**HIGHLIGHTS OF THIS ISSUE**

- **In Conversation with ...**
- **Almnus Speaks**

Silicon

*...beyond teaching*

# SLATE

Silicon Language for Arts Technology & Education

Vol-XVIII | No. – 3 | Jul. – Sep. 2020

**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"


Dr. Pradyumna K. Tripathy (CSE), Dr. Manoranjan Behera (BSH), Dr. Ambarish G. Mohapatra (EIE), Dr. Bodhisattva Dash (ECE) and Ms. Debasmita Pradhan (CSE) of Silicon Institute of Technology, Bhubaneswar were awarded the University Foundation Day Research Award For Faculty/Research Scholar 2020 by Biju Patnaik University of Technology (BPUT) the state technical university of Odisha. The felicitation ceremony was held online on 21st November 2020. SiliconTech is proud of them.


Siliconites outshone all contestants in the Elocution Competitions organized by NALCO during the Vigilance Awareness Week celebration from 27th October to 2nd November 2020. Our students earned the first position in the competition in all 3 languages viz. English, Hindi and Odia. Sanath Kumar Swain (4th Year, EEE) was first in English, Geetansa (2nd Year, ECE) in Hindi and Annada Guman Singh (3rd Year, CSE) in Odia



We come nearest to the great when we are great in humility – Rabindranath Tagore

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

*Dear Readers,*

*Hope you're all doing well amidst the pandemic which has had an overstretched presence. Despite the constraints it put on us to function in the normal way with our academic schedule, we are glad that nothing has come to a standstill owing to it. We are indeed glad to have inducted new batches of BTech, MCA, MTech and MSc students. The otherwise grand orientation programme of the BTech students took to the online mode for the first time and the induction was squeezed to 3 days. But planning and execution saw no compromise. We are also pleased that all classes have started smoothly; but we look forward to all academic operations in the physical mode which will bring the joyful and bouncing campus life back and restore charm to the teaching-learning experience.*

*Even amidst these trying days our faculty and students have made us immensely proud. Four of our faculty members across disciplines such as CSE, BSH and ECE have won the University Foundation Day Research Award for Faculty 2020 from BPUT which is indeed an achievement to cherish. Our students at the same time have had victorious wins at HackwithInfy, TCS CodeVita, TCS Digital and Empowering Youth Hackathon apart from the Elocution competition held to celebrate the Vigilance Awareness Week. Many many congratulations to all of them for their achievements.*

*Please read this quarter of SLATE for more Silicon news and student articles.*

*Happy Reading*

**Priyambada Pal**
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## Story of a Real-Life Hero - Subedar Major Yogendra Singh Yadav

This story is of a real-life hero Subedar Major Yogendra Singh Yadav, one of the three living legend who follow the Delhi GOC leading the Republic Day Parade. He is a Param Vir Chakra awardee which is India's highest gallantry award.

In the year 1999 when Pakistani Army infiltrated and occupied the high-altitude posts, clearly violating the Shimla agreement, the 18 Grenadiers were posted in the Dras sector of the Tololing post. Subedar Major Yogendra Singh Yadav along with the unit were to provide ammunition and logistics support to the top post at times of harsh weather and amidst raining shells from the enemy forces. Tololing was captured by Indian Army on 12 June 1999. The next assault was on Tiger Hill, to be accomplished by the Ghatak platoon, of which Yogendra Sahab was also a part. The strategy and drill to capture the Tiger Hill started and they were all set to move ahead. The hill was 16,500 ft, almost 90 degree slope which required to be climbed only at night.

While climbing the hill, the sound of falling rocks could make the enemy forces vigilant. The enemy was not only on either side of them but also at the top of the Tiger Hill. They could see the death in front of them but they didn't lose their courage.

Due to the lack of ammunition they stopped the fire and tried to deceive the enemy. Later a group of enemies came for recce but were heavily attacked by the hiding Indian Army men. The firefight did not stop, there were casualties on both the sides and our men lost one LMG (Light Machine Gun). There was only one ray of hope which was a sniper and Yogendra Sahab was assigned the task to capture it as soon as possible but the enemy forces noticed it and lobbed grenade onto it. Yogendra Sahab felt like he lost his leg but this wasn't the only one. Another grenade lobbed onto his nose. For a second, he lost his vision. He saw his other buddies dying one after another and he was lying there but couldn't do anything.

Then came an enemy soldier who hit bullets one on his hand and another on his thigh. Then came a lucky moment for Yogendra Sahab when the enemy soldier again hit him on his chest but luckily he used to keep coins in his pocket which diverted the bullet from its path.

The enemy forces were killing and abusing the men lying there. As they were returning Yogendra Sahab threw a Grenade and a man fell down towards Yogendra Sahab which helped him to instantly get a rifle and start firing on enemy posts from various positions. The enemy thought that the reinforcement of Indian Army has arrived and they fled away. His actions destroyed the enemies plan to cut off our supply lines.

Later on, Indian Army was successful in capturing the Tiger Hills too and today Subedar Major Yogendra Singh Yadav is an instructor in one of the great institutes which train Indian Armed Forces Officers.

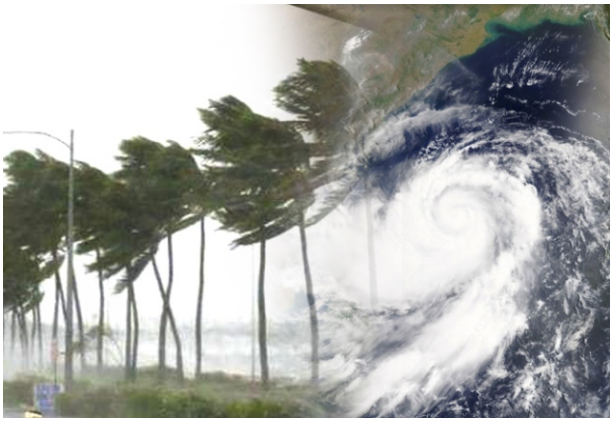
Jai Hind!

**Tirlochan Singh**
*CSE, 7th Sem.*



If you want to improve, you must be content to be thought foolish and stupid – Epictetus

# India's Best Kept Secret



*"We know what we are, but we know not, of what we can be."* – William Shakespeare

In the year 2013, there came a cyclone named 'Phailin' that rattled the Indian coasts, and forced the government of Odisha to undertake the largest ever evacuation till then, shifting 11 lakh people into safety. The state stood strong as rains lashed the landscape, and death toll was contained to 21.

In the year 2014, there came another cyclone named 'Hudhud', around the same time of the year as 'Phailin', and this time the death toll was contained to just two.

In the year 2019, came the mighty cyclone 'Fani', first tropical cyclone in 43 years to hit the state. In response, Odisha carried out 'one of the biggest human evacuations in history,' with more than a million people evacuated into 9,000 shelters in 24 hours.

And the preparation for this was made well in advance, with more than 45,000 volunteers, 2,000 emergency workers, 100,000 officials, youth clubs and civil society organisations such as National Disaster Response Force (NDRF), Odisha Disaster Rapid Action Force (ODRAF), Panchayati Raj Institutions (PRI) agencies and all other teamed up to evacuate 1.2 million people. At least 3 million targeted messages were sent; 7,000 kitchens and 9,000 shelters were built and the state geared up to face its challenger.

And this time the death toll was 64 as compared to 10,000 lives lost during the 1999 super cyclone, which was of almost same intensity.

Odisha, the phoenix state, known for its efficient Disaster Management, because of its geographical location, coast side to the Bay of Bengal, acts as a sitting duck for all the yearly cyclones known to India.

Learning its lessons from the super cyclone, Odisha established its Disaster Management wing, the Odisha State Disaster Management Authority (OSDMA) in the year 1999, with the primary motive to carry out response to all natural or man-made disasters and for capacity-building in disaster resiliency and crisis response.

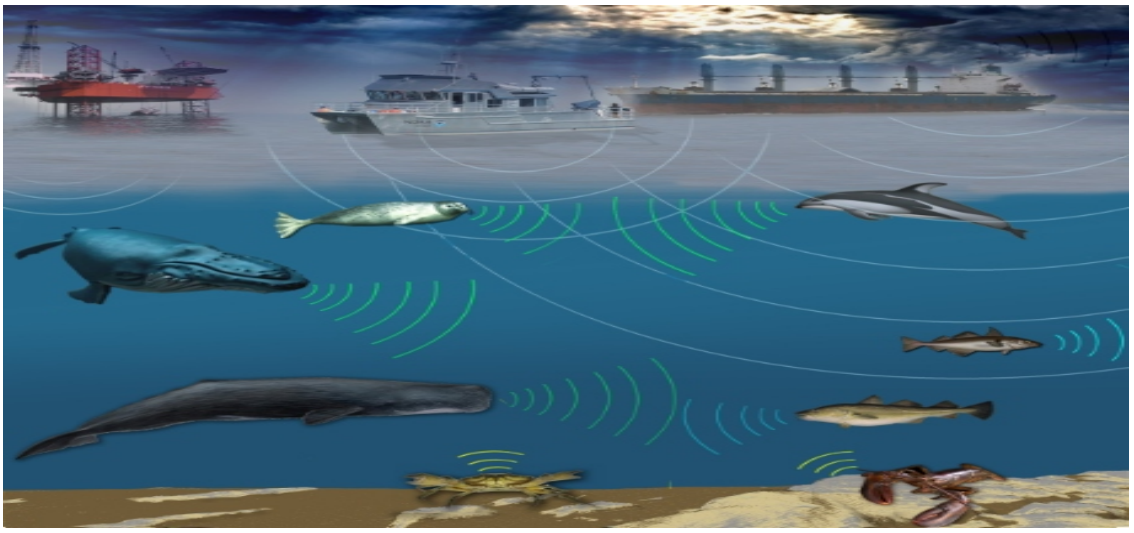
This body was by far, the first disaster management authority centre established in India, or perhaps the world, given its scale of operations.

