

— Year 2020 - 2021 —



IEEE

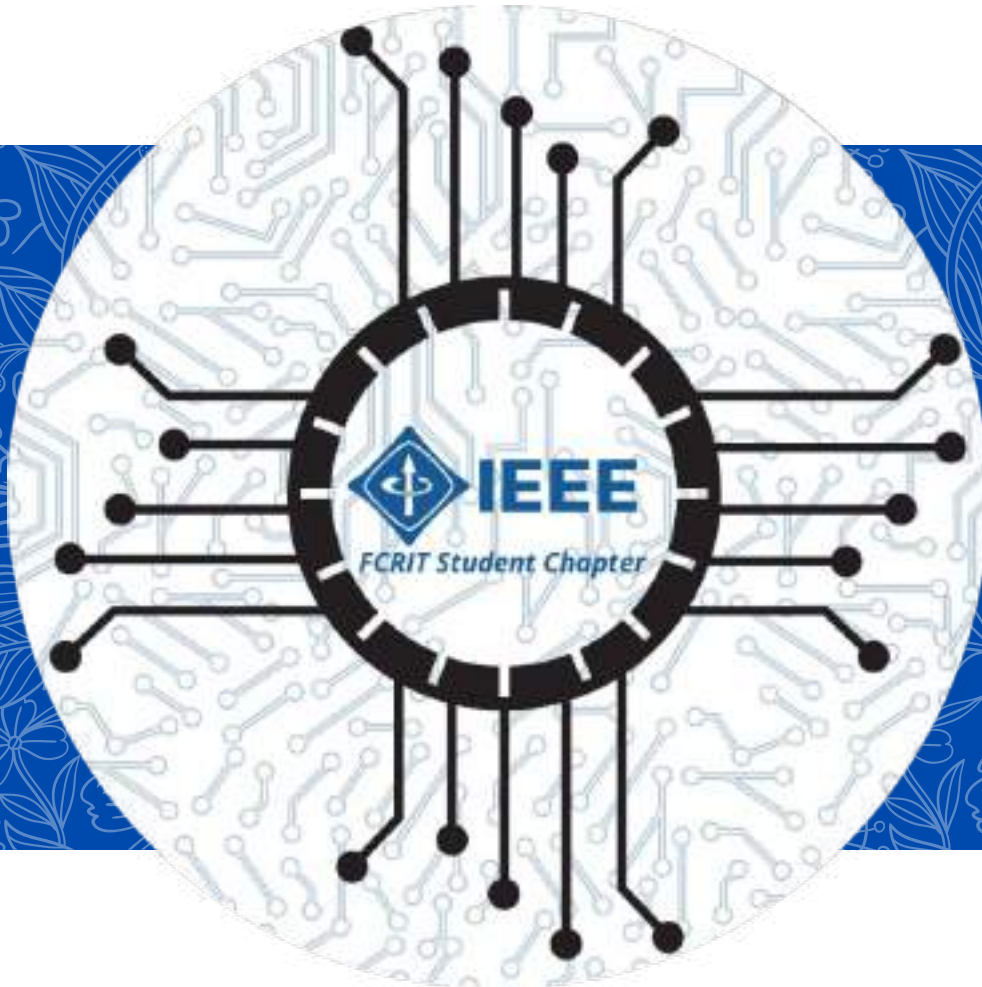
विद्याधनं सर्व धनं प्रधानम्



Docendo Discimus

IEEE Student Chapter Magazine

Fr. C. Rodrigues Institute of Technology



IEEE FCRIT SB LOGO

Committed to bringing skill-based knowledge to our peers, in the year 2020-21, our team organized 10 events spread out over the terms. Each event came from a diverse field and yet, all of them were equally rich in the knowledge they imbued. With immense pride in our work, we present to you **IEEE LIVE WIRE**

Message From

BRANCH COUNSELOR



Mrs. Bindu R

(IEEE Student Branch Counselor, FCRIT)

To become successful professionals and entrepreneurs, our engineering students should develop various skills like leadership, communication, team building, creativity, innovation along with a sound technical knowledge. Our Institute provides integrated education to the budding engineers with a motive of their overall development by providing them various forums and opportunities to develop and showcase their technical as well as leadership potential. IEEE is the world's largest technical professional organization. The IEEE Student branch at Fr. C. Rodrigues Institute of Technology (IEEE-FCRIT) which is formed on 6th April 2000 under IEEE Bombay Section has been instrumental in promoting its members to organize and participate in various events, workshops and seminars.

In the academic year 2020-21, our IEEE student branch organized various technical and educational events where the students got an opportunity for interacting with experts of various fields as well as students of other Institutes across the country.

This year, we had members not only from Electrical and EXTC, but also from Computer, IT and Mechanical engineering. My hearty congratulations to the enthusiastic, dynamic Team of IEEE-FCRIT 2020-21 Council who organized ten events spread throughout the year, on topics ranging from Aerospace to Health. The Green Challenge Competition, of almost one-month span for creating awareness about the importance of reduction in wastage of electrical energy and sustainable growth, was an important event.



Message From

BRANCH COUNSELOR

The workshop conducted by the student instructors was one of the new appreciable initiatives of this year. Also, the beautiful designs in the advertisements of each event was really eye-catching. I also congratulate the editorial team for bringing out this year's LIVEWIRE edition in time.

I am grateful to the Management, Dr. S.M. Khot (Principal), Dr. Bindu S (HOD, Electrical Engineering), Dr. Milind Shah (HOD, Electronics and Telecommunication Engineering), Dr. Lata Ragha (HOD, Computer Engineering), Dr. Nilaj Deshmukh (HOD, Mechanical Engineering) and Mrs. Dhanashree Hadsul (I/C HOD, Information Technology) for providing support and facilities. Also, on behalf of IEEE Student Chapter of FCRIT, I thank everyone who came forward to participate and help us in all our endeavors.



CREATORS' NOTE

"Act as if what you do makes a difference. IT DOES " A quote by William James has inspired me to be a part of this beautiful journey along with my colleagues who were there throughout, till the end. I never imagined that I would be part of a committee where we worked together, shared our opinions, growing from each other's achievements and mistakes, and took each step forward together.

The grace of our branch counselor, who guided us and helped us in whatever way possible, allowed us to experience and experiment with the ventures we weaved throughout the year on our own, without hesitation. That trust she put in us was the only motivation we needed and it was the reason we could keep up the spirit of commitment and conduct these many events with flying colors.

My friend, as well as our Chairperson, is a strong believer in "you get what you work for, not you wish for" and this belief has led us on a difficult path with beautiful scenery. From the initiation of introducing our new logo on our Instagram page to completing this magazine, it would not have been possible, had he not pushed us to explore the limits of our capabilities.

The ups and downs our team faced were like the strokes of the paint on a canvas, and we as a team have overcome everything in harmony. In the beginning, it was not easy to work in an online environment where the interaction is limited to few words sent as texts, which is easy to ignore with just a scroll, and publicizing amidst such a dire situation was not an easy task either. Despite not having proper resources, we went out to build our legacy little by little. I still remember the joy of being part of our every "firsts" that we experienced down the line and the small text messages dropped by our counselor appreciating our achievements would bring smiles to our faces.



CREATORS' NOTE

Also, realizing teamwork is not as simple as it seems. When you have not conversed or met casually with your juniors as well as members from other departments, it does create tension and question the comfort of working. But this is how we entered a new domain of life and we grew to bond naturally over time. When we all look back to those wonderful days, we are reminded of a quote by Dr. Seuss- "sometimes you never know the value of a moment until it becomes a memory"

And undoubtedly these memories would remain in us even after we part our ways.

-SHIKHA MENON (Publicity Head)

No effective organizational structure can claim success without setting an agenda or what we may call a 'vision'. The dearth of such objectives leads to incompetence and inefficient working. Recognizing these cautions, we set up a simple, yet achievable vision of providing our peers with diverse opportunities to find their niche via events that cater to their needs, and still be pocket-friendly.

