

**Silicon**

*... beyond teaching*

# SLATE

SILICON LANGUAGE FOR ARTS TECHNOLOGY & EDUCATION

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Our Mission : To provide the best of technical skills, professional ethics and human values.



## FUTURISTIC FACILITIES AT SILICON HILLS



*The Sky Lab is a Wi-Fi zone for students with seating arrangements around a picturesque fountain. Students use this facility for internet browsing with soothing background music matching the hour of the day. It has a sculpted, reflective roof to protect users from the sun and rain.*



*Silicon has an Auditorium with a seating capacity of 346, featuring a state-of-the-art audio-visual system for movie shows, theater performances, conferences and other such events. The Silicon Cine Club organizes weekly movie shows from diverse genres for students and employees of the Institute in the Auditorium.*

## *From the Editor's Desk...*

*Dear Readers:*

*It is that time of the year when we make preparations to welcome our new students. So let us extend our heartfelt congratulations to all the new entrants of the batch 2017-18.*

*This transition takes time: from being called the newcomers, to feeling at home on this campus. To make this changeover and progression a smooth one, we vest all our confidence and faith on the older students. It is these senior students of the Silicon family who will take the responsibility of creating a homely and comfortable ambience for the incoming new students.*

*Thus, while sharing a word of advice with my students I am reminded of the age-old saying that, 'Knowledge is Power'. But if we ponder a little on this commonly known expression, we understand that knowledge gives us wisdom, which in the process makes us powerful. To be wise means to be able to use knowledge in the right proportion and for the right purpose. Without purpose all our efforts become aimless and all our skills stand wasted. Therefore, to be able to reap the fruits of our vigorously determined attempts, we need to plan our career. Our students need to develop an insight into things and carry the right perspective to employ their knowledge in a way that it yields productive results. And one such method is to have a multidisciplinary approach to gaining knowledge and education.*

*Our approach to a topic or a problem should involve a combination of several academic disciplines and professional specialisations. Such a multi-disciplinary approach will help redefine problems and yield solutions based on a new understanding of complex situations. It is only then that our career planning will have fruitful manifestations. With an understanding of the interdisciplinary subjects and their applications, our students can look beyond their engineering careers; they can get involved in research, plan for higher studies or venture into entrepreneurial enterprises and make their mark in the global market.*

*With this I want to share with my young friends of the students' community, a view which I have inherited from my elders that honest hard work is like a contagion. With just one person being afflicted from it, it spreads rapidly among others. So wish you all happy reading, a happy journey ahead and enjoy working hard. What awaits at the end of hard work and honest labour is immense self-satisfaction.*

**Ananya Roychoudhury**  
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## Governator

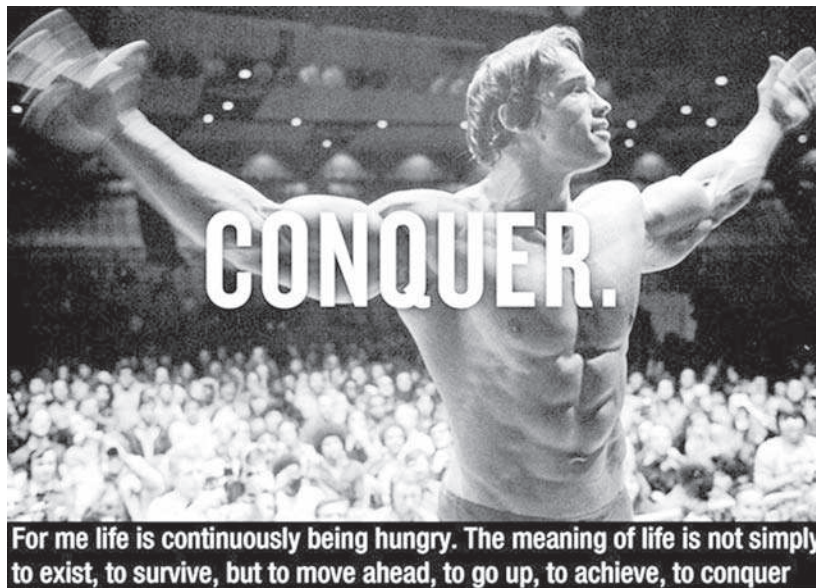
Attributes characterize a unique individual. One of the great personalities is the "Governator", union of two words Governor and Terminator which is the nickname of the world's greatest bodybuilder, Arnold Alois Schwarzenegger. He is considered among the most important figures in the history of

bodybuilding. Born on July 30, 1947, in the small Austrian town of Graz, Schwarzenegger has won several European contests and international titles. His father, Gustav, was an alcoholic police chief who wanted him to become a police officer like him but Schwarzenegger's goal was to become a bodybuilding champion.

Arnold always wanted to be number 1. He took it very seriously in his career. Schwarzenegger began weight training at the age of 15. He read books and magazines on bodybuilding and also served in the Austrian Army in 1965 to fulfill the one year of service required at the time of all 18-year-old Austrian males. During his army service, he won the Junior Mr. Europe contest and then Mr. Europe. He won the Mr. Universe title at age 20.

He dreamed of moving to the U.S. since the age of 10, and saw bodybuilding as the avenue through which to do so. Joe Weider, the head of an organization that sponsored contests such as Mr. Universe and Mr. Olympia helped him in moving to the United States in September 1968 at the age of 21. His bodybuilding victories included five Mr. Universe wins and seven Mr. Olympia, wins from 1970 to 1975 and in 1980. After the 1975 Mr. Olympia contest, Schwarzenegger announced his retirement from professional bodybuilding.

Schwarzenegger wanted to move from bodybuilding into acting. He was chosen to play the role of Hercules in 1970's movie Hercules in New York. After acting in a few small parts, Schwarzenegger received a Golden



Globe Award for Best Newcomer for his performance in Stay Hungry in 1976. With his intense physical strength and size, Schwarzenegger was a natural for action films. He became a leading figure in several popular 1980s action movies, including Conan the Barbarian. Schwarzenegger came out of

retirement to compete in the 1980 Mr. Olympia and finally ended it up with winning the title for the seventh time and he then officially retired from the competition. Schwarzenegger also starred as a deadly machine from the future in The Terminator (1984). The science-fiction drama spawned two sequels - Terminator 2: Judgment Day and Terminator 3: Rise of the Machines. In total he has acted in 42 movies till today. Recently he has worked in the super hit action movies The Expendables-2, Expendables-3.

Arnold turned politician and became the 38<sup>th</sup> Governor of California for two terms from 2003 to 2011. He worked to improve the state's financial situation, promote new businesses, and protect the environment. Arnold was not able to run for the Presidential candidate in 2016 U.S. Presidential elections as he was not born in the U.S.A. At the age of 69 he is still active in his acting career and is also an environmentalist. On April 28, 2017, he was honored by France's highest award for his environmental work by the French President François Hollande. Expendibles-4 is his upcoming movie in 2018. Arnold is great inspiration to everyone as he has achieved whatever he wanted in life with his hard work. He said "Strength does not come from winning. Your struggles develop your strengths. When you go through the hardship and decide not to surrender, that is strength".

**Akampan Gupta**  
ECE, 5<sup>th</sup> Sem.

## Tectonics of the Earth

There was a time when our earth was only a massive piece of land surrounded by water rather than being divided into seven continents and five oceans. Pangaea was a supercontinent that existed during the late Paleozoic and early Mesozoic eras. In contrast to the present Earth and its distribution of continental mass, much of Pangaea was in the southern hemisphere and surrounded by a super ocean, Panthalassa.

