30 p.m. on a specific day towards the end of March. WWF was founded in 1961 and is active in nearly 100 countries and six continents. Earth Hour is an initiative to encourage individuals, businesses and governments around the world to take accountability for their ecological footprint and engage in dialogue and resource exchange that provides real solutions to our environmental challenges. Participation in Earth Hour symbolizes a commitment to change beyond the hour. A 2014 study observed changes in electricity demand caused by Earth Hour in 10 countries, spanning 6 years, and found that the events reduced electricity consumption in an average of 4%. The study noted the policy challenge of converting Earth Hour's short-term energy saving into longer-term actions, including sustained changes in behaviour and investment.

As college students we can also bring changes and we can add to this world wide movement and raise awareness for reduction of energy consumption and effects on the environment. In our campus we all celebrated Earth hour; turned off all non-essential electric lights. We gathered in the lawn, sitting and talking with our friends and also organized some fun activities for the hostelites. All the students and staff members of Silicon cooperated and enjoyed this duration, sitting in darkness and feeling the beauty of nature, which is a rare thing we generally do. Members of the Silicon Green club (SGC) organized this event which concluded successfully. We all have some responsibility, we all have some work to do, but can't we contribute just some moments to spread awareness about sustainability and climate change, and to take care of our mother earth?

A lot of people including individuals, business communities and cities in 188 countries and territories worldwide joined the earth hour 2019 held on 30th March from 8:30 PM to 9:30 PM to speak up for nature and inspire urgent action for our environment.

In 2020 this event will be held on 28th March. Let's join it for our betterment and to make earth a better place to live in.

Pledge for the Planet: *We're the first generation to know we are destroying our planet. And we could be the last that can do anything about it.*

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