This magazine marks the culmination of our efforts of one year in achieving our vision and I could not be more proud when I say that we achieved what we set our mark on and more.

We are ever grateful to our Branch Counselor, Mrs. Bindu R, who was the support to our endeavors and without her guidance, we may not have achieved even half of what we did. Furthermore, as the Branch Chair, my efforts had always been to ease the process for my colleagues and plan things that would suit our schedule, but these would have been in vain if not for my very supportive team. Their constant efforts to ease the burden on me fueled my desire to work harder. I am very proud of the efforts of our Membership Committee and Publicity Committee Heads particularly, for it is due to their efforts that not only we clocked 100-160 participants in most of our events, but have one of the highest IEEE members count in Bombay Section.

As our term draws near to an end, I wish that this magazine serves as a guide for the upcoming council, and may they excel over us, by correcting the mistakes we may have committed and making a mark of their own.

AKHILESH MENDON (Chairperson)



EDITORS' NOTE

The previous academic was an experience off the norm. As we saw the pandemic grip the nation, learning across the nation took the unprecedented jump to virtual platforms. Amidst this, the IEEE Student council was obliged to follow the regulations in place and adapt to take our events online as well. And towards the end of this difficult yet eventful term where perseverance was never scarce, we present to you the achievements of this council in the form of our annual publication - IEEE LIVE WIRE 2021

This magazine gives you a gist of the webinars and virtual events that were organized by the IEEE council of Fr. CRIT in the academic year of 2020-2021 giving you a glimpse of challenges and opportunities available in the field of engineering.

“Scientists investigate that which already is; Engineers create that which has never been.” -Albert Einstein

Our efforts throughout have been to facilitate learning in these difficult times, where even though information is abundant online, yet their unstructured nature made grasping them harder.

In this year, we organized ten events distributed across fields of technology, administration and humanitarian efforts. These events covered a wide spectrum of fields, which tried to bridge the gap between the industry's requirement and the online era of academic learning.

Moreover, within the council, the diversity in its constitution enabled us to work with new skillsets and made the whole journey enjoyable. All of the events, competitions and activities would not have been possible without the constant guidance and support of Mrs. Bindu R. We are also extremely grateful to the college staff and organizers for their contribution and co-ordination throughout the year. Lastly, a huge thank you to all the students for their participation in the organized events and all the student members. We were fortunate to be given this opportunity.



2020-21

COUNCIL MEMBERS

“ A trial by fire which truly shaped our understanding of teamwork and leadership ”

Akhilesh Mendon
CHAIRPERSON



“ It was a graceful experience of responsibility, teamwork and engagement in diverse tasks upheld by us ”

Shruti Malpure
VICE-CHAIRPERSON



“ IEEE provided me the platform to unite with the people having common desire to interact, organize, innovate and work in a team. ”

Kunjal Mahajan
SECRETARY



“ It was a great experience to be a part of this wonderful team while overcoming the challenges of organizing events online ”

Udayraj Tawde
TREASURER



EXECUTIVE COMMITTEE



Akshata Patil
PROGRAM HEAD



Sahil Mohite
DEPUTY PROGRAM HEAD



Avinash Saruk
FINANCE HEAD



Shruti Nair
DEPUTY FINANCE HEAD



Shikha Menon
PUBLICITY HEAD



Swaroop Gogate
DEPUTY PUBLICITY HEAD



Tadaksha Mahesh
MEMBERSHIP HEAD



Vedant Rajput
DEPUTY MEMBERSHIP HEAD

PROGRAM COMMITTEE



Shivani Sharma



Ashwin Shirgaonkar



Gaurav Rangari

PUBLICITY COMMITTEE



Vrukshal Rajput



Dylan Pinto



Reuben Jose

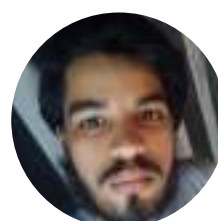
EDITOR COMMITTEE



Gaurav Lanjekar



Archit Kulkarni



Anush Malik

FINANCE COMMITTEE



Aniketh
Rachakonda



Chinmay Vartak

MEMBERSHIP COMMITTEE



Rishabh Mhatre



Celine Fernandes



Devanshi Singh

CONTENTS

01

TECHNICAL

02

GREEN INITIATIVES

03

HUMANITARIAN

04

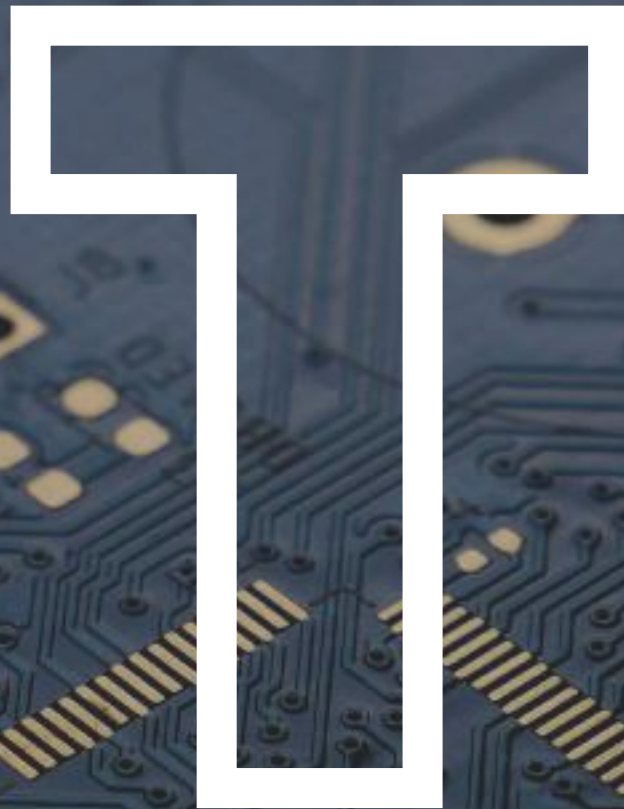
BEYOND THE BOOKS

05

FROM OUR PEOPLE



IEEE



T

TECHNICAL EVENTS

100

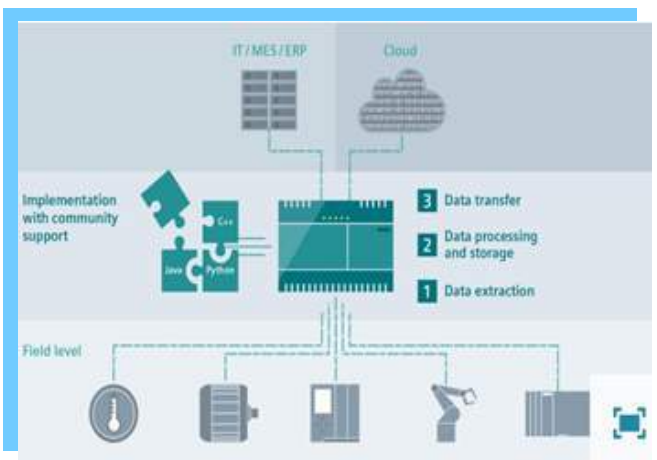
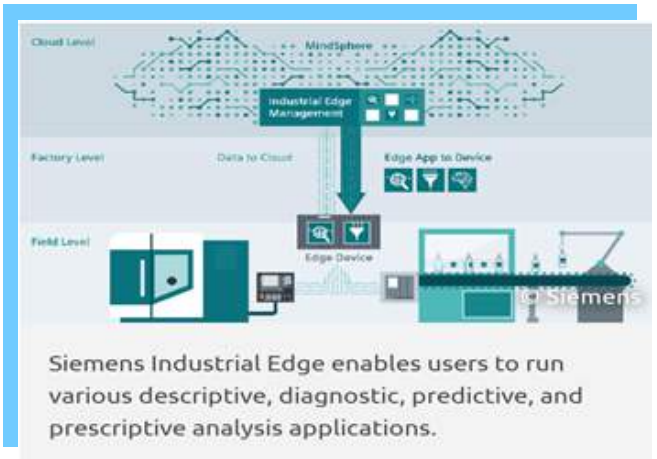
The student chapter of the IEEE-FCRIT, in collaboration with SIEMENS Training Centre organized a webinar on the concept Industry 4.0 for budding engineers as enter the age of automation.