Alfred Wegener suggested that perhaps the rotation of the Earth caused the continents to shift towards and apart from each other. Today, we know that the continents rest on massive slabs of rock called tectonic plates. The plates are always moving and interacting in a process called plate tectonics.

The Earth's crust is an extremely thin layer of rock that makes up the outermost solid shell of our planet. In relative terms, its thickness is like that of the skin of an apple. It amounts to less than half of 1 percent of the planet's total mass but plays a vital role in most of Earth's natural cycles.

The crust can be thicker than 80 kilometers in some spots and less than one kilometer thick in others. Scientists have named the largest plates for the continents and oceans they contain. The seven largest plates are the North American Plate, Eurasian Plate, African Plate, Antarctic Plate, South American Plate, Indo-Australian Plate and the Pacific Plate.

### Misconception about Plates and Crusts

The crust and tectonic plates are not the same thing. Plates are thicker than the crust and consist of the crust plus the shallow mantle just beneath it. This stiff and brittle two-layered combination is called the lithosphere. The lithospheric plates lie on a layer of softer, more plastic mantle rock called the asthenosphere. The asthenosphere allows the plates to move slowly over it like a raft in thick mud.

Plates move with respect to each other in three ways: they move together (converge), they move apart (diverge) or they move past each other. Therefore plates are commonly said to have three types of edges or

boundaries: convergent, divergent and transform.

In convergence, when the leading edge of a plate meets another plate, one of them turns downward. That downward motion is called subduction. Subducted plates move down into and through the asthenosphere and gradually disappear.

Plates diverge at volcanic zones in the ocean basins, the mid-ocean ridges. These are long, huge cracks where lava rises from below and freezes into new lithosphere. The two sides of the crack are continually pulled apart, and thus the plates gain new material.

The north Atlantic island of Iceland is the foremost example of a divergent zone above the sea level.

Where plates move past each other is called a transform boundary. These are not as common as the other two boundaries. The San Andreas Fault of California is a well-known example.

The points where the edges of three plates meet are called triple junctions. They move across the Earth's surface in response to the different motions of the three plates.

### Few Amazing Facts about Crusts and Plates

1. Tectonic plates don't quite match the continents and the oceans on the Earth's surface. The North America plate, for instance, extends from the west coast of the U.S. and Canada into the middle of the Atlantic Ocean. And the Pacific plate includes a chunk of California as well as most of the Pacific Ocean.
2. The continents slowly grow over geologic time as oceanic crust and seafloor sediments are pulled beneath them by subduction.
3. We can measure the plate movements directly by GPS and other long-distance measuring (geodetic) methods, and geologic evidence shows that they have moved the same way in the past.
4. The world's seafloor is geologically young because old oceanic crust disappears by subduction.

**Sharanya Pradhan**  
AEI, 3rd Sem.



*The map of Pangaea*

## From Mouth to Stomach

### Social implications of food and its consumptions



Food - the support system of more than seven billion humans, uncountable trees and organisms on earth. We have evolved from the primitive apelike men to become cosmonauts today. Our shelters have changed, our bodies have changed, our evolution has been driven through a chain of factors, and among those a major one is our food and food habits. Humans have eaten leaves, fruits, grasses, flowers, animal meat and skin and have even turned cannibals at times to survive. A thing which really matters a lot, which we don't pay much attention to, is what and how food affects us today?

People make cultures and cultures make society. If the social implications of food are to be drawn, one must have a look at the kinds of people, cultures, and societies that exist between us. Definitely, each will have distinct food habits and food and food related cultures that are sometimes a characteristic of that particular community. Be it a super diverse country like India or a comparatively less diverse one like Finland, one would always find it easy to mark out communities by the food they eat. You can stroll through some daily market and explain the diversity based upon the food items being sold there. One thing to be thought upon is the great human mind. Some 50 years ago, food was something that one could have for hunger and content after a day's hard work. Same is the case now, except the fact that modernization in food and its commercialization have shaped the way we eat, what we eat, how we eat, how much we eat, and when we eat. For instance, one can order anything, anytime, and have it anywhere, when one needs it. We've got hundreds and thousands of retail chains working on that, both online and offline. Food plays a very vital role in the development of a place and formation of new trends, cultures, societies, etc. We can go into any place, and can find a 'KHAU-GALI' which is a Hindi translation for 'EAT-STREET', meaning a place which has gained its current importance because of a vivid

assemblage of food stalls and courts flanking the road, street, or whatever, and people coming there to meet, to rejoice, eat, have fun, and define a culture - a new one - through the magic that is called food.

Our food often reflects our stratified society. For a simple example, you would not normally witness the chairman of a billion dollar company eating a *vadapao* at Juhu-Chowpatty beach in Mumbai, or hurriedly eating sambar-vada at a stall before rushing to job. Would you find a lower middle class or middle class person caring much about the cholesterol levels in his paratha or the nutrition levels of his roti while he dips it into his tea and prepares for the day's work? Everyone has work and the compromises made related to it get reflected in their food, and the food in turn generally reflect peoples' social position.

In a country as huge and diverse as India, one can really find out and explain, along with prove how food plays a major role in the coming together of sections of society, and their peaceful unity. You may visit a Biryani House in the Delhi streets and see how the shop is run by our Salim bhai whereas Mr. Khurana provides him with the spices from his shop. This is an excellent example how food has been amply able to sew our societies together to make them the beautiful portrait called India.

We have also seen instances where a particular kind of food item may have caused misconceptions and serious tensions amongst two religious sects, or two communities, causing riots and disharmony amongst them, naming them isn't necessary because examples can be many. There are a few food and food-habit related assumptions and thought processes that exist in society too, both the local/micro society and the world/macro society. Some foods are universally considered healthy and nutritious but they, at the same time, may not necessarily suit other people, especially children and the very young, and may even prove harmful to them. The cost of production of many a healthy food item makes it difficult for the poor to consume them. The cost of clean drinking water is a mentionable point in this context, as the world is already facing this crisis. Food with the other essential components, is what keeps us alive and we are hence able to know its implications and have our assumptions related to it in our daily lives.

**Disha Kumari**  
CSE, 3<sup>rd</sup> Sem.



## Crime and Punishment



The act of forgiveness and punishment go hand in hand. It is just that one is in the hands of an individual and the other in the hands of the community. Let's throw some more light on the aforesaid statement.

Whenever a crime is inflicted upon a victim, it is in human nature to seek for vengeance, which is justifiable in its own sense but not right. An individual doesn't have the right to seek vengeance, but the society has the right to punish the criminal. This punishment is not vengeance, because vengeance appeases the anger of the heart by opposing one evil to another, but this punishment is for the protection of one's rights. Because if the criminals were forgiven completely, everything would turn into chaos. The individual must forgive the sinner, which is rather too difficult, but is necessary in a sense too.

The most important thing is that people must understand and take responsibilities. They must think of life in such a way that no crime is needed to be done. They must be educated in such a way that the very idea of crime must appear to them as reprimanding. So, no crimes will be committed.

We must speak of things that are possible of in this world. There are many theories and high ideas on this subject, for example "The act of disproportionate punishment" which states the first person to commit a crime should be severely punished, so as to set an

example for the rest of the people, and so that the others won't do the same, but they are not practicable. Consequently, we must speak of things that are feasible.