The OSDMA has setup approximately 800 multipurpose cyclone and flood shelters with innovative designs across the vulnerable areas of Odisha, and armed them with active 'Cyclone Management Centres' having community-based response team with locally trained young volunteers. It has raised 20 units of highly trained personnel with multi-disaster tackling capabilities, trained in tackling floods, building collapses, cyclones, biological and nuclear disasters. The state has implemented Early Warning Dissemination System (EWDS) and a network of weather forecasting doppler radars across the state to give the necessary pre-requisite warning needed for further actions.

Apart from the technological advancements and the government initiatives, the greatest resource which Odisha has, is its strong-willed people who accept these calamities as a challenge, work hand in hand, realizing 'human force is the greatest force' , adapt themselves to the situations, and use this opportunity to bounce back higher, uplifting themselves and humanity as a whole.

**Isha Bharadwaj**
*CSE, 5th Sem.*

## Ocean Uproar: An Invisible Enemy Lurking Deep in the Oceans' Shadows



As the deadly corona virus brings the world to grinding halt, humankind has finally found some time out of their busy lives to introspect. And as a result of it, we finally seem to be realizing how our "daily activities" adversely affect Mother Nature. Yet we are a long way from understanding all the different ways by which we are pecking away at the environment bit by bit. While the talk of the town has clearly been the receding veil of pollution from our very own neighborhood, it is a matter of concern that one of the major players in this field has gone undetected for long now and it is the menace of marine noise pollution.

When the word marine pollution comes up, the first thing that crosses our mind is plastic or other toxic chemicals and when we give it a good, hard thought one might even come up with oil spills and even ocean acidification. But amongst all this, we completely ignore all the noise we inject into the marine ecosystem. The sources of these noises range from the constant drone of nearly 50,000 ships of the global merchant fleet to air gun blasts of seismic surveys for locating oil and natural gas reservoirs to that of offshore oil drilling sites and wind farms.

The ocean is not naturally quiet as noise plays a very important role in the underwater ecosystem. Underwater creatures use it to find their way around, locate food and mates, detect an approaching predator, and so on and so forth. Hence the unnatural noise is not only irritating to them but it can cause them chronic stress and even physical injury in addition to all the chaos it causes to their ecosystem.

To understand the magnitude of the pollution let's dwell into some figures. Ocean's natural soundscape is of around 50 to 100 decibels and human activities have added a whopping 3 decibels each decade. Now one might wonder that it isn't a "whopping" addition but you must know that the decibel scale is a logarithmic one much like the Richter scale for earthquakes, so essentially 3 decibel means doubling of underwater noise intensity every decade and what is really concerning is that it's only an estimation as there are no defined bodies to monitor the oceans.

We, human beings, have evolved to be a species that relies on visual inputs, we really rely on our eyes but on the contrary, marine life relies on sound the way we rely on sight. So a noisy ocean is as disorganizing and dangerous for marine life as is a dense fog to us. A noisy ocean means that underwater species are constantly in an alert mode and this stress, which might seem minimal, can be enough to push the endangered species into the oblivion of extinction.

While the issue has been in the shadows for long, it is not as complicated when compared to climate change or ocean acidification. All it will take to cut down on the noise is to redesign our equipment, let it be boats or air guns or sonar mechanisms. This small tweak in our equipment will go a long way in creating a quiet and much favorable ecosystem for marine life to bloom in.

**Anshuman Mahapatra**
*ECE, 5th Sem.*



Humility is nothing but truth, and pride is nothing but lying – St. Vincent de Paul

## Discovering Your Core Values


If I were to ask you to name three to five words that define who you are could you answer that question? At first thought, anyone would think, "Well, of course, I know who I am." But once you sit back and try to come with words that defined you and your life, you would be surprised at the results.

Well these words, the words that define, that define your life are your core values. And when I say values, I do not mean your ability to say wrong from right. Core values are our sacred truths, the things that no matter what happens, no matter what situation you're in they don't change. They highlight what you stand for; they represent your unique and individual essence.

To discover these underlying secrets of yourself you need to start with a clear mind, with no preconceived notions. This will give you access to inner truths to which your conscious mind is yet unaware. Getting in the right mental and emotional state is an essential first step. And everything thereafter is very simple.

Next up, is introspecting your life until this point. List the extreme experiences of your life or some big decisions you have made. These are when our values leap out, sometimes even without our knowledge. These decisions or experiences brought out everything in you, for good or bad, subconsciously. Once the list is done, you will see a pattern in your behaviour. These patterns reflect your core values.

You might be shocked to see some unexpected words in the list of words which essentially describe you. So the toughest part is to accept them for that is what you are, who you are at your very core. What you can do is prioritize some values you want to abide by in your life. But let me tell you, you cannot just ignore the undesirable aspects of your life away. You first have to accept it and only then you can start working on changing them, changing yourself in the process to become better individual.

Having talked so much about core values, you must be wondering why one needs to discover them in the first place. Well to start, you get to know yourself better and this brings clarity to your life. Most importantly, it improves your decision making. Knowing what you really want to uphold in your life makes decision making very easy. It is like having the answer key to the exam called life.

**Anshuman Mahapatra**
*ECE, 5th Sem.*

# Healthy Diet - A pathway to a Healthy Life

When it comes to eating healthy, people always find it quite complicated like, stuffing themselves with boiled vegetables. However, a healthy diet is not about strict limitations, staying unrealistically thin, or depriving yourself of the foods you love. Rather, it's about having more energy, improving your health and boosting your mood. The fact is that while some specific foods and nutrients have shown to have a beneficial effect on mood, and it's the overall dietary pattern that is most important. In fact, it is highly recommended to replace processed food with real food whenever possible. This helps to make a huge difference to the way you think, look and feel.

An essential step towards a healthy diet is moderation. It means eating only that much food as your body needs. You should feel satisfied at the end of a meal, and not stuffed. For many of us, moderation means eating less than required or eliminating the food we love. But sometimes it is fine to have an oily breakfast only if you follow it by a healthy lunch and dinner. People also perceive healthy diet as a weight loss technique but the fact is that it is only one of the benefits of a healthy diet.

It is always suggested that one should eat only when one is hungry. Because when we eat food much of the nutrients is used up by our brain. And when we eat food when we are not hungry the excess nutrients are stored for future use, which ultimately results in 'obesity'. In fact, it is recommended to eat fruits and vegetables daily because it is low in calories and rich in nutrients which also helps to get over one's inclination to consume unhealthy food.

It is always suggested to plan one's inclination to consume well for doing any task and so is for healthy eating. And so, it is suggested to have healthy snacks, and to eat cooked food as much as possible rather than packaged food. This will help to cut on calories and lead a healthy life.

**Soumya Kanta Panda**
*EEE, 5th Sem.*



Destroy your illusions so you can see reality. Destroy your fears so you can take risks.
Destroy your ego so you can see life – Maxime Lagacé

## Necessity is the Mother of Invention


Imagine a platform where you can find all the notes for your subjects, that too uploaded by your own faculties! The name would already have popped up in your minds," Lecture Notes!", isn't it? Lecture notes has been an integral part of our academic lives but not many of us will be aware that it was founded by a Siliconite. Here's an exclusive story about Mr. Ayush Agarwal an engineer turned entrepreneur whose magnificent start-up serves as an inspiration for many.

A Siliconite of the batch 2009-13, Er. Ayush Agarwal of Electrical and Electronics Engineering got the idea when he was a 2nd year student and had faced the issue of getting notes for classes that he had missed during his internship at IIT Powai. He thought why write notes when we can listen to the faculties during classes, grasp concepts and get a deeper understanding, while using another platform to access the notes later?

Through his unique platform, Mr. Agarwal has brought together a community of intellectuals who engage in productive discussions, which ultimately leads to creation and sharing of ideas to enable the masses to learn better. His organisation takes pride in their goal which is to make quality education reach to a larger audience, keeping affordability in mind.

Like every other start-up, they started from a 1-BHK flat, in Bhubaneswar in the year 2017 and kept growing with time; now they have 24 full-time members who are young and passionate.

The reach of Lecture Notes has been continuously growing which is a testament of their brilliant initiative.

"We started small, but since there is a real need for the solution now we have users from 11 countries which include the likes of Nepal, Pakistan and English speaking African countries. In India we have users from 21 states; majority of our users are from the southern states like Tamil Nadu and Karnataka", said Ayush Agarwal during an interaction.