The webinar was conducted in the period 8th and 16th of October 2020 in batches according to the departments and semester. The event was conducted virtually and students from various departments attended it.

The webinar began with Mr. Nilesh Sawant introducing us to Siemens and their contribution in the present automation and control systems in the market. He talked about measurement technologies and process instrumentation sensors. He mentioned about the Siemens-Sitrain package and it's unique features like training equipment, training material, automation and electrical training packs etc.

Next, Mr. Durgesh Mishra who enlightened participants about industry 4.0, it's working and also, it's relevance. He gave a brief idea of how the industry is evolving and how it has changed from use of mechanical equipment to labor concept and further from electronics and IT automations to use of cyber-physical systems. He spoke about digitalization of the field level using digital enterprise in both discrete and process industry. The relevance was answered by the fact that industry 4.0 reduces time-to-market, increase flexibility, improve quality and increase efficiency.

The event ended by a thank you speech to whole SIEMENS-SITRAIN team which was delivered by the Secretary of IEEE council 2020-2021 and finally a token of appreciation by the branch counsellor Mrs. Bindu R.



CAREER OPPORTUNITY IN AEROSPACE INDUSTRY

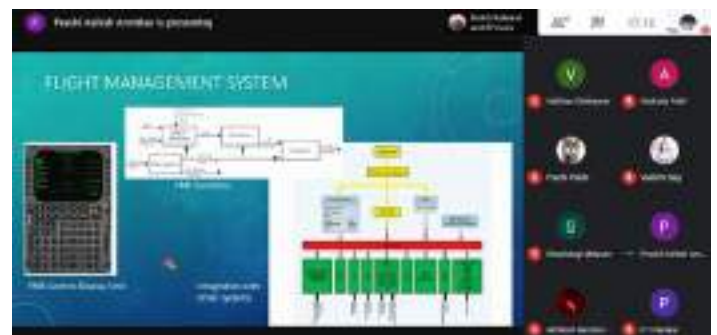
IEEE FCRIT STUDENT BRANCH organized a webinar intending to introduce the concept of Aerospace Engineering entitled as "Career Opportunities in Aerospace Engineering". The webinar was organized under the guidance of the IEEE Student Branch Coordinator of Electrical Branch, Bindu R. The online webinar was conducted on Google Meet between 4pm. to 6:30pm. on 18th December 2020.

The speaker for the webinar was Ms. Prachi Ashish Amritkar. The session started with the introduction of the speaker and brief speech on her career. Speaker has extensive experience in the field of Aerospace Engineering. She's an Engineering Manager handling diverse activities of calibration, operation, Testing, Data analysis.

The introductory speech was followed by an in-depth discussion about the working of the Aeronautical Industry. She introduced the participants about different systems involved in working of an Aircraft namely the Avionic System which mainly includes the flight control, navigation aids, cockpit, communication systems, landing controls. As webinar succeed she explained to the attendees about the landing gears i.e., the "wheels" of an aircraft. She spoke about various moving surface of aircraft, the power plant of Aircraft i.e. 'Engine', Flight Management System.

She introduced various opportunities for different engineers in the field of Aerospace Industry. She also briefed on different universities (both Foreign and Indian) where students can pursue higher studies in this field.

She explained to the participants this complex industry in a straightforward manner and also interacted with the attendees while inviting comments and questions simultaneously. This webinar helps students to acquire unique knowledge of this engineering field and clarity to some extent about the possible opportunities for engineers in the Aerospace industry.



HEALTH CARE 3.0

Student Chapter of the IEEE FCRIT invited Mr. Ashish Wani to Deliver a Webinar on “Healthcare 3.0”. Mr. Ashish Wani is an adept Electronics Engineer with a wide range of projects in embedded systems, sensor interfaces, motion control etc. He is project Webinar was commenced on 18th February, 2021 on Google Meet. IEEE Student Members of FCRIT and fellow students of FCRIT and other colleges attended the webinar. He began by portraying a broad overview of the healthcare technology landscape that he has witnessed. He brought out the history of the field talking about Healthcare 1.0 which has a limited amount of awareness, resources and technology. He further spoke about today’s healthcare technology (Healthcare 2.0) where we see the emergence of large hospitals, pharmacies and the patient awareness is also higher. Furthermore, Mr Wani introduced everyone to healthcare 3.0 which is the evolutionary future of the industry. He scrupulously delineated on how a connected digital healthcare infrastructure builds active patient participation in data sharing and prevention measures.

He classified it further into sub types such as bio-electronics, automation, connectivity, intelligence and information sharing. Bio-electronics includes Pedometers, Sleep monitors, Activity detection and tracking. Automation Smart Surgical tools: Orthopedic drills Ablation Catheters Redesigning traditional surgical tool with multi-sensor feedback to reduce errors, decrease patient exposure X-rays, reduce costs. He renounced the session by speaking about the challenges we might face, like efficacy of sensors and associated systems and data security and also mentioned the opportunities the field presents.

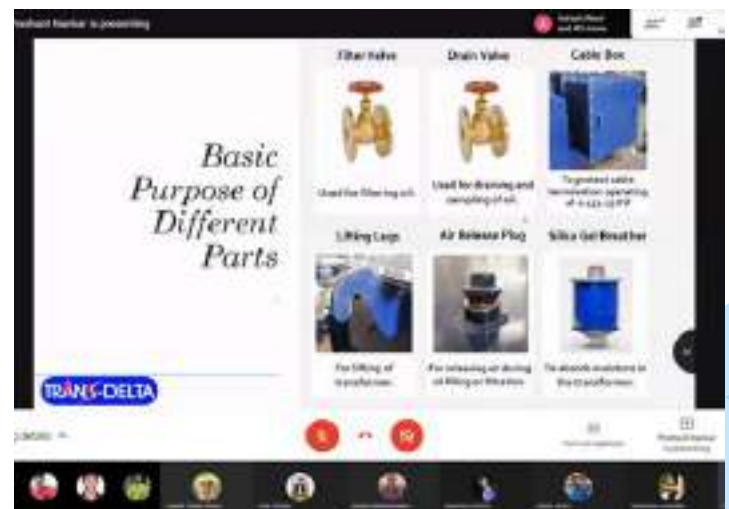
Participants were able to rivet the various aspects of Healthcare 3.0 on how the technology as a whole has potency to evolve and strengthen Healthcare in near future.



TRANSFORMER AND COMPACT SUBSTATION

With the ever-growing concerns of power the demand for innovation can't be escaped. With this ideology IEEE FCRIT organized a webinar on the Topic "Transformer and Compact Substation: An industrial Overview" Mr. Prashant Nankar Managing Director of Trans-delta Transformers Pvt. Ltd. Having 20 plus years of profound experience, specialized in design & manufacturing of various types of transformers and compact substations was invited to Share his insights on the topic. The discussion gave us a brief idea of the practical scenario and advancements taking place in this sector. Transformers are one of the crucial element used in in the electrical power sector , the session gave an overview of all different kinds of transformers used along with it the potential Risks involved while installation and failures of conventional transformers were explained. After traversing in depth in power transformers, the speaker enlightened us on the concept of Compact substation which is an arrangement of all substation equipment into one unit which can be important asset in this industry. The Pros and Cons of Both Conventional Arrangements of substation equipment and an all in one Compact substation were described in detail. Real life examples of the installations performed by Trans-delta Transformers Pvt Ltd in various places were shown for better understanding of the concepts.

The participants got an brief overview on the topic and the Practical scenario of the advancements in Transformer industry and The session had an overwhelming response extended by noticeable participants from Engineering students from various colleges .The session had a throughout adulating response from the attendees. The knowledge and experience of speaker was highly appreciated by all.





GREEN INITIATIVES

A NEW LOOK AT ENERGY AND SUSTAINABILITY

He encouraged many young minds to join him in this journey of his.