There is a thin line between succumbing to one's will and forgiving. If the society and the victims were to forgive and return good for evil, the cruel would be continually ill-treating others, and assassinations would continually occur.

The tent of existence is upheld upon the pillar of justice and not upon forgiveness. The continuance of mankind depends upon justice and not upon forgiveness. So if, at present, the law of pardon was to be practiced in all countries, in a short time the world would be disordered, and the foundations of human life would crumble.

Society must think of preventing crimes by educating the individuals, rather than by rigorously punishing them.

There can never be true forgiveness in the eyes of the law, or else the stability of rules itself will get imbalanced. The only soft corner can be



accommodated in the enforcement and making of law. Forgiving a criminal directly won't do good to anybody. Neither the society, nor the criminal. The criminal can really be forgiven if and only if he reflects upon his deeds. This is what the punishment does. It forces even the vicious of all to think, reflect and atone upon his sins. One can truly be forgiven when he realizes what he has done and understands the gravity of his sins. So, in a way punishment in itself is a road to forgiveness.

**Prachi Mallick**  
CSE, 3<sup>rd</sup> Sem.

## Sleep - A Necessity, Not A Luxury

### Attention Night Owls!!

The human body is a constantly functioning integral unit. Just like any machine, it needs time for rest and recovery. Take a note of why you need to straight away quit the treacherous habit of staying up late at night and get into your beds in time.

In this life full of hectic schedules, one often doesn't get time for proper sleep. Sleep is generally conceived as a waste of time, a time that is lost forever and one where our productivity seems to be null. People often cut off their sleeping time to include other activities into their lives. With changing times the duration as well as the quality of sleep has deteriorated significantly. It has become the need of the hour to eradicate the myth that "sleep is just a luxury but not a necessity".

Studies and researches conducted in the past years show that people with sleep deprivation are more prone to both physical and psychological diseases. People with improper sleep routines suffer from the risk of heart disease, kidney disease, high blood pressure, diabetes, obesity and many more ailments. A healthy sleep schedule helps one stay fit, increases longevity, hormonal balance and strengthens the immune system. Researchers often claim that with each hour of sleep lost, the odds of suffering from diseases increases.

Sleep deprivation also affects one's psychological condition leading them to depression, MICROSLLEEP (brief moment of sleep that occur when you are normally awake), Insomnia (inability to sleep), Sleep apnea (breathing interruptions during sleep), Restless leg syndrome (tingling or prickling sensation in the legs that causes a person to move them, interrupting sleep). It also affects an individual performance and concentration. Their productivity decreases and they tend to make mistakes more often, have slower reaction mechanism. Most people presume that when we sleep our brain too goes into sleep but it is not exactly so. Scientific research claims that while we sleep our brain



gets engaged in clearing out toxins from our mind, assembling events and creating memories, which thereby indicates that a sound sleep is a must for the optimum functioning of the human brain.

Now, that we are aware of the boons of sound sleep, let's turn our attention to the quality of sleep. The sleeping hours for an adult must vary from 6-10 hours whereas for a teenager it should vary from 7-11 hours and for school going children it must be at least 8 hours and up to 11 hours. As a guideline, the tips mentioned

below can be quite helpful in getting a good sleep:

1. Sticking to a proper sleep schedule instigates our brain and makes it act as an alarm clock which automatically sends signal to sleep at the scheduled time.
2. Take care of your food habits. Do not prefer intake of caffeine, alcohol or nicotine before sleep. Do avoid large meals and beverages at night.
3. Relax a little before your bed time. Having a hot bath, listening to soft music, reading good books are some things which help.
4. Create a restful environment. The sleeping area should be dark, ventilated and of moderate temperature.
5. In case you still are suffering from sleep deprivations, do consult a sleep coach. Sleep coaches examine your schedule, eating habits, and sleeping areas and recommend changes that can help you in getting a good sleep.

The aforementioned steps can only be beneficial once you identify yourself as a sleep-deprived. But this identification is a great challenge in itself. Statistically, it is established that we spend one third of our lives sleeping. Human life is short. And we must not let one-third of that transitory time-period go haywire. Seeking quality and completion in sleep assumes equal importance as seeking happiness in any other activity.

**Ritika Gupta**  
CSE, 5<sup>th</sup> Sem.



## O2O Commerce: Paytm



O2O (Offline to Online) commerce, Paytm, started as a mobile wallet to simplify payments. Today it is aiding financial inclusion. One97 Communications Ltd. is India's leading mobile internet company. Paytm was founded and incubated by One97 Communications in 2010 as a prepaid mobile recharge website. One97 runs Paytm, which is India's largest digital goods marketplace. Paytm, One97's flagship brand, is India's largest digital goods and mobile commerce platform. Paytm is inspired and driven by a commitment to great consumer experience. Paytm is also a leading payment solutions provider to e-commerce merchants using its RBI approved semi-closed wallet. Paytm is an Indian payment and commerce company. It was launched in August 2010. The name is a descriptor for "Pay through Mobile". In 2015, Paytm became the first Indian company to receive funding from Chinese e-Commerce company Alibaba, after it raised over \$625 million at a valuation of \$1.5 billion. The Alibaba Group was the biggest stakeholder in Paytm parent company One97 Communications. In August 2016, Paytm received an investment from Mountain Capital, one of Taiwan-based MediaTek's investment funds, which valued Paytm at over USD\$5 billion. The company employs over 13,000 employees as of January, 2017 and has 3 million offline merchants across India. It also operates the Paytm payment gateway and the Paytm Wallet. Paytm launched bill payments services in Canada, its first

overseas market. Paytm service is available through a browser, and the app is available on the Android, Windows and iOS operating systems. In 2013, the company launched Paytm Wallet, which became India's largest mobile payment service platform with over 150 million wallets and 75 million android based app downloads as of November 2016. The surge in usage of the service was largely due to the demonetization of the 500 and 1000 rupee currency notes. The Paytm Wallet application enables users to book air tickets and taxis, recharge mobile devices, and pay DTH, broadband and electricity bills among others; money transfer feature is not available for desktop users and it's only available for mobile users. Users can also pay for fuel at Indian Oil Petrol pumps and buy movie tickets at PVR Cinemas through the wallet. It is one of the cheapest and best ways of getting recharges done and hence has mesmerized users with its panache. Paytm was founded by Vijay Shekhar Sharma, an extremely venerated and knowledgeable personality. He had embarked on the notion behind this fantastic website and has taken it to glorious heights and fame. Mr. Sharma is a young and dynamic business stalwart and is extremely positive in both thoughts and action. His qualities and traits are impressive and he has an innovative approach towards business.

**Jigyansa Das**  
ECE, 5<sup>th</sup> Sem.



**Subrat Kumar Swain**, graduate of 2013-17, CSE branch recently won the Best Student Award for the Academic Year 2016-17. A popular secretary of the Silicon Music Club, Subrat has been instrumental in organizing many cultural events. All through his student career at Silicon Subrat has struck a beautiful balance between studies and extra curricular activities. He was interviewed by Ms. Disha Kumari of CSE, 3rd Semester about his achievement.