Building a start-up in India especially in a tier 2 city and not having access to big funds is definitely a challenge, but Mr. Agarwal is one of those few who are ready to face that challenge. Through his story we look to motivate our student community to keep combating all hardships that come their way and always remember the line *"Never forget why you started."*

**Ashutosh Bijay Mallik**
*EEE, 4th Sem.*

## Happiness, the Inner Quest


*Happiness, not money or prestige should be regarded as the ultimate currency the currency by which we take measure of our lives.* – *Tal Ben-Shahar*

Human beings, the most improved species on earth having the refined cognition are expected to function rationally and make this world a better place to live. On the contrary the rat race to excel in all domains of life has controlled our lives in such a way that it has become all gloomy to understand individuals, relations, interests, emotions and the humanity at large. The outbreak of COVID-19 had just put a stop on the motion and everything was absolutely standstill for a period. The day-to-day life has merged with restrictions, uncertainty, news filled with negative incidents, etc which lead to frustration, annoyance, and dissatisfaction in everything around us. Then the realization to live and lead life with happiness has emerged. This unanticipated halt has opened up the possibility to look at life in a rational and meaningful way.

Regarding this concept of "happiness" there are many erroneous ideas which govern people's thoughts and behavior. People become so futuristic that they wait for the destination to be happy. Some common beliefs are like, after cracking a competitive examination, after landing a dream job, getting married to the right person becoming rich etc. "To remain happy, one has to achieve some milestones" is the biggest myth. The emotion of being happy will be there of course but it will not last long. Because happiness is independent of achievements and success. Rather it is a state of mind. As once the goal is achieved, the happiness will shift to the next target. In the process they put so much pressure on themselves that they forget to remain happy.

As happiness is the universally longed goal, Psychologists have conducted many researches on this. Renowned Psychologist Martin Seligman have identified that humans are happiest when they have the following:

Pleasure (Which pleases any of the five senses like good meal, sound sleep, serenity of nature)

engagement or flow (Experience of enjoyable and challenging activities)

Relationships (Societal connection and human relation)

Meaning (Connecting with bigger canvas beyond oneself)

Accomplishments (Achievement of goals or purpose of life)

Here the purpose is how to remain happy, though there is no absolute prescribed rule, but few suggestions may be cited.

- Identify and overcome negative thinking pattern
- Be grateful towards life
- Make positive memories
- Communicate kindly
- Live your values
- Pay attention to the good
- Stay mindful
- Take a break from social media
- Be yourself
- Celebrate life

Happiness is not just being in a pleasant situation for ever, but rather to explore and experience the novel spheres of life. This will contain pain, pleasure, comfort discomfort, success failure and the rational perspective to look at these scenarios will bring the happiness. Thus, happiness is there in the process, let's grab it.

**Dr. Saswati Jena**
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Ego is false confidence, self-respect is true confidence – Naval Ravikant

***Krishna Singh*** *of 2020 batch IT, is currently placed at Amazon. He has good knowledge on Data Science and analytics, and is equally fascinated by the advancements in technology. He has done many internships regarding his field. He was interviewed by Ms. Isha Bharadwaj of 5th semester, CSE for this quarter.*

**Isha** : You have currently chosen data science and analysis as your field. What was the inspiration behind this?

**Krishna** : When I started coding in Python language, I researched different fields in which I could explore myself and groom my career. There I found Data Science and Analysis, where I can get exposure to Machine Learning and many open-source tools. Extracting meaningful data from scratch, analysing those data and applying different algorithms to predict the outcomes of future events fascinated me to dive deep into this field. To get clarity on this specific field, I also did a few hands-on projects.

**Isha** : Would you say getting into Amazon was easy or rather very difficult to achieve? How did you prepare for the job at Amazon?

**Krishna** : First of all, my preparation was not for any specific company, but yes, I prepared myself for Amazon after I cleared the written. Getting into Amazon is neither that easy nor that much difficult, anyone with good technical knowledge and most importantly "can explain their knowledge on a domain " can get a job at Amazon. Amazon not only focuses on your coding skills, but they also look at the knowledge you have in other subjects such as (Internet and Web Technology (IWT), Computer Networking, Linux, and Windows).

**Isha** : Usually students are confused as to which internship to go for. What advice would you give to your juniors regarding this?

**Krishna** : If you have options in your hand, then definitely select the one in which you want to build a career. And if you get a chance to do an internship for a company like Facebook, Amazon, Microsoft, and Google then go for it because these companies will help you to groom your career in the domain you want to.

**Isha** : According to you how can a junior build on his academics to pursue a career in data analytics?

**Krishna** : There are lots of sources from where anyone can learn anything from scratch, and you need to know not just the theory but try hands-on projects to get more clarity. During your academics, you have to focus on some of the subjects like Database, Data warehouse, and Machine Learning. This will help you to build a strong base for data analytics. I will also suggest to choose a language like Python as it will help you with your coding round as well as in the field of data analytics.

**Isha** : How did you manage your time between academics and work?

**Krishna** : “Time Management is the Key" after the end of 2nd-Year I was very clear where I want to devote my time. One should spend time on learning new technology and explore as much as one can. I planned my schedule and stuck to it, which eventually helped me to balance my academics and my preparation for placements. As both are important and at the same time, I made sure that I work on small projects too, which helped me to make my resume different from others.

**Isha** : What do you do in your leisure time? Do you have any extra-curricular activities?

**Krishna** : I am a die-hard cricket fan and love to play cricket. During my leisure time, it depends on my mood what I want to do; I either watch movies, web-series, or plan some trips with friends. I used to miss my early morning classes and even internals just to get 1 hour of extra sleep!

**Isha** : With the competition getting tougher every day, what suggestion would you give to Siliconties being the budding engineers?

**Krishna** : Listen to everyone but do what your mind says because you are the only one who knows what your strengths and weaknesses are. So, work on your weakness and sharpen your strengths even more.

***Himanshu Ranjan*** *of 8th sem. IT excels in competitive coding and has good knowledge on Coding (C, C++, JAVA and Python), Database Systems, Web Development and Operating Systems. The once committed and passionate student is currently placed at Amazon as a system development engineer. He was interviewed by Anshuman Mahapatra of 5th sem, ECE for this quarter.*

**Anshuman** : We know you have a keen interest in competitive coding, would you like to share where you picked up a liking for it. And it is common knowledge that this field is all about perseverance, so how do you keep yourself going when you are having a hard time dealing with a question?

**Himanshu** : Yes, I have had a keen interest in coding since my early days. I started learning programming language in 6th standard itself. I enjoyed writing programs for any problem I could think of that could be solved programmatically. When I got admitted in the college, all I did was exploring different concepts and practiced whatever I learnt. I took one problem at a time and tried to solve it using as many concepts I could. This helped me a lot to clear my doubts, at the same time I gained more confidence in whatever code I wrote. Java is my forte but I am also proficient in Python, C and C++.

Yes this field is about perseverance, so it is very important to keep your calm because if a problem is there, a solution must be existing for it. You need to find the path to that solution. Also there is no hiding away from the problem. Let's face it. You need to write codes no matter what. So it is better to keep learning and practicing.

**Anshuman** : What do you feel is the difference between the coding one does in academics and competitive coding? How do you suggest one can bridge this gap?

**Himanshu** : The Coding one does in academics is the learning phase and you need to be honest with yourself during this phase. Here you can make mistakes, write codes that are not so efficient in terms of logic and complexities (time and space). But in competitive coding, the code must be efficient in every way. The time that you take to think of a good logic which has less time complexity and has less no. of lines is really important. This can be perfected with practice only. There is no short cut to it.

**Anshuman** : Landing a job in Amazon is a dream for many, was it as tough as you had imagined? How did you prepare for it, did you do anything special or was it all about sticking to the basics?

**Himanshu** : To be honest, I did not know that I would get into Amazon. I never prepared for a specific company. All I did was that I stuck to the basics and always remained honest with myself and knew my limitations as a programmer. I believed in classroom teaching and self-study. I never went for outside coaching. Teachers here at Silicon are amazing. You just need to respect this fact and be a little less boastful about what you know and gather as much knowledge as you can from them. Once you star t learning and practicing whatever you learnt every day, it becomes cakewalk to crack any company.

**Anshuman** : Would you like to share how you spend your leisure time?

**Himanshu** : I watch anime. I am a huge Marvel and DC fan and I love to learn more about the characters of both these universes.

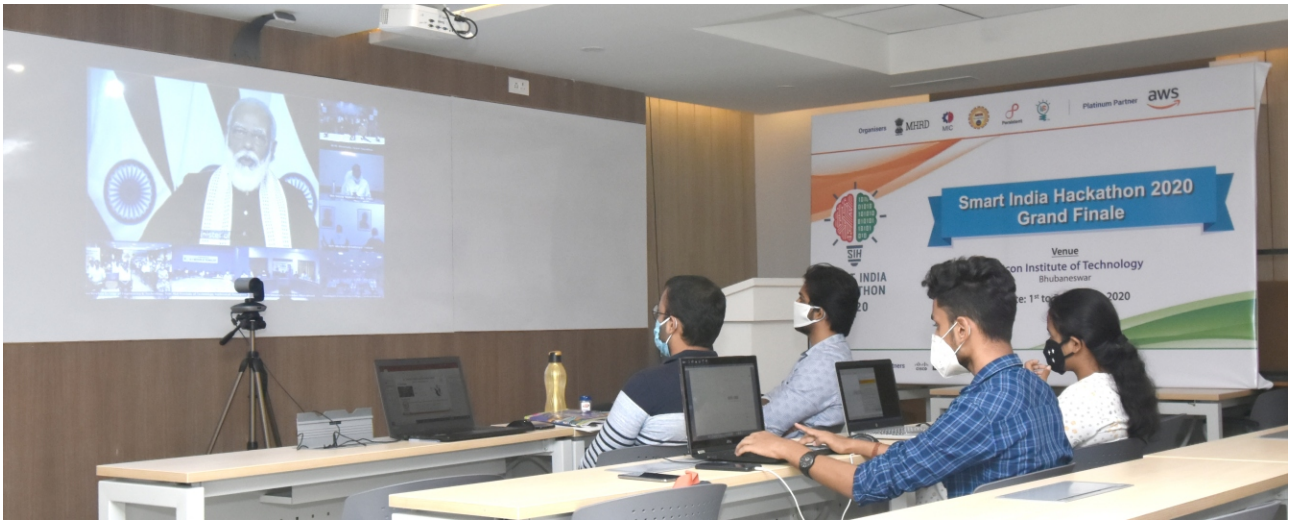
**Anshuman** : What would be your advice for the budding engineers of our institution who are rearing to launch themselves into the corporate world?