The student chapter of the IEEE-FCRIT invited Dr. Chetan Singh Solanki to deliver a webinar on the topic 'A New look at Energy and Sustainability'.

Prof. Solanki aka Solar Man is an Indian scientist, social entrepreneur, researcher, author and a professor at the Department of Energy Science and Engineering, Indian Institute of Technology Bombay. Currently, he is on all India Energy Swaraj Yatra on awareness drive about use of solar power. He has taken up a mission to create awareness regarding adoption of solar energy and has pledged to not go home until 2030 and said that he would live and travel in the solar bus. His research interest includes Solar Photovoltaics comprising of 266 citations and 4696 reads including sustainable development and economical analysis.

The webinar was conducted on the 24th of October 2020 from 5pm to 6pm. The event was conducted virtually and students from various departments of many colleges attended it.

Dr. Solanki necessity and urgency to surrender the grid electricity connection and install individual solar panels at our level to be self-sustainable. This will in turn also limit our usage and will be used more efficiently.



He then talked about the popularization of this movement which he will be doing by travelling to various places in his self-sustainable collar equipped bus thus setting an example to others to do the same. He also encouraged many young minds to join him in this journey of his. This was then followed by a very interactive and fruitful Q&A session that was conducted courtesy of every enthusiastic participant.

The event ended by a thank you speech to Dr. Solanki which was delivered by the Secretary of IEEE council 2020-2021 and finally a token of appreciation by the branch counsellor Mrs. Bindu R.



GREEN CHALLENGE

4th November,2020 to 5th December,2020

Objectives

To motivate students to take steps in public interest to reduce power consumption and create awareness by accepting the Green challenge and contributing in accordance to their respective fields of interest.

Technical Description

The IEEE STUDENT BRANCH, FCRIT organized a Green Challenge Competition starting 4th November 2020. The competition was conducted digitally and students were asked to submit their work on via drive links.

The challenge was sponsored by Techno Associates Vidyut Pvt. Ltd

Challenge was categorized in three fields : Technical, Literature, Art.

There was also a special recognition prize for participants who contribute significantly towards environment physically, for eg. Mass tree plantation drives.

Different sets of rules and regulations were formed and the same were explained to participants with the help of PDFs.

Outcomes

Various students from different colleges participated in the event and had submitted their work.

Cash prize worth One thousand was awarded to winners, one each from the three events. Furthermore, few runner-up awards were also declared.



OPEN EVENT
PARTICIPANTS: 47

EFFORTS THAT COUNT

Green Challenge Responses



WINNERS

TECHNICAL

Shravan Poovaiah

(SUSTHIRA- The solar inverter)

Chinmay Vartak

(Protection of plants from unwanted pests and insects using PIR sensor)

SOCIAL ACTIVITY

Vedant Rajput

(planted 50+ saplings)

LITERATURE

Anand Unnikrishnan

(Why Apple has removed charging bricks in the box and how it's affecting the environment)

ART

Swaroop Gogate

(Drawing)



LET'S HEAR

WHAT OUR WINNER HAS TO SAY

It was just another normal day in my hometown Coorg with frequent power cuts and I realized I have had enough. I thought it's time to build a device that stores energy which can be enough to provide light as well as to charge devices such as Laptops, Mobile phones, 12v tools etc.

Ergo an idea was born, SUSTHIRA the solar inverter. It's made of a tricycle frame and is also portable. I named the device SUSTHIRA Mark 1. I wished that was it, but there were few setbacks. Along with the frequent power cuts, the other difficulty was the erratic weather condition due to heavy rains. Hence mark 1 had to be scrapped out and had to be made waterproof.

As a result SUSTHIRA 2.2 was born, a machine with 300W power and 10 hours worth electricity which was also water resistant up to 2 inches of rain.

The machine was a grand success. After the victory, I wished for a competition to flaunt my machine, though the pandemic was going on .

With the help of IEEE-FCRIT, I had this opportunity to do so as I came across their poster regarding GREEN CHALLENGE competition. My happiness knew no bound when I receive a platform to finally showcase my machine. There were many competitors and the results were declared after a month of submission, and to my surprise my machine won first place in Technical Category.

I was overwhelmed as It gave me an insight about competitions like this and also about various other different machines built by others. This event was a motivation for my future ventures and it remains to be one of my favorite events till date.

“

This event was a motivation for my future ventures and it remains to be one of my favorite events till date.

”



- Shravan Poovaiah
(Technical Winner)





S

SOCIAL WELFARE

TALK WITH DOC :

WOMEN'S HEALTH

To provide knowledge and guidance on women health ranging from menstrual hygiene, diet to sexual health, safe sex, fertility issues and many more, IEEE FCRIT in collaboration with ICC for PPSHWESRG, organized an interactive session on 'Talk with the Doc : Women Health', on 11th April 2021 on Google Meets and the same was attended by the female audience of all age groups. The speaker for the event was Dr. Devi R. , Infertility and IVF specialist (MBBS, MS (Obs-Gyn), FRM).

Starting with the event, the speaker discussed the problems faced by women of different age groups, various menstrual abnormalities and how to maintain menstrual hygiene. Next, she gave an insight on PCOS and ways to handle it, various birth control methods, fertility issues, followed by which were the routines to be practiced for safe sex. Lastly, topics like breast self examination (BSE) and Uterine cancer were also discussed. The session was very beneficial for women of all age groups as it touched upon all the problems women face during different phases of life.

The event was a great success, as the audience were able to interact freely and clear out their doubts. Also, we received good feedback from them.





B

BEYOND THE BOOKS

THE REALM OF SOUND ENGINEERING

Music and Cinema are primarily included in the domain of performing arts with people engaged in putting together these acts usually inclined towards artistic talents. However, in the current era, technology has spread its roots in this domain as well, streamlining and enhancing the quality of acts to a whole another level. One such technically vibrant domain is that of Sound Engineering which is extensively used in movies, theatre and concerts.

With a view of taking a peek at this niche of engineering, IEEE FCRIT organized a seminar on 'Realm of Sound Engineering', on 23rd December 2020 on Google Meets which was attended by students of FCRIT and other colleges.

The speaker for the event was Mr. Aniruddha Purushe, an experienced personality in the field of Sound Engineering, having worked in theatre acts such as those of Disney's Aladdin and TV shows such as MTV Unplugged and The Stage. Furthermore, he had the experience of working with popular music bands such as ALIF, TAPAS and signers such as Abhijeet Srivastava.

The event began as our speaker introduced to us the different aspects of sound engineering employed in the Entertainment Industry and the level of complexity the mechanisms related to it could have.

Moving on, he explained the primary role of Foley Engineers and the challenge of producing sounds which are otherwise difficult to capture. He then went on to explain his work with Sound Mixing, Reproducing, Equalization, Sound Projection and Electronic Effects. The entirety of these new concepts were explained in simpler terms, accompanied by a presentation of Mr. Purushe's own experiences and works pieces related to them.

The session in particular was very useful to individuals who had a spark of interest in artistic creativity and were enthusiastic to ask doubts, participating whole heartedly in the conversation. A highly positive feedback for the event confirmed the demand to conduct similar sessions in future, exploring domains in which engineering plays a supporting role.



DIGITAL MARKETING

To introduce to the students digital marketing, a new way of marketing in this digital world and its various aspects, IEEE FCRIT organized a webinar on 'Digital Marketing', on 20th March 2021 on Google Meets and the same was attended by students of FCRIT and other colleges.

The speaker for the event was Mr. Sharan Pillai, an experienced marketing professional with working experience for 65+ brands.

Currently, he is working at leading Digital Media & Partnerships for Jio Creative Labs, also previously worked for Publicis India and Performics, Convonix. And also he was part of a non-profit organization project by Google to establish a business on the digital platform and currently working on The100LifeProject to help rural young minds to develop or set up their business online.

Mr. Sharan Pillai started the webinar by defining what digital marketing is terming it as a combination of art and science with help of an example of an advertising digital campaign. Followed by this, he described the three key elements of digital marketing.