**Disha** : How do you feel after winning this award and who do you think have been instrumental in achieving this?

**Subrat** : Yes, I was extremely happy. I would like to dedicate it to my parents because it was their efforts which made me what I am today. There was Mr. Sameleswari Prasad Nayak Sir, Pradyumna Kumar Tripathy Sir and Subhakanta Dash Sir who guided me at every step. I got constant support from my friends Preetish Priyadarshi, Anurag Bhol, Deepak Kumar Sethi, Bipasa Das and last but not least, Monika Sahoo who were with me at every point supporting me. All these people made me achieve this award and they are the actual winners.

**Disha** : We always see you engaged in some sort of activities. Moreover you are the Secretary of the most active club i.e. the Music Club. How do you manage your time and your responsibilities along with your studies?

**Subrat** : I love to keep myself engaged in some work or the other. In short, I am a workoholic. You might have heard that "Karma is God". Similarly for me, fulfilling my responsibilities is next to worshipping God. Studies and responsibilities can be managed parallelly if you are well organised.

**Disha** : How has Silicon helped you in your growth?

**Subrat** : Being from a small town it was a completely new experience for me here at Silicon. Silicon has made me come out of my comfort zone and face new challenges. It has made me stronger than ever. This place has taught me many lessons too. Silicon has played a major role in my personality development. Be it the speaking skills or meeting new people. Silicon has made me realise my potential not only in studies but also in activities such as event management.

**Disha** : What is the thing that you will miss the most about our college?

**Subrat** : Of course I will miss my friends and my lovely juniors. The Music club will be missed the most. "The Stage" at North Lawn which contains most of my memories shall be badly missed. With that stage I have shared my happiness as well as sadness. Ashok Bhai's shop, better known as ABD will be missed. I loved that place a lot. Both Ashok bhai and Sipu bhai will be missed.

**Disha** : What are your future plans?

**Subrat** : I am looking forward to pursue M.Tech. in one of the top institutes in India through GATE and then get into a job. I am also planning to do my PhD after being stable in my job.

**Disha** : Do you have any message for the juniors?

**Subrat** : To all the lovely juniors, thank you so much for bearing with me till now. I would like to suggest that don't be sad or disheartened if you fail because "picture abhi baki hai mere dost". Something big might be waiting for you. Be sincere in whatever you do and you will achieve success for sure.



### Mega Health Camp



The Staff Welfare Committee organized a Mega Health Camp on 15<sup>th</sup> April 2017. Around eighty-two staff members availed different facilities like free Weight check, Blood sugar, Blood pressure check-ups etc. The camp was conducted by Neoteric Medical Care. Many staff members also benefited with other health services offered on a discount by the Neoteric team.

### Refresher Course on E-mail Etiquette

A refresher course on E-mail etiquette was conducted in two batches on 15<sup>th</sup> April 2017 and 26<sup>th</sup> April 2017 in the institute. Fifty-seven candidates attended both the programs. Each program was for two hours with Prof. Jaideep Talukdar as the resource person. This was a refresher program of the main program conducted earlier in September 2016.

### Academic Audit by Prof. Sunil Kumar Sarangi



On 21<sup>st</sup> April 2017 Prof Sunil Kumar Sarangi, former Director of NIT Rourkela, conducted an Academic Audit of the Institute as per the requirement of NAAC. He interacted with the Principal, all Deans & HODs while looking at the PPT presentation on the Institute. He

visited the project exhibition of the Circuit Club and addressed all faculty members on Autonomy and its Responsibilities in the afternoon.

### Farewell Function for B. Tech. 2017



The Farewell function for B. Tech. 2017 passing out batch was conducted on 28<sup>th</sup> April 2017 evening. The Principal and the Deans addressed the students. Many students spoke about their experiences at Silicon. Mr. Subrat Kumar Swain from Computer Science & Engineering received the Best Student Award and Ms. Archana Kumari from Computer Science & Engineering received the certificate for best performance in GATE 2017.

### Talk by Dr. Sanjeev Pattnaik



Dr. Sanjeev Pattnaik, former Director of AICTE, delivered a talk on "Academic Quality Improvement Initiatives by the Govt of India - Reforms & Resistance" on 1<sup>st</sup> May 2017. The talk was informative, motivating. He spoke on many schemes and processes of AICTE which can help in application processes for different projects and schemes of AICTE. Faculty members and officers of the Institute attended the talk.





*Silpa Priyadarshini Das, BPUT Gold Medalist 2016 from the department of ECE along with Dean Administration & Student Affairs, Principal and Head of the Department of ECE*



*Poster Painting Competition - Noesis 2K17*



*Robowars - Noesis 2K17*



*Inter-College Basketball Tournament*



*Annual Cultural Fest - Zygon 2K17*



- REMINISCENCE 2016-17



*Laurels for Silicon - Inter-College Winners of Debate and Oratory Competitions at Astha School of Management, NALCO and MAN Trust Autism Therapy, Bhubaneswar*



*Organizing committee of SITMUN 2K17-Model United Nations, for the first time in Silicon Hills*



*The Team Power Bursters - the winning team of Smart India Hackathon*



*Blood Donation Camp - Silicon Red Ribbon Club*



*Annual Sports Meet*



### Farewell Function for MCA 2017



The Farewell Function for 2017 passing out students of MCA was held on 13<sup>th</sup> May 2017. The Dean Academics and the Dean Administration and Student Affairs addressed the students on the occasion. The atmosphere turned nostalgic when students and teachers shared their experiences at the college. Ms. Sushree Sangita Rout received the Best Student Award, MCA.

### Summer Courses

This summer different courses were offered by various departments at the institute. Around 41 students enrolled in the Summer Courses. The Department of

EEE offered courses on (1) Power System Analysis using Mi-Power, (2) Advanced Simulation techniques using SPICE based software, (3) Designing, Sizing, Installation & Modeling of Solar PV systems.

While the Department of CSE offered a course name Make Yourself Skilled in C++ Programming. The courses offered were coordinated by Prof. Ramaprasad Panda, Prof. Seema Behera and Prof. Samaleswari Pr. Nayak.

### FDP by March Ahead Academy

A four-day Faculty Development Program was conducted by Mr. Sulakshan Kumar Sharma, Director, March Ahead Academy and a former Chief Instructor of I N S Mandovi from 19<sup>th</sup> to 22<sup>nd</sup> June 2017.

### Faculty Development Programme

An FDP was held on June 24<sup>th</sup> on Technical Writing for faculty members. Prof. J. Talukdar, the resource person briefed the participants on various aspects of Technical Writing such as writing abstracts, journal articles, reports and proposals for grant funding.

### Free Check-up Camp by Hyundai

The Staff Welfare Committee organised a free check-up camp of Hyundai Motors (four wheeler) on 27<sup>th</sup> June 2017 in the campus in which around Ten staff members availed the service.

## News from Industry Interface Cell

### Muvi Campus Recruitment

Muvi, a software company dealing with Media & Entertainment World conducted a pooled campus drive for the 2017 graduating students at Silicon on 1<sup>st</sup> April 2017. Muvi was founded in New York and its head office in India is in Bhubaneswar. Eligible students from ten colleges including CET, Bhubaneswar and VSSUT, Burla participated in the drive. Out of the ten students selected, Silicon had four winners and had the highest hit-ratio.

### Quinnox Campus Recruitment

Quinnox, a US based strategic business and technology solutions provider with three development centres in India, conducted a pooled campus drive for the 2017 graduating students at ITER on 20<sup>th</sup> and 21<sup>st</sup> April 2017. The process included on-line aptitude test, GD, HR and Technical interviews. Out of two students selected from the drive, Silicon had one winner.