**Himanshu** : Enjoy to your fullest every day and college is the best place to explore whatever field you want to. And don't worry much about what is to happen, rather work in the present to get that perfect future that you dream for. In the corporate world, one may feel lost so it is very important to make friends who will stick to you throughout your life.



My opponent is my teacher, my ego is my enemy – Renzo Gracie

**Smart India Hackathon 2020 (Software Edition)**




Two teams from Silicon namely, Creative_Beings and Vektor were selected for the grand finale of Smart India Hackathon 2020 (Software Edition). Their nodal centers were BML Munjal University (Gurugram), Haryana and Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology (Chennai) respectively. The team Creative_Beings became the Winner and received 1 Lakh cash prize. They demonstrated their product "AgroChain" as a solution to the problem "Smart Management of Food Storage And Waste Reduction". The team members were Kiran Kumar Potnuru (7th Semester ECE), Sachin Kumar Rawani (7th Semester CSE), P. Digvijay (7th Semester CSE), Subhadra Panda (7th Semester ECE), Vicky Kumar (7th Semester ECE), Sidhant Ray (7th Semester CSE).

**Technozeal Programs**

Silicon Institute of Technology conducted its Technozeal program in July for teachers and students of higher secondary schools. A course on C++ Programming was conducted from 13th to 17th July 2020. There were 523 registrations out of which 309 participated in the program. 172 of them qualified to receive the certificate. Dr. Bimal Kumar Meher, Dr. Bikram Keshari Mishra, Dr. Pradyumna Kumar Tripathy, Ms. Debasmita Pradhan and Mr. Samaleswari Prasad Nayak were the resource persons. Python Programming for Students was conducted from 20th to 31st July 2020. There were 15 participants in the program. Thirteen of them qualified to receive the certificate. Mr. Pradipta Kumar Pattnaik, Dr. Jaswasi Prasad Mohanty, Dr. Pradyumna Kumar Tripathy, Mr. Samaleswari Prasad Nayak and Ms. Debasmita Pradhan were resource persons. A course on Understanding Higher Mathematics, Simplified was conducted from 11th to 13th August 2020. There were 139 participants. Three faculty members of Mathematics, Dr. Prayag Prasad Mishra, Dr. Subhakanta Dash and Dr. Tushar Parida were the resource persons.

**Webinar on Career Options and Opportunities for Electronics Engineers**

The Department of EIE, Silicon Institute of Technology Bhubaneswar organized a webinar on "Career options and opportunities for Electronics Engineers" on 8th August 2020. Mr. Renjeeth CV, Product designer medical imaging at Philps Healthcare R&D Centre, Pune addressed on Career Options and opportunities for Electronics Engineers. The major focus of this webinar was to provide career prospects of Electronics Engineers in various manufacturing industries such as smartphones, industrial automation systems, smart devices, biomedical devices and aviation systems. Many Faculties and Students from ECE, E&IE, EEE branches participated in the webinar.

**FDP on Computational Linear Algebra**

An FDP on Computational Linear Algebra was conducted from 10th August 2020 to 31st August 2020. A total of twelve sessions, including three hands-

on sessions, each of two-hour duration, were conducted. Twelve faculty members from different disciplines attended the program. Prof. Sudarsan Padhy and Prof Saroj Kanta Misra were the resource persons for theory sessions and Mr. Pradipta Kumar Pattanayak was the resource person for hands-on sessions. The FDP was organized with two purposes, one to facilitate the faculty members conducting classes on this subject for M. Sc. Data Science and the other to provide good input on this subject for research in Data Science and other engineering disciplines.

**Independence Day Celebration**

Independence Day was celebrated on 15th August 2020. Prof. Jaideep Talukdar, Principal, hoisted the National Flag followed by the singing of the National Anthem by all present. Prof. Talukdar addressed the gathering. He talked about the challenges ahead due to Covid-19 and the responsibilities of every citizen to share.

**ARIIA Rankings 2020**

Silicon Institute of Technology, Bhubaneswar was placed in Band B (Rank between 26- 50) under the category of Private or Self-Financed College/Institutes, in the East Region as per ARIIA Rankings 2020. Atal Ranking of Institutions on Innovation Achievements (ARIIA) is an initiative of the Ministry of Education (MoE), Govt. of India to systematically rank all major higher educational institutions and universities in India on indicators related to 'Innovation and Entrepreneurship Development' amongst students and faculties. ARIIA focuses on quality of innovations and tries to measure the real impact created by these innovations nationally and internationally.

ARIIA Rankings 2020 was released by the Honorable Vice-President of India, Shri. M. Venkaiah Naidu on 18th August 2020. A total of 674 institutes (including IITs) participated in the ranking process this year which marks the second edition of ARIIA.

**4th Academic Council Meeting**

The 4th Academic Council Meeting of SiliconTech was conducted on 18th August 2020. While the internal members were physically present in the meeting, the external members Prof. Raja Datta (IIT Kharagpur), Retd. Prof. Ranjan Kumar Bal (Utkal University), Mr. Manoj Kumar Panda (Center Head, TCS, Bhubaneswar), Dr. Debi Prasad Das (Pr. Scientist, IMMT Bhubaneswar), Prof. Banshidhar Majhi (Director, IIITDM, Kancheepuram), Prof. P. K. Hota (VSSUT, Burla), Prof. R. K. Jena (CAPGS, BPUT, Rourkela), and Prof. Debadutta Mishra (IIT Kanpur) attended the meeting online over GoogleMeet. In addition to the regular activities like ratification of online examinations, approval of results, review of other academic activities and events, the curricula and syllabi of different programs were also discussed and approved. Prof. Jayashree Das, Dean (Research) proposed an agenda for the commencement of the Ph.D. program at SiliconTech from AY 2020, which was approved in principle by the Academic Council. The external members of the Academic Council highly appreciated SiliconTech's efforts in continuing all academic and co-curricular activities despite the ongoing pandemic situation.

**INDIA QUIZ**

India Quiz was conducted on 22nd August 2020 as part of the Independence day celebration on a wide range of topics from mythology to the world of movies. A total of 114 students participated in the online prelims round. The top eight students qualified for the final. The final round was conducted on an online platform where finalists went through different rounds to reach the conclusion. Ashutosh Mallick emerged as the winner closely followed by Shreya Saloni Gantayat as runners-up. Rohit Kumar Nayak settled for the Third place.



Your ego screams for people to acknowledge you. But you must do nothing.
Take it. Eat it until you're sick. Endure it. Quietly brush it off and work harder – Ryan Holiday

**Farewell of MCA 2020 Graduating Students**

The Farewell Function of MCA 2020 graduating batch was organized online on 5th September 2020 using the zoom platform. The function was smooth without much technical glitch. Our social media team led by Mr. Satish Kumar Das organized the program. The Best Students Award for MCA 2020 was awarded to Mr. Ayan Mukhi.

**Foundation Day Lecture 2020**

This year the Foundation Day Lecture was delivered by Prof. Suddhasatwa Basu, Director, CSIR-IMMT, Bhubaneswar. He spoke on "Role of Education in Innovation, Start-up and Entrepreneurship" which was delivered on an online platform. Around 70 faculty members and staff attended the lecture in the Auditorium. Several students and guests also watched the same online which was broadcasted live by our social media group. Two competitions were conducted online for the Foundation Day. One was an Elocution Competition and the other one was Technical Quiz. The prizes for the same were announced during the program.

**Webinar on Opportunities for Start-up in Post-Covid Situation**

The Entrepreneurship Development Cell organized a webinar on Opportunities for a start-ups in Post-COVID Situation on 12th September 2020. Dr. Mahendra P. Agasty, FIC ED Cell welcomed all the participants to the webinar and gave an introduction about the webinar at the beginning. The Entrepreneurship Education Champion, Mr. Deepak Kumar Khaitan, was the chief resource person on this webinar. About 300 students and emerging entrepreneurs participated in this online program from different parts of the country.

**Advanced VLSI Lab Sends IC for Fabrication**

The Advanced VLSI Laboratory at Silicon

**NEET and JEE Exams at SiliconTech**

The Odisha State Government's decision to go ahead with JEE Main 2020 and NEET 2020 examinations, despite the COVID-19 pandemic, was a welcome move and SiliconTech stood by this decision and extended a helping hand in this regard. For aspiring students who had been toiling very hard, amidst uncertainties, this decision came as a sign of relief after a long wait.