Next, he talked about the career path in digital marketing by bifurcating the working domains in digital marketing into the agency side and the client-side and explained each one of them one by one. After this, he started with the skills required for being a digital marketer and then discussed the various opportunities available for engineers in this field with some of the companies name recruiting for these roles.

The webinar was very helpful for the young engineers planning a non-technical job profile after graduation motivating them to think of this option. After this, he started with the skills required for being a digital marketer and then discussed the various opportunities available for engineers in this field with some of the companies name recruiting for these roles. The webinar was very helpful for the young engineers planning a non-technical job profile after graduation motivating them to think of this option.



STUDENT INSTRUCTOR EVENT

In the 2020-21 term of IEEE FCRIT SB, we took up an initiative for a new type of event called “Student Instructors” in which we reached out to students of all branches and years in our college to find individuals with unique set of skills worth sharing with rest of our students. The primary goal was to provide an opportunity for students to take up the stage and allow them to explore their ability to present themselves and their ideas in an effective manner. As an added bonus, we expected the sessions to be more casual and relaxed for the audience as the instructor would be one of the students, hence also serving as platform for interaction between the seniors and juniors.

We had circulated a form to collect the list of people interested and then conducted a meeting with prospective participants to explain to them the procedure and scheduling of these events. Also, we carefully evaluated the resumes of all participants and ensured the quality of their content. The responsibility of handling these events was given to the second year students of our council with seniors playing the support role.

One such event conducted was of Gokul Narayanan, a third year student from Electrical department, in which he walked us through the process of composing music on computers.

The session was carried out in a wonderful fashion by Gokul, presenting a condensed display of knowledge and intuition acquired by countless hours of experimentation, sprinkled with witty quips to always keep the audience engaged. We witnessed the evolution of the track as layer upon layer of sounds were added, tuned, and timed, finally culminating into a finished product of amazing quality.

It was definitely a successful event with huge value in it for students in both the instructor and audience role. Therefore, such events are feasible to conduct in future for building a stronger IEEE community on campus.



HOW MUSIC IS MADE ON COMPUTERS

I was given the chance to become a student instructor for IEEE for a day, and with that a platform to share knowledge about the skills that I had learnt being a wannabe musician. I had the wonderful opportunity to teach my fellow batch mates a little bit about the things that I fell in love with, trying to learn the art.

This little event has helped me brush up on my own knowledge, for it is not a simple task to explain something that you know in such a way that the listener understands. I'd planned to speak a little on the theory and the history of some of the things that are essential to modern music production, and could successfully make a small snippet of a track from a genre of electronic music that I enjoy listening to- Future bass. I had never done anything of this sort, and the entire deal-from its conception to execution was an alien yet exhilarating experience for me. The team assigned to me, consisting of IEEE members Chinmay Vartak and Rishabh Mhatre did a fantastic job as event coordinators and Akhilesh Mendon as the event head was extremely welcoming and supportive in clearing out all the concerns that I had. They were quick to respond to suggestions, and as a result the execution was more than just perfect. I'm extremely grateful for this experience that wouldn't have been possible without the team, and IEEE organizing it.



“ I had never done anything of this sort, and the entire deal-from its conception to execution was an alien yet exhilarating experience for me.

- Gokul Narayanan
Electrical, 2018-22

”





P

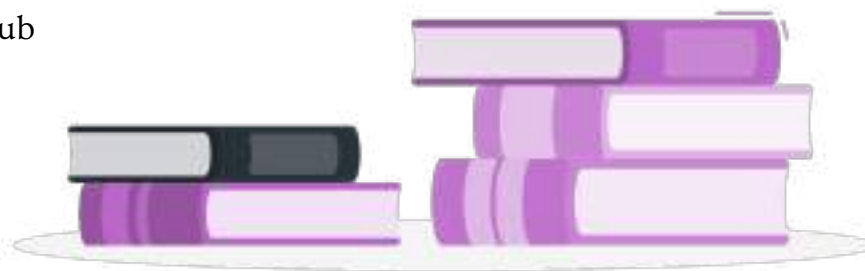
FROM OUR PEOPLE

MODELING OF PEAKING SWITCH AND ITS CHARACTERIZATION

Pulse power refers to the steady accumulation of energy followed by its rapid release. By releasing the stored energy over a very short interval a huge amount of peak power can be delivered to the load. The industrial application of pulsed power technologies includes sterilization, flue gas treatment, radiation processing and electromagnetic forming. The pulse used for this application requires a rise time of few micro-seconds to nano-second. Other applications include generation of high power microwave sources for military and civilian purposes such as target identification, detection of buried targets, humanitarian demining, nonlethal directed energy weaponry and also susceptibility and hardening tests on electronics systems. Research is going on in medical field to investigate the effects of high-peak power, low total-energy pulses on biological materials. Nanosecond pulsed electric fields have been documented to induce tumor regression and kill cancer cells. This discovery has led to the development of a high voltage Nano-pulse system for cancer treatment.

HPM (high power microwaves) and UWB (ultra wide band) are the two cases of electromagnetic radiation wherein a pulse with nanosecond to sub nanosecond rise time is required.

As the rise time reduces the frequency of the radiated pulse goes to GHz range. HPM technologies generate a significant threat for target structures that are equipped with modern digital electronics. The aim of an HPM weapon system is to interact with the increasing combination of software and hardware functions in electronics. To affect any target that uses such radiation, the frequency has to be matched to the target's frequency absorption spectrum. However, pulsed UWB radiation with pulse durations in the sub-nanosecond range does not need to be matched to a single target. UWB need not require carrier signal to transmit. These signals have the potential for greater penetration of obstacles such as walls, than conventional signals. For UWB devices, the peak-radiated E-field at a distance is highly dependent on the rate of rise of the voltage.



A 300 kV, 20 kA compact Marx with peaking switch and peaking capacitor is designed to generate sub-Nano second pulse. During experiments it was observed that Marx is not able to generate pulse with lower rise time even under high pressure. The Marx capacitor voltage rating put a restriction on increasing the chamber pressure. Peaking switch is one of the crucial parts of the UWB system. To convert the system to a UWB source, a detailed study of peaking stage was required. Development of mathematical model was necessary to understand the feasibility of modification.

Detailed literature survey has been carried out to understand the present status of nanosecond Marx generator, peaking stage, switch design and the different modelling methods. Experiments are conducted on a prototype peaking switch to characterize its behavior. Transfer function model has been developed to understand the operation of switch under pressure. As the pressure increases the switch rise time reduces increasing the output voltage magnitude. As the input pulse rise time reduces the output pulse rise time also reduces. But for a constant pressure it reduces the magnitude of the peak voltage. The pole location of the switch gives a clear idea of the optimum input pulse rise time to achieve optimum output pulse rise time for a switch under constant pressure.

Root locus tool is used to choose the peaking capacitor which produces an output pulse with minimum rise time and maximum output voltage. Experiment has been conducted on prototype switch model to characterize the switch under different electrode geometries, gap distance, pressure and gases. The modeling of the experimental setup shows that increase in rise time is due to large lead inductance. Optimization of the location of the peaking switch might help to reduce the inductance. This will reduce the output pulse rise time to sub Nano seconds.