### Robert BOSCH Campus Recruitment

Robert Bosch conducted an on-line test for the eligible

2017 passing out batch eligible Electrical and Mechanical branch students in Silicon on 18<sup>th</sup> March 2017. Five students shortlisted from the on-line test faced the final interviews on 12<sup>th</sup> June 2017 at Bangalore. Two were selected, one from Bhubaneswar campus while the other one from Sambalpur campus.

### Industry Interface Session at Silicon by Acesocloud

Mr. Mohar Manohar Mishra, Software Architect and CIO from an Healthcare Analytics Company Acesocloud, delivered a talk to the Pre-final Year students on 10<sup>th</sup> May 2017 at Silicon. During the 90 minutes session Mr. Mishra talked about difference between a Software Tester and a Software Developer, Application Development languages and Programming languages of industry demand, Bigdata and Data Analytics in large. Motivated students from the Pre-final year at Silicon went through a selection process that included a Screening test followed by Technical & HR interviews. Four selected finally have joined Acesocloud and are working on real-life projects.





**Professor Sudarshan Padhy** is a doyen educationist in the field of Mathematics and Computer Science. A renowned mathematician in Odisha, Prof. Padhy was also instrumental in starting the M.Tech. programme in Computer Science at Utkal University. He pursued his Post-doctoral research with the DAAD scholarship in the University of Freiburg, Germany. Before joining Silicon, he served as the professor emeritus of computer science at IIIT and was the Director of the Institute of Mathematics and Application (IMA) and has also been a visiting faculty to NISER. This interview by Prof. Ananya Roy Choudhury introduces us to his contribution and achievements in academics.

**Ananya** : Sir, would you like to share with us the experiences of your post-doctoral research work in Germany? How challenging was your work and your stay in a foreign country?

**Prof. Padhy** : I did my post-doctoral research at the University of Freiburg, Germany by availing the DAAD fellowship of Government of Germany during June 1980-October 1981. The research work was preceded by 4 months German language course conducted in a suburban town surrounded by greeneries. The teaching style was very enjoyable. I was fortunate to have one of the famous professors in my research area (Mathematical Theory of Finite Element Method), J.A.Nitche, In whose name there is a theorem in text books on finite elements. He emphasized on quality in research rather than the number of publications. From that time my research is geared towards quality. The important thing I observed in Germany is quality and discipline in every walk of life.

**Ananya** : We would also like to know about your areas of research in details.

**Prof. Padhy** : My Ph.D. research area was Computational Fluid Dynamics and my post doctoral work was on Finite Element Method (FEM) in partial differential equation. Apart from these two, I worked and supervised Ph.Ds in Mathematics, Computer Science, Economics in the following areas: Numerical Optimization, Numerical weather Prediction, Computational Biology, Parallel algorithms, Machine learning and Computational Finance. My present research interest is designing efficient models for solving problems from biology, finance and classification and regression problems from other domains.

**Ananya** : Over the years you have supervised the Ph.D. research work of several scholars. Could you share with us your experiences in this regard?

**Prof. Padhy** : I insist on my students to make a thorough study of theory and techniques of the area of research before they work on a problem. This helps them to do reasonably good work.

**Ananya** : When and how did you feel attracted towards Computer Science?

**Prof. Padhy** : As my Ph.D. work (1974-1978) was computational, involving the use of computer, I learned programming in 1974 and wrote my own programs needed for computation as and when necessary. Later my work involved numerical solution of partial differential equations and so we developed efficient numerical algorithms and wrote our own programs for implementation. These activities made me interested to study computer science subjects such as Theory of Computation, Design and Analysis of Algorithms, Computer Aided geometric design, and Cryptography by teaching elective courses in M.Sc. Mathematics (since the best way to learn is to teach). Later I studied Computational Biology and Machine learning and continued research in these areas and got success.

**Ananya** : Apart from being a mathematician, you have been a man of Computer Science too. We would like to know about your contributions in the field of Computer Science in Odisha.

**Prof. Padhy** : Around 2000 many new engineering colleges started in Odisha and there was dearth of good faculty in computer science. So I proposed to start an M.Tech. programme in Computer Science in the Mathematics Department of Utkal University and it was accepted. The programme started in 1999 under my supervision. The objective was to produce good students suitable for quality teaching and research. The Curriculum included rigorous courses taught at the top institutes in India and abroad. I am happy to note that many of M.Tech. students passing out from this programme are faculty of computer science of good engineering colleges of the state and some have also achieved success in research. Furthermore, I coordinated the conduction of several train the trainer programmes by Orissa Information Technology Society for improving the quality of teaching.

**Ananya** : Could you share with us a few of your notable achievements?

**Prof. Padhy** : As a student I was the topper of the University in Pre-university, B.Sc. (Math Hons.), M.Sc. (Math) examinations. I consider my selection for the DAAD fellowship by Govt. of India out of several nominations from universities/institutes (there was only one fellowship for Applied Mathematics) as an achievement as my work in the Freiburg University motivated me to put emphasis on quality research. Pursuing research in computational Biology, Machine Learning and Computational finance are other achievements.

**Ananya** : Talking about being an academician, what do you think should be the right approach towards classroom teaching? What pedagogies should be followed?

**Prof. Padhy** : Some of my suggestions with regards to undergraduate teaching in engineering are (i) many of the students study only for

examinations. So if some of the questions are critical the students will be more interested in the class. The justification/intuition of techniques taught should be explained rather than teaching them as a recipe. (ii) Emphasis should be given to solving some of the non-trivial exercises (to be selected by teacher) given at the end of the chapter. (iii) Remarks on recent developments in a subject may be made in the class occasionally which will motivate few students to study beyond the syllabus. (iv) For quantitative subjects use of slides may be avoided, if used, it should be as few as possible.

**Ananya** : What are the recent job and research opportunities for the students of Computer Science?

**Prof. Padhy** : One of the top areas having lot of job opportunities in India and abroad is Data Science. This subject comprises of Mathematics (Linear algebra, Optimization, Probability), Statistics, Computer Science (Artificial Intelligence, Machine Learning, Data Analytics, Big Data, visualization), and programming skill in R and/or Python. The role of a data scientist is to design better models to solve problems in business, science, industry. The Data Science India Jobs Study 2017 has estimated that close to 50,000 positions are available to be filled in currently and it is expected to increase at least 50% in succeeding years.

**Ananya** : Finally, what advice would you like to leave for our students?

**Prof. Padhy** : In engineering, knowing the techniques/technology without understanding the theory behind it will not take one to the top. For understanding theory, good background in Mathematics and Basic Sciences is necessary along with engineering principles. So apart from your specialty, all other subjects should be studied in depth. Try to do some innovative work as your project. If you have a mindset to learn and achieve something you can always succeed.