SiliconTech was selected as one of the nodal accommodation centers for the JEE Main examination (1st - 7th September 2020) and one of the examination centers for NEET on 13th September 2020. Examination seating arrangement for 800 NEET aspirants along with accommodation, food, and transport facilities for the aspiring students and their parents were provisioned in our Institute in sync with the strict COVID-19 protocols concerning sanitation and social distancing norms to ensure that the students have a safe and smooth experience.

under the ECE department is committed to provide world-class research and training facility for students and faculty members in semiconductor electronics. The lab is equipped with industry-grade IT and CAD infrastructure to execute turn-key projects from specifications to physical design. Our partnership with some of the world's biggest semiconductor consortium and manufacturing companies including IMEC, Belgium, X-FAB, Germany and Muse Semiconductor, USA, allows us to fabricate microchips cost effectively as part of that mandate, the Lab is collaborating with Boston Microtechnology, a semiconductor start-up in the Greater Boston area, to design mixed-signal IP blocks for a power management integrated circuit (IC). We designed and laid out a Serial Protocol Interface (SPI) for a 32-byte calibration register, a bandgap voltage reference, a temperature-independent current source, a programmable slope current generator for a ring oscillator, an 8-bit DAC current source. The first revision of this IC was sent for fabrication on 14th September 2020 using an 180nm Silicon-on-Insulator (SOI) CMOS process.

**Farewell of B. Tech. 2020 Passing Out Students**

Silicon organized the Farewell Function for the graduating batch 2020 (B. Tech.) on 19th September 2020 in an online mode with live video streaming on the social handles of the Institute. Students participated in full zest and even shared nostalgic memories of graduating from Silicon. Messages from staff and faculty were shared. A collage of old photographs and videos of the passing out batch covering different past events and activities was presented. This, perhaps, made the passing out students nostalgic and teary-eyed. There were a few cultural performances too. The Best Student of the Year 2020 award was given away to Akshay Kumar from the IT branch.

**Webinar on Recent Trends in VLSI Verification**

The Department of EIE, Silicon Institute of Technology, Bhubaneswar organized a webinar on "Recent Trends in VLSI verification" on 20th September 2020. Dr. Ranjan Kumar Barik, senior verification engineer, XILINX, India, focused on making the students visualize the role of an engineer in a VLSI industry as a verification engineer. He highlighted some recent technologies of the VLSI industry and discussed on selecting a career as VLSI Verification Engineers. Students from different electronics streams of Engineering participated in the webinar.

**MOU between SiliconTech and Phoenix Robotix**

An MOU has been signed between Silicon Institute of Technology, Bhubaneswar and Phoenix Robotix Pvt. Ltd., (PRPL) on 26th September 2020. Dr. Jaideep Talukdar from Silicon and Mr. Amiya Kumar Samantray from Phoenix Robotix were the signatories. This MOU targets collaborative efforts of SIT and PRPL in the broad areas of IoT and Industry 4.0. This MOU will enable faculty members, research scholars, and students of SIT get an exposure to the world of IoT and Industry 4.0 using existing/future commercial products and solutions developed by PRPL

**Faculty in News**

- Dr. Sudhansu Mohan Biswal, Professor from the EIE department was awarded his Ph.D. degree from Maulana Abul Kalam Azad University & Technology on July 4, 2020.
- Dr. Judhistir Dash, Professor from the ECE department was awarded his Ph.D. degree from Jadavpur University on August 1, 2020.
- Dr. Kasturi Dhal, Professor from the CSE department was awarded her Ph.D. degree from KIIT University on August 8, 2020.
- Dr. Soumya Ranjan Samal, Professor from the ECE department had his patent published on July 31, 2020.



The Ego's job is to kill everything but itself – Byron Katie

1. Rewoke Technologies, a Full-Stack firm that develops products ensuring a smooth digital future, selected one 2021 graduating student from B.Tech. for internship on 1st July 2020 with a monthly stipend of 5K.
2. Spikewell India Private Limited (a fully owned subsidiary of Spikewell LLC, USA) conducted a recruitment drive for the 2020 graduating batch on 25th July and selected three B.Tech. students for internship-cum-placement with 20K stipend per month and 6 LPA package after successful completion of internship.
3. DXC Technology, a leading global software company offering secured, scalable digital IT solutions across differentiated industry domains in public, private and hybrid clouds conducted on-line Aptitude test and Interviews for the 2020 graduating batch students on 9th and 24th July respectively. Fourteen B.Tech. students were selected in the recruitment drive conducted in two phases with 3.6 LPA.
4. Cozentus Technologies Pvt. Ltd, a company focused on providing IT solutions using emerging technologies, conducted a virtual recruitment drive for the 2020 graduating B.Tech. students in two phases between 24th to 28th August and seven B.Tech. students were selected in the drive with 4 LPA CTC. Six students from 2021 graduating batch were also selected for internship in Mobile Apps and Data Science with a monthly stipend of 10K.
5. Centroxy Solutions Pvt Ltd, specialized IT service providers in Web/ Mobile technologies and Databases, conducted an internship drive for the 2021 graduating MCAs on 24th August 2020 and selected four MCAs with a monthly stipend of 5K.
6. Larkai Healthcare Pvt. Ltd., A start-up from Eastern-India working in the Health Sector, conducted an internship-cum-recruitment drive for the 2021 and 2022 graduating B.Techs on 4th July and 20th August 2020. While three 2022 graduating B.Tech. students were selected for internship only with a monthly stipend of 5K, two 2021 graduating B.Techs got selected for internship-cum-placement with 8LPA offer.
7. Amazon Inc., an American Multinational Technology Company focusing on e-commerce, cloud computing, digital streaming and artificial intelligence, selected two 2020 graduating B.Techs from the IT branch with a high package of 15.5 LPA after their six months internship with Amazon.
8. Pre-placement Recap/ Brush-up Classes with Mock Tests were conducted on-line for the 2021 graduating students divided into two groups like every year. The on-line modules of 19 hrs for each batch were from 5th to 13th September covering Aptitude, Verbal and Soft skills with a thrust on Virtual Interviews and preparing an effective resume. The Soft Skills sessions were taken by Viswanadh Raju, Global Head of Talent Acquisition at AXISCADES covering topics like Industry Expectations from a Fresher, Future Skills required, Preparing an Impressive Resume, Networking, LinkedIn Profile, Virtual Interviews know-how etc.
9. Pre-placement on-line training classes for the 2022 graduating students started from 10th September 2020. These classes are attendance driven and built into our Academic timetable.
10. GATE 2020 on-line in-house preparatory classes for 30 enrollments have started with experienced GATE qualified external resource persons. GATE is a gateway to enter into institutes of repute for M.Tech./ Ph.D/ Fellowship, join PSUs or MNCs with high packages.
11. A popular learning app BYJU's, an Indian educational technology (edtech) and online tutoring firm, judged as world's most valued educational technology company today, selected Monalisha Ojha from 2016-2020 batch EEE branch with a package of 8LPA per annum.
12. Sixteen students from 2021 graduating batch at Silicon got selected for the entry level role of Systems Engineer at Infosys after successfully clearing the Infosys Certification Test (InfyTQ) and the HR interview held on 7th March 2020. Silicon is proud to have the highest hit-ratio amongst the participating colleges in Odisha. These students will get an opportunity to appear for niche roles at Infosys with differential salary.

| Sl. No | Name | Branch |
|---|---|---|
| 1 | Rahul Dev | CSE |
| 2 | Subham Ray | CSE |
| 3 | Jagadish Adla | CSE |
| 4 | Aman Anand Bhola | CSE |
| 5 | Kiran Kumar | ECE |
| 6 | Debashis Jena | CSE |
| 7 | Ahwan Mishra | CSE |
| 8 | Asfa Siraj | CSE |
| 9 | Hitesh Hiranmaya | CSE |
| 10 | Swaraj Priyadarshan Dash | CSE |
| 11 | Rahul Kumar | CSE |
| 12 | Sachin Rawani | CSE |
| 13 | Amit Kumar Pradhan | CSE |
| 14 | Anurag Upadhyay | CSE |
| 15 | Nitish Kumar | CSE |
| 16 | Ruchiramya Tripathy | CSE |

**Student Achievers**

- Archana Prajapati (EIE) and Rupashree Panda (ECE) from Batch 2020 joined Neoma Business School, Paris and Birla Global University to pursue higher studies in Management in July 2020.
- Sagar Kumar Agarwal, GATE 2017 qualifier from ECE branch of Batch 2013-2017 at Silicon and M.Tech. from ISM (Dhanbad) joined Indian Institute of Space Science and Technology (IIST) as a Ph.D Scholar. Sagar has taken a research topic in the area "Human Space Program 2025" an ambitious ISRO mission to have an Indian Space Station by the Year 2025. IIST is the first Government aided Deemed University in Asia and set up by Indian Space Research Organisation (ISRO) to be solely dedicated to the study and research of Outer Space. Dr. A.P.J. Abdul Kalam, a renowned technocrat and former President of India was the first Chancellor of IIST.
- Raju Yadav, GATE 2020 qualifier from 2015-2019 batch ECE branch got admission for M.Tech. in IISc, Bangalore. Raju, also, got selected for Scientist-B position in DRDO, a premiere R&D wing of the Ministry of Defence, GoI, working with a vision to develop cutting-edge defence technology and hence achieve mission of self-reliance in defence technology and systems in accordance with the requirements of the three Services of the nation.
- Animesh Kumar, GATE 2020 qualifier from 2015-2019 batch AEI branch got admission into NIT, Agartala for M.Tech. in VLSI Design.
- Gyanaranjan Sahoo (ECE) and Charu Charan Kunal (EEE), GATE 2020 qualifiers from 2015-2019 batch joined MNIT, Jaipur for M.Tech. in VLSI Design and Power System Engineering respectively.
- Sanjog Samuel Samantray from 2018-2022 batch CSE branch got selected as "D2C Chief Igniter" to start a D2C Igniter Club at Silicon. This club under the Dare2Compete (D2C) platform will ignite spirit of competitiveness among the students and ensure that talent on campus can connect with opportunities of the universities and companies on a global scale. Sanjog is one of the 6 students selected from Odisha out of 2700+ registrations across the country.