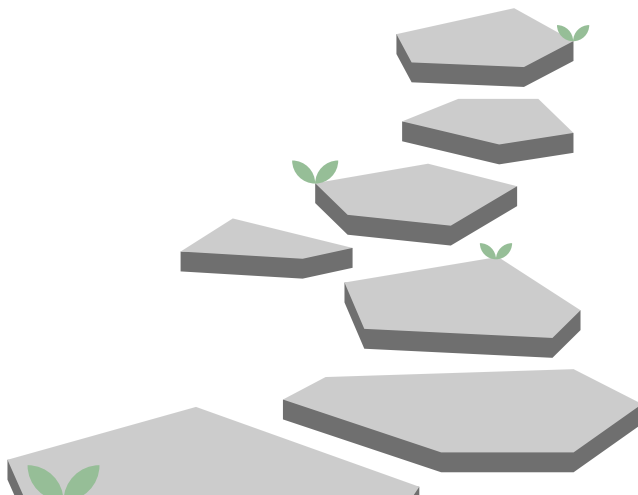
(Thesis)
Dr Bindu S
Professor and HoD
Department of Electrical Engineering
Fr C Rodrigues Institute of Technology



The Rainbow

I was born in gray lines
But didn't allow to be one.
I was told, gray was a lie,
A myth, an illicit disease that captivate people's mind to side track the reality.
A reality told by dharam(religion), prakriti(nature) and samaj(society).
They told me, black and white is a holy absolute and gray needs to be punished.
I needed to be punished.
The life I lived till now in this world showed me colours that never changed my actuality
And all of a sudden I was the guilty of my existence, of my world.
And I needed to be punished.
But my mother always told me,
'Beta don't have faith in anything,
Because it asks to follow that path blindly.
But believe in something,
Because it allows to question everything.'
And I believed in nature-prakriti.
And I questioned it,
If my existence and emotions are so wrong then why did it allow me live and feel, this while?
If my mortality asks for intersection, then why have I felt the urge to remain parallel?
If I'm so wrong, then why I'm not yet punished by you?
Why?
The nature signaled that it never differentiated gray with black and white.
It allowed everyone to breath, to smile, to cry,
to disintegrate and again form back, to be any color,
The nature signaled me with a thunder that thrashed everything that came into it's way and
yet shone showing a new path, The Rainbow

-By Solly (Sweekarti Giri)
IT
(2020-24)



A LIGHT AT THE END OF THE TUNNEL



What you can do when your mind and heart takes you to a dark uncomfortable place, you can try these

Acceptance -

You should be brave enough to accept when you are going through an emotional breakdown and it's causing damage to your potentials, and there is a need for damage control. Your approach should be more practical than emotional. Practically analyzing what is dragging you down, you should then swim in deep waters to free yourself from those shackles, deep enough to their roots, and cut them off from their cause.

Self-belief -

You should have faith in yourself, in your potentials, and you should help yourself in building your confidence by recollecting your previous achievements and how you overcame all the odds and came out victorious. Try to embrace your hardships so that you get the drift of challenging yourself.

We all know the example of Sir Edison on how he believed in himself, not getting demotivated by the losses he faced and in the end inventing a miracle.

Motivation -

When we are depressed, we fall short of hope, and that ray of hope comes from nothing but a strong and positive will. One thing about depression is it forms a viscous comfort zone where we unknowingly visit so many times that slowly we start living in it.

Maybe here we need help of our close ones because the motivation we need should not be restricted to words, we need people ready to take efforts for pushing us out of our bubble.

When we are depressed we build walls around us making ourselves feel how alone we are, and how we have lost many precious things over time. Here we need a rope of Motivation from someone who can pull you out or maybe by getting yourself together you can climb it up.

Contentment -

You should be able to make yourself realize what you have today is sufficient and you are in a far better place. You should learn to be satisfied and you should find out ways to make use of the resources that you have and bring the best out of you. A depressed person tends to focus more on a half-empty glass than a half-filled one. You should stop regretting what you have lost and you should recognize the importance of what you have today.

Work on your hobbies

You should work more on your passion, something which drives you to get up from bed. Spare time can rewind your cassette so better be cautious, In doing something that we like we tend to do it with full dedication which kind of disconnects us from memories of making us depressed. Try setting big goals for your passion and put your efforts into it to achieve it part by part. Efforts never go to waste, focus on improving your taste.

Even spending enough family time, spending more time with friends can bring back the genuine smile which went missing. For a spiritual person, his devotion towards God can help him to find a way out.



Coming towards the end, Here's a poetic influence.

Why are we so depressed?
Spending the swings of the clock in
distress.
How big is this world just immensely
grand,
Where are we and where do our problems
stand?
A lot of things yet to discover and find,
And we are stuck with the vision of the
blind.
You have potentials so don't worry about
fate,
Counter your problems with a fair
checkmate.
Opportunities don't always come knocking
on your door,
You have to be ready with your oars
waiting on the shore.
Never underestimate your very own
credibility,
It's all about your guts, never question
your ability.
Life is not about your problems and
complaints,
Rise above failure and then see who is the
one with blames.
Learn to wear your very own crown,
Live all the shades of life be your clown.

- Harshal Mishra
(Electrical 2019-23)

In Midst of Paddy Field

I held her soft hand
As we walked through those
paddy fields which waved at us
On the command of wind
Who also enjoyed her curls
Just like me

She danced throughout our way
Giggling and messing around
With those poor little grasses
For brushing against her anklets
That tickled those beautiful feet

She pulled me back
To wait for the sun to set
Dragging her pleated silk skirt
She sat on the moist mud
Gazing at the vivid sky
With those breathtaking eyes



She leaned on my shoulder
And drowned into the calmness
of the music i let out for her
With the lyrics of my heart
Forgetting the existence of time
She dwelled into deep sleep

I could look at her forever
For being so rare so mesmerizing
But she woke up by the buzz
Of twinkling fireflies spreading
All over the fields

she held me tight in excitement
And i saw that light in her eyes
There i wished to make her mine
But before i could profess my love
She whispered in my ears
That her world turned bright
Since the day she had me by her side.

- *Frozen fire* 2119
(Shikha Menon)
2018-21

IEEE MEMBERS 2020-21

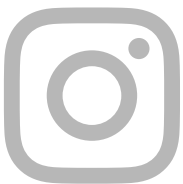
Akhilesh Mendon
Shruti Malpure
Kunjal Mahajan
Udayraj Tawde
Rishabh Mhatre
Vedant Rajput
Celine Fernandes
Devanshi Singh
Avinash Saruk
Shruti Nair
Aniketh R.
Chinmay Vartak
Shivani Sharma
Gaurav Rangari
Ashwin Shirgaonkar
Akshata Patil
Shikha Menon
Swaroop K. Gogate
Vrukshal Rajput
Reuben V Jose
Dylan Pinto
Archit Kulkarni
Anush Malik

Gaurav Lanjekar
Sahil Mohite
Vineet Kekatpure
Eeshan Nanekar
Anand Unnikrishnan
Pratik Deokate
Shwetha Sallmath
Snehal Maria
Shraddha Ambilkar
Pratik Bhole
Vaishnavi Dhake
Divya Vyas
Raheel Qureshi
Shubham Vishnu Dixit
Shruti Sandip Ghodke
Chettiar Dominic
Nikita Bhole
Samyak Rokade
Gaurav Wani
Sudarshan Pillai
Supriya Bhivsane
Namrata Gaikwad
Tadaksha M



We wish for you a healthy and
successful year ahead

-Team IEEE FCRIT



@ieeefcrit



FR. CONCEICAO RODRIGUES
INSTITUTE OF TECHNOLOGY



REMANENCE



EESA

ELECTRICAL ENGINEERING STUDENTS
ASSOCIATION
2020-2021

Year 2020.

*Time had stopped.
We were stuck in a
whirlpool. Everyone
had gone into their
shells.*



As the current pandemic situation forces us to stay at home away from our friends and we've been missing on all the fun, laughter, teaching & learning and all of it done in college, a positive point of view towards life has surely let us win and overcome the blues of Covid 19 that had once taken a toll on our mental and physical health altogether.

Starting the academic year with online teaching and learning process and getting used to it was a major concern and now culminating the work for this edition with a team of 15 members, the journey has been a memorable one. It has been nothing less than a pleasure for all of us. Right from adapting to the new normal of online platforms to deciding what events could be kept online was a big question in our mind and here we are with a beautiful magazine representing the events and all other activities which took place throughout the year even though online.



FROM THE EDITOR'S DESK

There are a lot of people who are responsible for the way the magazine has turned out; the student members of the magazine, who put in their best efforts to make the magazine the way you see it. The students and teachers who have contributed to the Magazine, giving the Magazine its charm.