**Ananya** : Thank you Sir for sparing your valuable time.



**"SHE" - One of a Kind**

Born as female  
 that cold-night was tough for her to inhale.  
 One second's heights of pride  
 & the other second's safety deprived.  
 Sufferings never lost her way  
 Hopes abandoned her right away.  
 There was she hung between death and pain  
 Difficult to make a move and reveal things insane,  
 She struggled till the end  
 Unfortunately her soul left the body ripped & blood  
 stained.  
 "Nirbhaya" she was named.  
 Helping hands knocked her doors  
 celebrating her dare to fight the worse.  
 Where some morons tried to shush her voice by every  
 try  
 there her supporters made the Loudest Cry.  
 Tremendous march covered the streets  
 never ending tones roared justice.  
 Took long, convicts were penalised  
 But can this undo many such innocents every time  
 being brutally demised?  
 Here woman is worshipped as deity  
 yet she is abused every moment without any pity.  
 Draped in a saree she is addressed all Cultured  
 A piece of jeans concludes her a woman of  
 questionable Character  
 Her giggles, frankness & YOLO outlook invited danger  
 Because these are limitations which society's  
 Rulebook has framed for her.  
 So called society still keeps its eyes closed  
 Forgetting that Freedom of a Woman do not assign  
 her with an "Available" signboard.  
 Then why threaten her integrity  
 Why perish her worth,  
 In a society where "Equality"  
 Has finally taken birth.  
 Even there is light at the tunnel's ending  
 We can revive her glory that is fast declining.  
 She gifts us with Happiness in every Character  
 At least one thing we can render in return is to heartily  
 "Respect" her.

**Priyanka Mangaraj**  
 ECE, 3<sup>rd</sup> Sem.

**Travel: Journey is more important than destination**

The vastness of the earth cannot be covered with measured steps. To see each corner of this ever-astonishing world, the clarity of oceans, the depth of the sea and the peak of the mountains require an eye of an observer, a traveler. Becoming a travelling is never easy but living a travelers' life is the most exciting job certainly much better than a placement in Infosys or Tec Mahindra. The nomadic life of a traveler talks him to places which people like you and me can only dream about, and don't get it wrong tourism in very different from travelling as in travelling what matters is the journey and not the destination.

Recently a dear friend of mine returned from his solo trip to Himachal Pradesh. I decided to enquire about the details of his journey and the source of his motivation. He described that the peace he found in the hills, and the treks took him closer to life and himself. He engaged in conversation with the locals and gained much wisdom about the place that you and I can spend ages searching on the internet. The path to one's own self-discovery is through travelling. It gives an edge to your life. You become good at talking to strangers and after a while even become better at making conversations. Travel unlocks a different you. It makes you fall in love with things that you had never noticed. It pushes you out your comfort zone and makes you more adaptive and flexible; teaches your patience and is a more effective way than meditation (more fun too). It makes you confident and strangers.

Travel is not very popular in India as we tend to worry too much about the future. People fail to enjoy the present and start accumulating the resources for the future and this process takes away the thrill of the present. There is a misunderstanding related to travel too. It is thought to be very expensive. This is again a misconception. Tourism is expensive, travel is not. Travel means using the means you have to survive in conditions you never expected to. And in today's digital world you can also earn while travelling. Among the very few Indian travelers, Shivya Nath, sold her stuff and quit her job at the age of 23 and set out to see the world. Her primary source of funds for her journey being her travel blog "The shooting star" which won her the India's Best Blogger Award 2013. Today she has seen Taiwan, Tokyo, Slovenia and places that leaves us awestruck.

A person who has travelled is much wiser than a person who has not. Travelling has been proven to make one

a better problem solver and also gives one a new and refined perspective of things and life in general. It has the ability to stir your core and give you a sense of rebirth. So pack your bags, shake off the laziness, do not procrastinate, hit the road and see where destiny takes you!

**Subhodeep Sarkar**  
CSE, 3<sup>rd</sup> Sem.

### **It Happens for a Reason**

*Humans are not omniscient;  
It is too early to rejoice and pump our fist.  
Only time is omnipotent;  
The future is a cloud of mist.*

*Every relationship stands on four pillars;  
Love, Trust, Care and Respect.  
Our fates are written in pages stellar;  
Rekindling hope is a crucial aspect.*

*The past is done and dusted,  
From our lessons passé we evolve.  
The future is yet to be tried and tested,  
Around which our lives revolve.*

*Fear and apprehension,  
Are like barriers invisible.  
Care and comprehension,  
Make empathy feasible.*

*Eventually all the scattered pieces will augment;  
Pronto smile at the confusion,  
Live for the moment,  
And know that everything happens for a reason.*

**Akash Das**  
CSE, 3<sup>rd</sup> Sem.



# AMMCA

We Miss You...

*The Arvind Mishra MCA (AMMCA) group of Silicon has been instrumental in awarding the final year MCA students with mementos during their farewell ceremony for the last two years.*

*This group consisting of the MCA Alumni of Silicon was formed in the loving memory of late Sri Arvind Mishra, the then Head of the Department of MCA. Their aim to popularize the perspectives of their beloved teacher and to familiarize the young generation with the contributions once made by this teacher.*

*Late Sri Arvind Mishra was a very student-friendly teacher and is still remembered by his pupils as a man with a heart of gold. His students love to remember him as a person who did not discriminate his students on any grounds. He loved them all equally well and was always at their side in both good and bad times. His students want to keep him alive in their memory and to pass on this legacy of*

*unconditioned love, this group named AMMCA came into being.*

*This group has also been sponsoring events of 'C' programming during Noesis (Silicon Tech-fest) for the past 2 years.*



*The AMMCA Core Team*



Art by: **Asmita Patra**, ECE, 3rd Sem

### A single spark of hope is enough in the darkness of fear



ZEAL has always helped the children to dream and encouraged them to have a glimmer of hope even in the gloomiest situation. ZEAL was associated in the Rahagiri initiative of BMC. As most of the times, in Rahagiri also our prime focus was on children. They are the hope for a better future and to nurture them has been our sole motto. We had a great time interacting with the children and discovering their beautiful dreams. As always we were moved and touched by their thoughts which had clarity which defied their age. Their dreams are an inspiration for us to work even harder for them so that they don't lose their faith in society. We have given them a hope

that they will always be heard and we would always work to make their dreams a reality.

Nukkad Natak or "Path Natya" as popularly known in Marathi is a drama performed on streets to create social awareness. It is very inspiring yet simple form of play that has been highly efficient since long. Tremendous power to connect with the audience makes it not only effective but entertaining as well.

ZEAL representatives went on to give one such memorable performance in IIIT, BBSR to create awareness among the audiences. It was a chance for us to showcase our talent among other participants from reputed colleges like ITER, TRIDENT and C.V. RAMAN. Our group had a very pleasant time there, we shared our experiences with other groups and at the same time learned a lot from them. Those moments do make us realize that performances such as these bring people from different visages of society together. Also, that we all share a common goal in life to help build a society which doesn't discriminate on the grounds of caste, creed, colour and more.



**Ritika Gupta**  
CSE, 5<sup>th</sup> Sem.

## My Journey from Bhubaneswar to Los Angeles

As I sit in the dorm room of UCLA to write this article, I have a sense of pride and accomplishment. I have written scores of cover letters explaining and documenting my journey, to companies like Google, Disney, and Mattel. But to write for your alma mater magazine is overwhelming! It means your efforts have been recognized.

To put things into perspective, I am currently interning as a Brand Marketing Intern at Mattel Inc. for team WWE. Mattel is the world's largest toy maker and its products include Barbie, Hot Wheels, Fisher-Price, and superhero toys like Batman etc. I am doing my MBA from the University of California, Irvine (UCI) which is one of the top 50 colleges in the world.