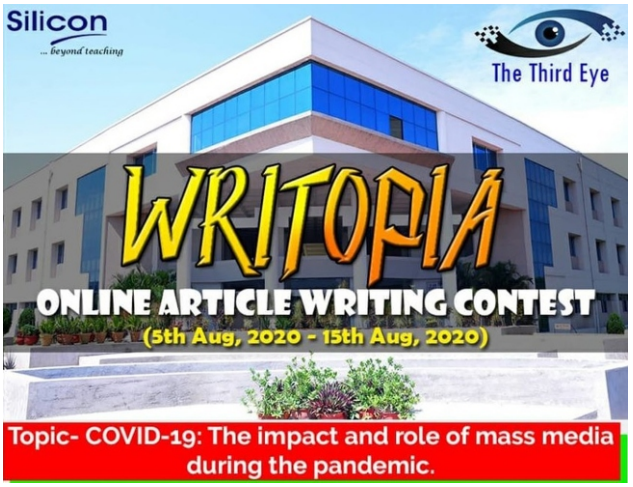
## Condolences

*All students and staff members of Silicon Institute of Technology convey their deepest condolences on the sad demise of Raja Kumar, 3rd Sem. ECE branch, and pray for his soul to rest in peace. May God provide strength to his family during these difficult times.*



Talking much about oneself can also be a means to conceal oneself – Friedrich Nietzsche

**Writopia**




The Literary Club with the initiatives taken by the members of 'The Third Eye' the in-house newsletter of the institute organised 'Writopia' an online article writing competition among students of 11th and 12th standards from different schools and colleges in India from 5th to 15th August 2020. It was organised under the auspices of the Admission Cell. Ms. Ipsita Swain from Vedic Junior College, Sambalpur became the winner, Mr. Vishwajeet Ghosh from DAV Public School, Sector 4 Bokaro Steel City was adjudged the First Runners-up and Ms. Anuska Patel from Vedic Junior College, Sambalpur was adjudged Second Runners-up.

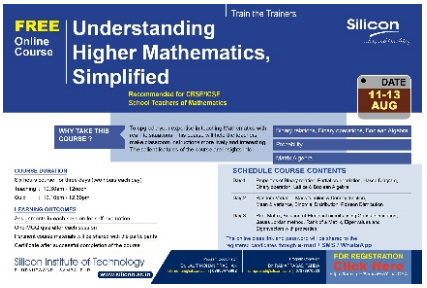
**Independence Day Celebration**

The Independence Day was observed on the institute campus on 15 August 2020. Prof. Pradeep Kumar Mishra, Director of the institute hoisted the National Flag and addressed the members of faculty and staff. The day was observed while following all the norms of COVID19. Prof. Mishra shared his concerns on how the pandemic has affected lives around the world and reflected upon how to extend academic and moral support to students amidst the pandemic.

**E-FDP on "Application of Remote Sensing and GIS in Civil Engineering"**

A Four-Day National e-FDP on "Application of Remote Sensing and GIS in Civil Engineering" was organised by the Department of Civil Engineering from 7th to 10th July 2020. Dr. Subashisa Dutta Professor, IIT Guwahati, Dr. K.C. Tiwari Professor, Delhi Technological University, New Delhi, Dr. Prashanth J Assistant Professor, NIT Silchar and Dr. Ratnakar Swain Assistant Professor, NIT Rourkela enriched the programme with their insightful deliberations.

**Train the Trainer' Workshop on Higher Mathematics**




A Three-Day Workshop under the 'Train the Trainer' initiative of the institute was organised for teachers of Mathematics in Higher Secondary institutions from 11th to 13th August 2020. Teachers across the country participated in the programme titled "Understanding Higher Mathematics, Simplified" where the resource persons reflected upon how to advance the students' knowledge while dealing with school curriculum.

**Webinar on "Digitalization in Civil Engineering**

A state level Webinar on "Digitalization in Civil Engineering and its effect on Career Advancement" for Diploma Engineering students in the discipline of Civil Engineering was organised by the Department of Civil Engineering on 25th September 2020. Mr. Sudeep Kumar Patel, Senior Assistant Professor, CE, SIT SBP, Mr. Ashutosh Rath, Assistant Professor, CE, SIT SBP and Mr. Rasmiranjan Samal, Assistant Professor, CE, SIT SBP reflected upon the focus area of the webinar and also steered this programme as an academic outreach programme of the institute.

**Expert Talk**

Dr. Rama Ballav Swain, Former Engineer-in-Chief (Civil), Department of Works, Government of Odisha delivered an Expert Talk on 15 September 2020 on the occasion of Engineers' Day. Prof. P.K. Mishra (Director, SITSBP), Prof. Enakshi Das (Dean, SITSBP), Members of Faculty & Staff and about 60 Students of the institute participated in the online session.

*Dr. Debasish Nayak, is a Senior Asst. Professor in the department of Electronics and Instrumentation Engineering who recently completed his Post Doctorate from University of Texas, Edinburg, USA. In this interview taken by Anshuman Mahapatra of 5th sem ECE, Dr. Nayak talks extensively about his research and his areas of interest.*

**Anshuman** : Congratulations on completing your post-doctoral studies from a reputed institution like the University of Texas. Would you like to talk about the field on which you did the post-doctorate and how was the experience?

**Dr. Nayak** : Thank you very much. I always wanted to use my expertise for a great social cause. Cochlear implant is a device, which is used by the hearing-impaired individuals for better hearing. Though patients already use the device, its experience is not so satisfactory and there is a lot of scope for its improvement. I was working for enhancing the performance of the cochlear implant by optimizing the on chip memory present in it. I had also designed few software-based tools, which will be used to collect the patient's auditory response, and it will analyze this data and provide few auditory performance indices.

Definitely, the work experience in such a reputed university in the USA was fabulous. It gave me a lot of learning and the scope to explore various cutting-edge research domains.

**Anshuman** : You did your PhD on VLSI, how did you come to develop an interest in the subject?

**Dr. Nayak** : From my childhood, I was curious in electronic gadgets. Before two decades when mobile phones came to market it was capable of voice call only. In a year or two, the FM radio was integrated into the mobile phone. A few years later a camera was integrated into it. Then a good touch screen was integrated. Then the GPS was integrated and the phone was capable of browsing internet and saw many more improvements in its functionality.

When I analyzed it, I found that the small processor placed inside the mobile phone is performing the entire task and since the capability of the processor is increasing day by day, it was possible to integrate more and more functionality into the phone.This gave me a strong interest to work in the field of VLSI which is the backbone of the processor and all the electronic gadgets.

**Anshuman** : Would you like to tell us about your hobbies and interests?

**Dr. Nayak** : Hobbies keeps on changing with time and scopes available. Game design was my hobby earlier. I had designed few games and other applications using Java during my B.Tech. career. However, once I entered into PhD and active research, innovation in memory technology in various ways has become my first priority. Listening to music and playing Tabla and violin are my interests.

**Anshuman** : You have had a long and diverse career, how did you manage to keep yourself motivated throughout this long journey?

**Dr. Nayak** : Yes, it is true that I have a diverse career. After working in industry for few years, I switched to academics as I had a great interest in academics and higher studies. I had a dream to pursue doctoral in Electronics. When you think about



The only way to escape the corruptible effect of praise is to go on working – Albert Einstein

achieving your dream, all the efforts and pain you pay for it seems negligible.

**Anshuman** : In the course of your career, you have had industry experience as well as research experience. What inspired you to choose teaching as your profession instead?

**Dr. Nayak** : I believe that, be it the last student of a class or the first student, he or she has a tremendous potential to have an innovative solutions to a problem or to design an innovative problem that can be solved by the engineers to resolve a great social issue. Academics is the only field, which gives me access to hundreds of students that is hundreds of genius minds. Staying in either standalone research or in industry does not give me this advantage and does not help me to fulfill the social responsibility I have for my own motherland.

**Anshuman** : To finish off, what advice do you have for students who aspire to pursue a career in the field of VLSI? How can they build on their academics to pursue their dream?

**Dr. Nayak** : My advice to students is that if you are interested in VLSI, then you have to keep patience and work hard. The initial days will be difficult. However, it will pay you later in your career. You should have a strong fundamental knowledge in RC network, Digital Electronics circuit.