To all our readers, I will say this: we make this magazine for you, being an inseparable part of electrical department and giving us such wonderful experiences to write about, and for our teachers to thank them for sharing with us their wisdom and experiences.

Happy reading to one and all!!

**- DYLAN PINTO
ELECTRICAL SEM 7**



FROM THE HOD

Dear students,

For both students and teachers this year has been very challenging. However in this pandemic condition also our Institute had taken initiative to conduct all the activities which we were conducting in the offline platform. Our faculties have been constantly trying to create and maintain an environment for the holistic development of each and every student. Department have been conducting both curricular and extra curricular activities under various student chapter through online mode. To show case the creative side of electrical students, department releases magazines and newsletter. EESA magazine one among that which gives a platform for our students to freely express their ideas. I wish the EESA council all the very best and stay safe.



**-DR. BINDU S.
HOD, ELECTRICAL DEPT**



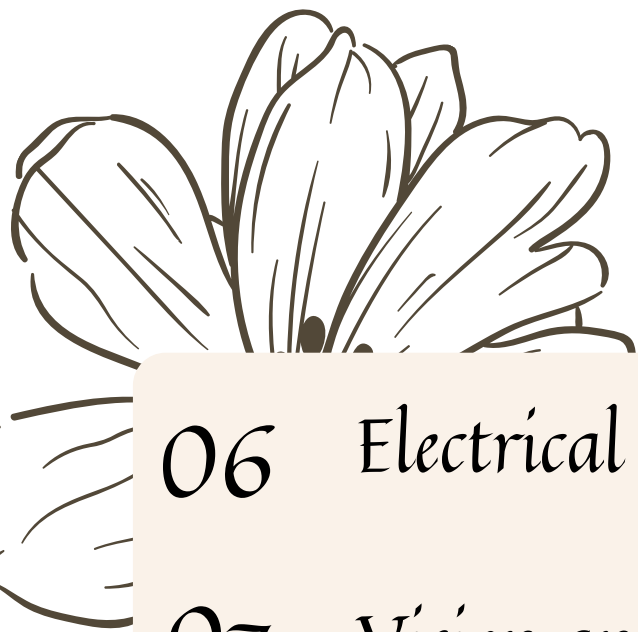


Table of CONTENTS

06	Electrical Engineering at FCRIT
07	Vision and Mission of Institute
08	Vision and Mission of Department
10	Staff Publications
14	Staff Achievement
20	Events Under EESA
33	Editors Pick
39	Student Corner
44	Placement
46	Committee Members



ELECTRICAL ENGINEERING AT FCRIT

Electricity has been a subject of scientific interest since at least the 17th century and hence is considered as one of the oldest branch of engineering. The students are taught to design, analyze, implement and operate electrical and electronics systems efficiently, thus opening the doors to new challenges. In this aspect the students are given in-depth knowledge in Machines, Power Systems, Control System, Signal Processing Drives, Power Electronics Microprocessors and Switched Mode Power Supplies. To impart this we have well qualified experienced and dedicated staff in the department.



VISION AND MISSION OF THE INSTITUTE



VISION

To evolve and flourish as a progressive centre for modern technical education, stirring creativity in every student leading to self-sustainable professionals, through holistic development; nurtured by strength and legitimate pride of Indian values and ethics.

MISSION

- To provide industry oriented quality education.
- To provide a holistic environment for overall personal development.
- To foster relationships with other institutes of repute, alumni and industry.



ELECTRICAL ENGINEERING DEPARTMENT



VISION

To evolve as a progressive centre for modern technical education in the field of Electrical Engineering to produce self-sustainable professionals through value based education

MISSION

- To provide modern technical education in the area of Electrical Engineering.
- To collaborate with industries and institutes of repute to grow progressively.
- To provide holistic environment for the development of socially responsible citizens.



ELECTRICAL ENGINEERING DEPARTMENT



PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Graduates will be able to...

1. Demonstrate core competency in the areas of power system, power electronics, machines, renewable energy and allied disciplines
 2. Contribute to environmental sustainability through design, development and commissioning of green energy or clean energy systems
 3. Excel in professional career and higher education with ethical values.
-

PROGRAM SPECIFIC OBJECTIVES (PSO)

Graduates will be able to...

1. Comprehend and analyze the problems in power generation, transmission and distribution systems.
2. Acquire technical knowledge, skill and competency in development of Renewable energy system and contribute to energy efficiency



STAFF PUBLICATION

INTERNATIONAL JOURNAL PUBLICATIONS

ACADEMIC YEAR 2020-21

Sr.No	Title of Paper	Details	Author/Co-author
1	Total Factor Productivity Analysis in the Regime of Multi-Year Tariff Policy Using Fisher Index Method	International Review of Electrical Engineering (I.R.E.E.) Praise worthy publication, Accepted for April 2021 issue	Ninad. P. Totare, Dr. Bindu. S
2	Performance Analysis of Power Sharing Control Strategies for Battery/Ultracapacitor Hybrid Energy Storage Based Electric Vehicle	<i>International Review of Electrical Engineering (IREE)</i> , Accepted on 24 th April 2020.	R. Bindu and Sushil Thale
3	FPGA Accelerator for Real-Time Emulation of Power Electronic Systems Using Multiport Decomposition	<i>IEEE Transactions on Industry Applications</i> , vol. 56, no. 6, pp. 6674-6686, Nov.-Dec. 2020, doi: 10.1109/TIA.2020.3024347	M. K. Namboothiripad, M. J. Datar, M. C. Chandorkar and S. B. Patkar

CONFERENCE PUBLICATIONS

ACADEMIC YEAR 2020-21

Sr.No	Title of Paper	Details	Author/Co-author
1	Design of a Power Electronic Drive for a Small Utility Electric Vehicle	2020 IEEE India Council International Sub-Sections' Conference (INDISCON 2020) 03– 04 October 2020, Visakhapatnam	Ann Rachel Mathew, Bindu R , Sushil Thale ,
2	Integrated Solar PV-Battery and Micro-Hydro Based Low-Voltage Autonomous DC Microgrid for Rural Electrification	47th IEEE Photo-Voltaic Specialist Conference (PVSC), June 2020.	Shrishell Muchande, Sushil Thale and Rupesh Wandhare
3	Design and Implementation of Autonomous	IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC 2020), organized by	Shrishell Muchande, and Sushil Thale
	Low Voltage DC Microgrid with Hierarchical Control	Visvesvaraya National Institute of Technology (VNIT), Nagpur, 25 – 26 September, 2020.	
4	Design of DSP Controlled Passive Cell Balancing Network based Battery Management System for EV Application	accepted for presentation in IEEE India Council International Subsection' Conference (INDISCON-2020) at Visakhapatnam during July 25-26, 2020.	Sanket Dalvi and Sushil Thale
5	Design of a Full-Bridge Converter for Lead-Acid Battery Charging and Powering DC Loads	IEEE International Power and Renewable Energy Conference, IPRECON 2020, 30 November to 1st December 2020.	Fabian Tauro Bindu , S, R. G. Rane

CONFERENCE PUBLICATIONS

ACADEMIC YEAR 2020-21

6	Accelerator for Real-Time Emulation of Modular-Multilevel-Converter Using FPGA	2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, 2020, pp.1-7, doi: 10.1109/COMPEL49091.2020.9265684.	M. K. Namboothiripad, M. J. Datar, M. C. Chandorkar and S. B. Patkar
7	Design of a PV fed Hybrid DC Bus Power Supply with the High Voltage Ride Through Capability	47th IEEE Photo-Voltaic Specialist Conference (PVSC), June 2020.	Rupesh Wandhare, Vrishabh Randive, Sushil Thale,
8	Solar_Powered LED Street Lighting with Digital Control for Dimming operation	ICNTE 2021, 15-16th Jan.2021	Tejas Deshpande, Sayantan Das, Himanshu Chavan, Ankit Kishore Hangloo and Seema Jadhav
9	Modeling and analysis of dual side de-tuned series-series compensation network-based Wireless Power	In <i>2020 IEEE India Council International Subsections Conference (INDISCON)</i> , pp. 102-107. IEEE, 2020.	Devlekar, Shubham, and Mahendra Rane
10	Implementation of Solar Based Irrigation System for Conditions like Pandemic	ICNTE 2021	Jitesh Shastri, Dipesh Narkar, Mandar Sase, Rashmi Kale,
11	Design and Modeling of Pandemic Featured Smart LED System	ICNTE 2021 15-16th Jan 2021.	Sukanya Khapne ,NishilLathia , Krunal Parab, Amruta Phadale and Rashmi Kale