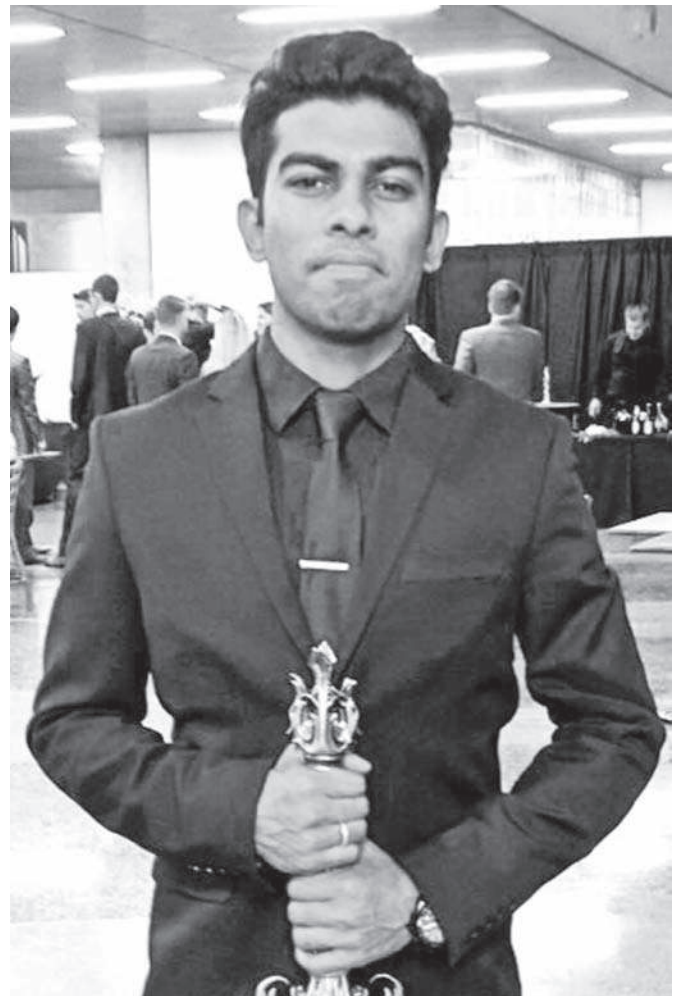
But it all started in September 2008 when I first came to Silicon (SIT) in the AE&I branch. From being part of ZEAL to dancing in all events, those were the 4 best years in my life. I made friends for life, among whom one would be my fiancé! The thing about Silicon was that the professors and seniors believed in you and it is these small things which push you to break boundaries.

Since my goal was always to do an MBA, when I joined Infosys I knew when to make the transition. I quit after 2.5 years and joined in a start-up because I wanted to do Marketing. I knew it would be impossible to get into a marketing function in the US without a Marketing background. That was the riskiest decision of my life. I let go of my salary and future onsite opportunities as part of that gamble. I started building the Marketing department for that company from the ground up and I was simultaneously studying for GMAT and preparing my essays for colleges in the US. That was the toughest time of my life. But I had my parents' support then and I will be thankful for that all my life!

But that gamble paid off. I got a GMAT score of 730, wrote the best essays I could and got selected into UCI with a \$50,000 Fellowship. Then started the next best journey of my life.

As I navigated the MBA program, I became President and Vice President for two clubs. Despite seniors advising me that Indians don't get into Marketing, I knew where my heart was! I applied to Mattel Inc. went through three rounds of interviews and bagged that job to be the first ever Indian to be in Marketing at Mattel Inc.

Now as an Intern I get to go to WWE events, Comic-Con and special screenings just because at one point I was



stubborn enough to believe that I could do it and more importantly there were people who believed in me!

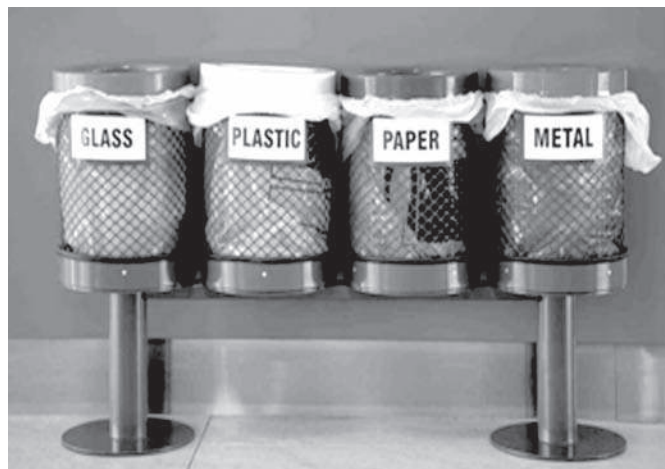
My message to Siliconites: Always believe in yourself no matter what. If you know you have the potential go a step beyond that. I see good representation of students from IITs, NITs and other private colleges from India. Barring a few I don't know anyone from Silicon doing an MBA in the premier Business Schools of US. I think the reason is that we are not aiming high enough! Be more ambitious, take risks, surround yourself with people who are bound to be successful! I am not selling a book here, I mean it. At Mattel, I get to work with students from Stanford, Wharton, Kellogg, Berkeley which are the best B-schools in the world!

If I, an alumnus of Silicon Institute of Technology, who was never a 9 pointer, can do it, then everyone of you can. DREAM ON!

**Bharat Yellumahanti**  
Graduate of 2012



## Waste Management in Silicon



Purchase a packet of chips, enjoy the yummy item, but don't forget to put the wrappers in the dustbin!! Numerous times we have heard this but there may be few of us truly serious about it. This results in roads or surrounding area with food wrapper and paper litters. People care little about the waste being generated from their purchase, which is a chargeable crime as per the "The Consumer act of India". Revision of Solid waste management laws in 2016 also states that "No person should throw, burn, or bury the solid waste generated by him, on streets, open public spaces outside his premises, or in the drain, or water bodies. Generator will have to pay 'User Fee' to waste collector and for 'Spot Fine' for Littering and Non-segregation."

There are other uncontrollable reasons for the waste being accumulated in an area of a city, such as domestic, industrial, institutional and waste from a shopping complex; managing them is the real big task, performed by the municipalities.

Silicon Campus is no exception when it comes to accumulation of wastes. The eighteen acres campus of six multistoried buildings generate a variety of waste, from its different sources. The academic building usually yields files and papers from the desks, the canteen is responsible for a huge amount of leftover and unconsumed food and the amalgam of waste from the three hostels, cafeteria and the silicon general store which includes steel and aluminum beverages cans, HDPE and PET bottles, paper-bags, cartoons and food. Being an engineering college, there is also some quantity of electronics waste from computer and electronics labs. Thus the campus gives out a group of bio and non-biodegradable, hazardous and

nonhazardous waste. With this wide variety and huge amount of waste which weighs around 4-5 quintals accumulated at a place adds up to city waste, creating another series of problems. Thus, it is mandatory for the campus to reduce & recycle it through managing. Waste management is an activity, performed to reduce its generation and obtaining numerous ways to utilize it, making it a valuable resource. The hierarchy of waste management emphasizes the need to decrease its creation, then reuse it, then to recover (via recycling, composting or waste to energy facilities) and at last to dispose to the landfills. There are series of activities that have been done for waste reduction and promote reuse of waste products, and more need to be organized to ensure better waste disposal.

SGC has been actively promoting the cause of waste management through its annual activity of 3R's - Reduce, Reuse and Recycle. Recycling is through creating and designing decorative or utility items. This annual event focuses on collection and use of materials that would otherwise been unwanted, as raw material for production of new models and art & craft. These models can also be made commercially available.