Another rising domain in today's world is IoT. Since large number of IoT nodes are used for data sensing purpose in many remote places, replacing their battery periodically is a much difficult task. So designing IoT node to operate using the power collected from the surrounded environmental sources is gaining much popularity, which is termed as green IoT. It is designing the chip present inside the IoT node much low power consuming or to be capable to run in the presence of interrupted power source collected from surrounding. Therefore, this is also a pure application of VLSI

My advice to the students is that if they can have some basic knowledge in this field along with their VLSI background knowledge, then it will also help them to enter to the domain of IoT.

## 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 Essay, 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.*

**The Forgotten Traditional Jewellery of Odisha**

Odisha is called as the soul of India. Odisha is known for its culture and heritage. The soul of gold-loving India, Odisha is fond of jewellery. Odisha has its own famous Traditional jewellery known as "Tarakasi" a type of silver filigree. Tarakasi is rich in patterns and designs and is one of the most exquisite forms of silver craft. The beauty of filigree spread to Asia around 2500 BC. The capital of British Odisha Cuttack is the home of Tarakasi where it flourished and nourished.

Tarakasi is more than 500 years old. Traditional jewellery of Odisha is made up of 90% pure silver and a very delicate process involving silver threads. The Konark Temple, *Konark Chakra* and the still from Bhagavad Gita depicting the chariot of Arjuna driven by Lord Krishna are some great mementos of Tarakasi. With modernization and globalisation the beautiful traditional jewellery of Odisha is being forgotten.

The Cultural vibrancy of Cuttack comes out during Dussehra. Tarakasi jewelry is used at pandals to adorn the idols of goddess Durga. The pandal at Chandni Chowk is very famous. There the complete crown and other jewelleries of Goddess are made up of silver, popularly known as Chaandi Medha. In 1955 for the first time the deity was decorated with silver ornaments at Choudhury Bazar. Tarakasi workshops can be found at Dolomundai, Nayasarak, Choudhary Bazaar, Balu Bazaar and Bania Sahi in the Silver City Cuttack. In 2006 the Sheikh Bazar committee modeled the backdrop of a pandal using 450kg of silver. it is the maximum in the history of the state even today.

Filigree work found in Indonesia is similar to that found in Odisha. This shows the trade relations of India and Indonesia in the 15th and 17th century. Tarakasi along with the tribal jewellery of Odisha mostly in the form of a choker, a 'Mekhalaa' (belt), anklets, bells, 'Kapa' (earrings) and a 'Seenthi' (ornament work on the hair and forehead 'padaka-tilaka' (a long necklace), 'Bahichudi' or 'Tayila' (armlets), 'Kankana' (bracelets). Most surviving form of filigree will be the anklets; silver anklets are a household name in Odisha. It is worn by women as their traditional every day as well as festive wear.

Odissi, the traditional dance of Odisha has been performed all over the world. It is the only Indian traditional dance form present in Michael Jackson's hit single 1991's "black or white?" Traditionally Odissi dancers wear Tarakasi ornaments, but now cheaper aluminum jewellery is replacing beautiful Tarakasi. The silver craftsmen of Odisha have inherited the craft from their forefathers. This 500 years old legacy has been transferred from generation to generation. In recent times Tarakashi is going through a tough time and questions are being raised on its survival.

Tarakasi is our legacy. We need to make Tarakasi sustainable and popular. The craftsmen are needed to be funded, trained and provided with the required machinery.

In today's generation there are a few people who are determined to take Tarakasi to national and international grounds. Three Odias Ashish, Nisha and Hemant have made a brand "silverlinings" to sell Tarakasi jewellery worldwide. Tarakasi is a pure form of filigree magic. We need to take it forward for our upcoming generations. This pure form of filigree Magic deserves the honour to be treasured and cherished. People need to understand the importance and the beauty of Tarakasi work and keep the legacy alive.

Alisha Das
*EEE, 3rd Sem.*

**A Poem of Motivation**

On days, when you feel the sky is falling apart,
And you don't know where to start,
Take a deep breath, remember there will be a light,
You are a fighter, you can and will fight.



A man wrapped up in himself makes a very small bundle – Benjamin Franklin

Life is a journey, there is immense pain,
Remember, there will be no rainbow,
without the rain.
Never lose hope, believe you are great,
Believe in yourself, and you can change your fate.

And never think of giving up,
Talk to people, read a book, listen to music
and finally rise up.
Coz, winners never quit and quitters never win,
There can be hurdles, but don't stop walking.

Accept your failures, learn from them,
Even diamond was a piece of coal
before it became a gem.
Coz mistakes are art, appreciate your creativity,
Your life is a gift, fill it up with love and positivity.

If you find people, who lost the hope,
Appreciate them, build up their hope.
Believe in God, have the faith,
Learn to Normalize the talks of mental health.

**Sulagna Nandi**
*CSE, 5th Sem.*

**Managing Your Thoughts**

Thoughts are the ideas, opinions, plan, etc that are formed in your mind. Moreover, it is the action or process of thing.

Thoughts play an important role in human life. Though it looks simple, it's like a spider web having several links with your life. They indirectly play a key role in the future. Human brains are a mixed combination of positive and negative ideas. It is always suggested to have positive thoughts in your mind and we consider a person as "good" if he has only positive thoughts in him but it's a hoax. No one can have control over their thoughts, and it's absolutely fine to have both the thoughts. It is never bad if some negativity strikes into your mind. Most people fear it by thinking about it and end up with so-called depression. Negative thoughts are prime reasons for depression. One person can think anything in his mind, positive or negative doesn't matter much but it matters

a lot when your thoughts are converted into actions. Your actions describe you in this world.

Life will run smoothly if one learns to manage his/her thoughts. Different people have different thoughts and they should know how to manage them. It is not so difficult to manage your thoughts as people think. You just need to have some basic rules in your life which you need to follow.

It is widely noticed that people usually get affected by over-thinking. Over-thinking is something which can increase your thinking process and at the same time, it can also make you depressed. When something unusual happens in someone's life, they start over thinking about it. Even there are people who think a lot on small matters too and their thinking never stops and hence it leads to disappointment. We can never conclude that over-thinking is bad or good unless we have a clear knowledge of the subject.

Lastly, I would like to say that humans cannot decide what to think but they can convert their negative thoughts into positive thoughts and focus on their future. It is sometimes best to prioritise your thoughts and focus on those thoughts that will lead to success and you can suppress your other thoughts or you can convert them into something productive. We are human beings and it's natural to have many things circulating in our mind. We need to think of solutions rather than complaining about it.

**Pratik Mohanty**
*ECE, 5th Sem.*

## The Dark Truth About Racism in India

51,000, that's the number of African American humans that are born into this world every single day. You may ask "So what? A lot of births take place daily, nothing special about it". Okay, then Let me rephrase it a bit. 51,000, that's the number of new names added daily to the never-ending list of victims of racial discrimination and bigotry in this world. Now, that shifts our perspective immensely. Sure, assuming that the world will be all the same even in the distant future is pretty idiotic but think about this for a minute, the civil rights act was signed in America in 1964, and 56 years after that historic event which promised to end discrimination and racism, an African American man is killed, or rather murdered at the knees of a police officer while screaming in agony 'I can't breathe'. His crime? Being genetically different from people around him. The entire world stopped breathing for a few moments as we watched George Floyd's life leave his body. Since the video went viral, a lot has changed in the world. Americans have taken to the streets and have started protesting in large numbers despite the current ongoing pandemic regulations in place. But as America burns, we Indians have started wondering about whether this is our war or not. Racism is not something that has bothered us for centuries so why should it now?

The problem at hand, is not that racism doesn't exist in India, but rather people think that there are lot bigger problems here that they have to worry about. This is the reason why people don't bother if they call a dark skinned person 'Kalu' or a hard working north-easterner 'Chinki' without giving it a second thought. And this happens throughout India. Even as I write this, all those snarky comments are coming back to me that I made to my dark skinned friends. We compartmentalize racism just because we 'do it fondly' or because simply it doesn't affect us. If the spine wrenching death of George Floyd has taught us anything, it's that we have to change now or watch the world around us burn. Racism in any form is not okay and being fairer or darker doesn't give or deprive us of any fundamental rights endowed to us by our constitution and the universal declaration of human rights. It is high time that we look around and see people as people and racists as unwanted scum of this society.

If you still think that racism is a thing of the west then let me remind you about the tireless war Dr. Bhimrao Ramji Ambedkar fought against untouchability during the 1950s. Caste based discrimination is no different from race based discrimination. Right from the times of our great great grandfather, people have naturally taken it upon themselves to brand a caste as higher and another caste



The ego is only an illusion, but a very influential one. Letting the ego-illusion become your identity can prevent you from knowing your true self – Wayne Dyer

as lower in an imaginary hierarchy determined by abstract factors that no one can properly explain.

We have to educate our kids about equality if we want to build a better world. We have to start thinking different and take actions wherever possible to break the chain. And unless we do that, all of us are collectively responsible for the Death of George and every other person that has been or will be killed due to discrimination in this world.

**Swaraj Baral**
*CSE, 4th Sem.*

**Where to Go?**

The world is in tatters, where to go!
I see flickering lanterns in a row,
Devil on its way to home
Has set free all evil, from its dome.

It has absorbed all the light into him,
The atmosphere now, looks too dim,
Confused with the entangled relations,
I see bodies roaming without emotions.

The bells of war are ringing loud,
Less humans, more robots in the crowd,
Social media flags are flying high,
Blind with trends, we have lost the power
to think and try.

Through the curtains,
Of my window glass,
I see the agitation in the mass,
I see the settlements of pollution there,
And corruption too, is no rare,
Money is the ultimate victory for them,
It's a decade or more, but the place is still the same.

I see houses, but not a single home,
Filled with gadgets paving ways to the catacomb.
The walls of empathy are breaking down,
Helpless, I sit with a frown,
The pillars of love are falling low,
In this catastrophic world where to go?

**Arpita Mohanty**
*CSE, 5th Sem*

***About the author:***

*Shiv Patnaik is from the 2012 graduating batch of Silicon. Post 4 years of working in roles from business development, IT Development & Consulting, he completed his PGP in IT, Strategy, and Public Policy. Afterwards, he joined AB InBev, the world's largest beer company and the parent company for Budweiser, Haywards, Knockout, and ~450 other brands, and was based out of Leuven, Belgium until April. He currently works in Lowe's Innovation Labs (the Corporate Innovation Accelerator for the fortune 50 home improvement firm Lowe's Companies Inc.) as the Sr. Innovation Program Manager heading Program Management and Partnerships.*

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***Few Musings…***

Pacing up and down from the boys' hostel to Ashok Bhai's store, wondering why did I get myself into Engineering during my very first semester in Silicon to leading the management team for a massive brewer in Belgium to currently leading Program Management for one of the biggest accelerators in the country, life has been truly amazing.

While in hindsight it all seems to have worked out well, don't let the ending fool you into believing that I had figured everything out. I didn't, and you know what? I am glad I did not. These experiences helped shape how I perceived different situations and the decision I took.

I, by no means, have "made it in life" yet, and hence I am in no position to preach a specific framework to success (I doubt if there exists one). But what I would love to share are a few hacks/principles which I wish I had known earlier.

**Be Flexible**: The world can change in an instant. Skills relevant today can become redundant in less than half a decade. It's prudent to stay well informed on what's happening out there.

**You wonder how?**

i. Seek 1-2-1interaction with people with more remarkable experience to pick their brains and seek soundboard ideas. Take them out for dinner, if that guarantees you some 1-2-1 time with them.

ii. Apply for internships, be it paid or unpaid. This will help you eliminate job roles you don't want to do, or to find something you love.

**Writing stuff down makes it more transparent**: Each of us can come up with tons of ideas. But with the daily distractions. We simply forget the right ideas or insights we have. Putting our plans and ideas into words makes for coherence of thought and improves accountability to follow it.

**Progress is not linear**: Whatever goal you've set your sights on, you should be making consistent efforts towards it. You will rarely start out correctly, but if you keep making small changes consistently, you give yourself the chance of achieving the results you want. A book on this titled *Atomic Habits* by James Clear may be helpful to you.

**Always give more than you take**: It almost sounds like a line from the *Bhagavad Gita*. But it couldn't be more accurate. Your relationships and friendships will thrive when you strive to give more than you get out of it.

A book on this: *How to make friends and Influence People* by Dale Carnegie

**Be hungry to know more**: Never Stop Learning (Read Read Read) there's so much to know and so little time: For example, I wish I knew about concepts on Product management, or what are the other professions there are apart from being a Software engineer or how to read through a balance sheet to invest in Equities of companies. Just the pursuit of this curiosity will open so many doors. You may be studying Engineering. But this doesn't stop you from exploring what's out there.

## The Joy of Gardening

I have always been in love with the nature since I can recall. Gardening is something I have always done and developed instincts on how to grow healthy plants. Off late, I have been spending time learning how to care for individual plant varieties. Gardening helps me to connect with nature and has a refreshing effect on my mind. If you are looking for inner peace, gardening might work for you. I have a small garden with around 50 varieties of plants on the ground and in pots.

Below are some gardening tips which I have learned along the way that might get you going:

- Start with plants and herbs that will give you aesthetics, health benefits as well as ease of maintenance. A great selection of such plants is: Pothos (Money plant), Carom (Ajwain), Coleus, Mint, Wandering Jew, Arrowhead, Pedilanthus (Devil's backbone) and Aloe vera. These plants grow both in pots and on ground. These plants require least effort to maintain.
- In the next stage, you may expand your selection to: Caladium, Anthurium, Peace Lily, Monstera, Calatheas, Aglaonema, Oxalis, Snake plants (air purifiers), Spider plants, Basil, Lemon grass and Curry leaves.
- To prepare the soil for pots, you can use a mix of natural soil, vermicompost and coco mix that will keep it light. For planting on the ground, use a mix of natural soil, vermicompost and sand to keep it airy.
- Watering should be done in moderation. Sprinkling style of watering once a day simulates natural rain and washes the impurities that settle on the leaves choking the photosynthesis process.
- I have seen plants do well together due to healthy competition. So, plant them in groups if possible.
- Once you setup your small garden, the average time you need to spend to maintain it is 20 minutes a day and one or two hours on Sundays.
- Keep the necessary gardening equipments handy for ease of maintenance. Gardening gloves are a must.
- Loosening of the soil around the base of the plant on weekly basis helps in producing healthy growth in plants.

Watching the plants grow in front of my eyes gives me immense joy and I am sure you will experience the same as well.

Happy Gardening!!!

**Dr. Pulak Sahoo**
*Associate Professor, MCA Dept.*

## Periodic Table for Cyber Security

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Executable Files | | | | | | | | | | |
| Macro | | | | | | | | | | |
| Exploit | | | | | | | | | | |
| Web Crawler | | | | | | | | | | |
| Adware | | | | | | | | | | |
| Back Door | Virus | Worm | Trojan | Wiper | Brute force | Captcha Bypass | Payload | Hacking | Adv Persistent Threats | Theft |
| Root Kit | Boot kit | Spyware | Point of Sale | Malicious Bot | Denial of Service Attack | Man in the middle attack | Botnet | Network Attack | Hijacking | Fraud |
| Logger | Browser Hijacker | Malicious Mobile Code | Point of Sale | Ransom Ware | Voice Fabrication | Data Diddling | Unwanted Apps | Drive by download | Cyber Extortion | Terrorism |
| Social Engineering | Crime ware | Phising | Spear Phising | Whaling | Spam | Water Holing | Malicious Research | E mail Crime | Cyber Espionage | Warfare |
| Cyber Squatting | Stolen Devices | Software Piracy | Malicious Insider | Deceptive Callers | Block Chain Majority Attack | Block Chain Price Manipulation | | | | |

Monomers: Basic monomers (could be benign or malicious dependent on developer's intent); Malicious monomers

Polymers: Malware polymers (usually contain basic and or malicious monomers); Technical stealth polymers (usually contain basic and or malicious monomers); Email or messaging polymers (usually contain basic and or malicious monomers); Hybrid polymers

Composites: Composites (usually contain polymers); Complex composites (usually contain composites)

Cyber Harassment

Pogrebna & Skilton (2019) Navigating New Cyber Risks http://bit.ly/MYCYBER

In cyberspace, where every business is considering digital economy, the cyber security threats are looming large. But it isn't easy for every organization to understand and comprehend the scope and sources of such threats. Various cyber analysts have come up with different classifications but there is no hard classification available till date. The one shown above is a Periodic Table for cyber security threats similar in structure to the Periodic Table of elements. The table is a self-navigating tool for an initial analysis and understanding of the various cyber threats and their impact.

The Monomers which are coded in grey and orange color are basic threats that can behave as benign or malignant depending upon how they are applied. Polymers are threats of higher degree and are usually malicious. They are classified according to the mechanism they use to attack or intrude into a system. Composites are threats of highest degree which have the capacity of impacting an entire network and cause large scale damage. Monomers combine to form Polymers and Polymers combine to form Composites. Hence the complexity of the threats and the defense required also increases as we move from one category of threat to another. Reportedly the Polymers pose the largest chunk of threat to businesses operating in the Cyberspace.

**Dr. Sushree Samita Rout**
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Always keep your ego in check and not be afraid to listen.
Listening is a great art form – Clint Eastwood

## Impact of Biodiversity Loss on the Environment

Biodiversity generally refers to the various types of living organisms on the earth. Biodiversity is also known as the web of life. Biodiversity can bring together the various species and forms of life (animal, plant, entomological and other) and their variability. It generally includes organisms from earth's vastly different ecosystems which can be deserts, rainforests, coral reefs, grasslands, tundra and polar ice caps.

Reductions or losses in biodiversity can damage the delicate biodiversity web. Some species happen to be "keystones in the arch," supporting the entire ecosystems, such as the sea otter in the Pacific coastal ecosystem. When these keystone species disappear, the web of life unravels as the complex interrelationships of predator, prey, parasite and mutual benefits are lost.

A square kilometre of coastal ecosystem such as mangrove forest can store up to five times more carbon than the equivalent area of mature rainforest. Unfortunately, these coastal systems are being destroyed by human activity three to four times faster than rainforests, which has the effect of reducing the carbon store or increasing the amount of carbon dioxide into the atmosphere and the ocean, thereby contributing to climate change and ocean acidification.

*Source: https://www.saveearth.info/loss-of-biodiversity/*

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# SLATE

Silicon Language for Arts Technology & Education

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