Waste Audit is also a part of energy audit competition where students become aware of waste generation in silicon campus.

Few of the many solutions are presented here; some ideas are proposed work which can create a cleaner and greener campus.

- Organic food waste management through bio-generation and composting to create organic fertilizer feed for silicon garden.
- Vertical garden to use plastic soda bottles.
- Use of color coded dustbins in order to segregate bio and non-biodegradable waste.
- Use of plastic wastes of the campus to renovate roads and making fences.
- Furniture from bottles, old utility items.
- Zero Litter on ground and classrooms.
- Rewards for recycling through reverse vending machines.

*Content Contribution:* **Harshit Agarwal**

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**Solution to the Problem of last issue:** There were two problems in the last issue.

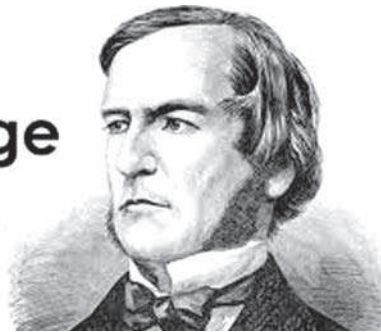
1. There is perfect circular lake. A fish starts from a position on the boundary and swims due north for 500 meters to reach a point on the boundary. From there the fish swims due east for 1200 meters to reach the boundary. What is the diameter of the lake?
2. Find out a simple expression with only one variable  $x$  such that when any positive integer is substituted for  $x$  the expression will surely give a prime number.

**Solution 1:** The fish makes a right angle to turn on the circumference to change direction from north to east. A right angle on the circumference of a circle will be on the chord equal to the diameter. So the diameter of the circle is the hypotenuse of the right triangle formed with sides 500 meters and 1200 meters. Hence the diameter of the lake is 1300 meters.

**Solution 2:** There can be many formulas like  $1 + 1^x$ ,  $0^x + 7$ ,  $11 + x/x$  etc.

**George Boole and his Unusual Algebra:** In 1936, Allan Turing published his paper "On Computable Numbers, with an Application to the Entscheidungsproblem". In this paper, Turing reformulated Kurt Gödel's 1931 results on the limits of proof and computation, replacing Gödel's universal arithmetic-based formal language with the formal and simple hypothetical devices that became known as Turing machines. In 1937 Claude Shannon went on to write a master's thesis, at the Massachusetts Institute of Technology, in which he showed how to optimize the design of systems of electromechanical relays then used in telephone routing switches. The important common concept that was used by both was Boolean algebra developed by George Boole some 89 years before.

## George Boole



In 1847 George Boole published the pamphlet Mathematical Analysis of Logic. This work helped him to be appointed as a professor of Mathematics in Queens College at Cork in Ireland, though he was not having any formal education in Mathematics and was mostly self taught. Though the work was appreciated no one at that time could think that it would be the base for the development of digital electronics and modern computers. Even in Russia it was introduced as an Unusual Algebra.

Boole was born on 2<sup>nd</sup> November 1815 in Lincoln, Lincolnshire, England, the son of John Boole Sr, a shoemaker and Mary Ann Joyce. He had a primary school education, and received lessons from his father, but had little further formal and academic teaching. He was self-taught in modern languages. At age 16, Boole

became the breadwinner for his parents and three younger siblings, taking up a junior teaching position in Doncaster at Heigham's School. Boole died of pneumonia on 8<sup>th</sup> December 1864 at the age of 49. His illness was attributed to a chill that followed a lecture he gave in wet cloth after having been caught in rain.

Boolean Algebra is taught to every student of circuit branches of science and engineering hence there is no necessity to talk about it here. However the following simple example may initiate to recollect all properties of Boolean Algebra.

Let us consider the set of elements 1, 2, 3, 5, 6, 10, 15 and 30. Here  $a + b$  is the LCM of  $a$  and  $b$ ,  $a \cdot b$  is the GCD of  $a$  and  $b$ , and the complement of  $a$  is  $30/a$ . With this the set satisfies all the requirements of a Boolean Algebra.

### Problem of this issue:

There are two problems.

1. Four persons want to cross a bridge which is old and can carry two persons at a time; also both the persons must walk at same speed. As it is night they need their only flash light to guide while crossing the bridge. They have only 17 minutes to cross. Each person walks at different speeds. A takes 1 minute, B takes 2 minute, C takes 5 minute and D takes 10 minute. Of course they can walk slower but no faster. How can they cross the bridge?
2. Find all primes  $p$  such that  $p^2 + 2p$  is a prime. Show that there are no others.

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## Kerala



*Traveling - it leaves you speechless, then turns you into a storyteller.*

- Ibn Battuta, The Travels of Ibn Battutah

Kerala renders you utterly spellbound and transports you to a world of serene backwaters; vast beaches colossal Western Ghats and bountiful tea plantations. This state is blessed with an excellent topology that includes both Malabar Coast and Western Ghats. Our itinerary included two destinations; Allahpuza and Munnar.

Munnar is connected by road to Cochin which is 127 km away via NH85 which one of the most popular roads to reach Munnar. Munnar is a popular hill station which lies in the north of Kerala, situated on the banks of three rivers- Mudrapuzha, Nallathanni and Kundalait offers some of the most beautiful mountain ranges and plentiful tea plantations with brilliant use of terrace farming. Overlooking the vastness, one can easily forget the intense summer heat of the plains.

When in Munnar, first one must visit Eravikulam National Park which is a home to several species of rare butterflies animals and birds situated in the lap of the Nilgiris, which also guards the Nilgiri Tahr: A rare endangered inhabitant and Neelakurinji: an exotic flower which blooms once in 12 years. This park also houses the Anamudi Peak considered as one of the highest peaks in South India standing at a height of over 2700 m. Treks to the peak are allowed with due permission from the Forest and Wildlife authorities at Eravikulam.

It also includes a large number of waterfalls such as Attukal, Thoovanam, Lakkam, Nyayamkadu which are great picnic spots for both the tourists and locals. It also has great sightseeing locations such as Mattupetty which has provisions for boating and also houses the

Indo-Swiss farms which take an active part in the Kerala's livestock development.

Next destination; Allahpuza. As we descended the hills we could easily feel the heat. The journey of 180 kms from Munnar to Allahpuza was less of fatigue and more of the changing topography from a complete hill station to a coastal region or more precisely to the famous backwaters of Kerala. Allahpuza a.k.a Allepy was founded by Divan of Travancore and is home to a large number of lakes, lagoons and waterways and is fondly called as the 'Venice of the East'. It is recorded as one of the busiest ports in history and is a witness of the extensive spice trade of India. This place has a strange element of pleasure and peace in its air.

The main attractions include Krishna Temple renowned for its architectural style as well as for the Palpayasam that is served here and an abandoned little island named Pathiramanal known for its aloofness from the modern world to name a few. To explore a new way of commute, we hopped on to one of the boats for ease like the hundreds of people who did it every day.

As the boat slowly moved through the serene backwaters, one could clearly mark the thousand chirps of birds' taking us back in time when the cities used to be the same; less noise of traffic and more music of nature, which we have achieved over the course of some decades at the cost of our so called 'development'. Intoxicated by the different flavors of Kerala, we enjoyed it till its last drop. But alas, the time finally came when we had to return taking with us a treasure trove of treats, souvenirs and sweet memories.

**Monidipa Ghosh**  
CSE, 3<sup>rd</sup> Sem.



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