CONFERENCE PUBLICATIONS

ACADEMIC YEAR 2020-21

12	Arc Fault Detection in DC Microgrid Using Deep Neural Network	International conference on Nascent Technologies ICNTE 2021, 15th and 16th January 2021	Dipti D. Patil, Bindu S , Sushil Thale
13	Electricity Distribution Firm Tariff Rationalization in Multi Year Tariff Policy	International conference on Nascent Technologies ICNTE 2021, 15th and 16th January 2021	Ninad P Totare , Bindu S
14	Mathematical Modeling of Peaking Switch	International conference on Nascent Technologies ICNTE 2021, 15th and 16th January 2021	Sachin U, Bindu S , H.A Mangalvedeker, Archana Sharma, P C Saroj
15	An Investigation in to the Parasitic Influence on the Performance of Buck-Boost converter	ICNTE -2021, 15-16th Jan.2021.	Utkarsh Mishra, Mini Rajeev

STAFF ACHIEVEMENTS



Dr. Bindu S.

- Dr. Bindu S elevated to grade of IEEE senior member
FH 2021
-



Dr. Sushil Thale

- Patent Granted to Dr. Sushil Thale inCollaboration with Dr. Vivek Agarwal (IIT Bombay) for invention titled “A SOLAR PHOTOVOLTAIC MICROINVERTER BASED MICROGRID WITH COMMONCOMMUNITY ENERGY STORAGE SYSTEM” by Government of INDIA.
FH 2021
-



Dr. Mini Rajeev

- K Shankar Meritorious Paper Award – 2020 to Dr. Mini Rajeev
FH 2021
-

STUDENTS ACHIEVEMENTS FH2021

1 NIMISH GHARAT & MIHIR GAWAND

2nd position in National level poster competition organized by IET Student's chapter of Electrical Engineering department.



2 ATHARVA PASALKAR

- First prize at National level technical paper presentation at SIES Graduate School of Technology, Navi Mumbai
- First Prize in "OU Toycathon 2021" by Oriental Institutes in Collaboration with IETE.



B.E. TOPPERS



Surve Gaurav Pradeep Preeti (CGPI- 9.80)



Patil Ganesh Gopal Shashikala (CGPI- 9.76)



Gawand Mihir Suresh Sneha (CGPI- 9.73)

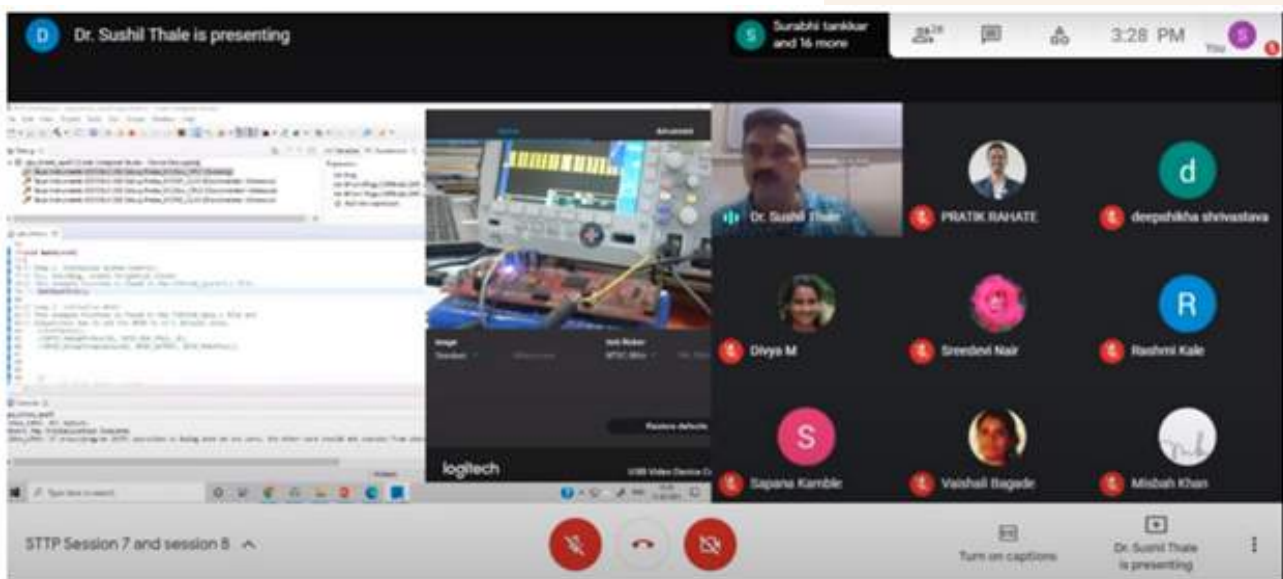
STTP

ISTE approved STTP on “DSP, Arduino, and C/Python” was conducted in Electrical Department from 10th May 2021 to 14th May 2021 to provide knowledge about modern controllers such as DSP (Digital Signal Processor) and Arduino and their programming. Also to provide knowledge about “C/Python” programming language applied to electrical and other allied Engineering applications.

The sessions were conducted online through Google Meet platform. Around 25 participants joined for the STTP. The sessions provided participants with technical knowledge about different modern controllers and processors and their programming. Participants were also given knowledge about online platforms which can be used to write Python programs and program and run Arduino based circuits. Sessions were taken by faculty from Electrical, Electronics and Computer Engineering Departments of FCRIT.



**Rajendra Soni
(Convener)**

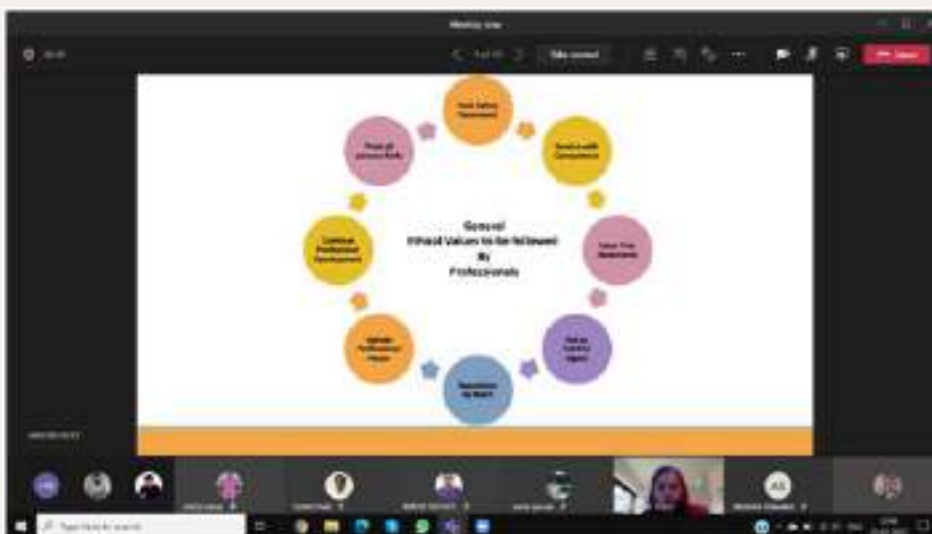




VIDYUT



The Electrical Department conducts a One Day Seminar every Semester under the banner “VIDYUT”. This seminar not only teaches students about the conventional electrical theory but also guides them into understanding about Professional Ethics, Financial Literacy, Project Management, etc. The seminar updates them about new industrial concepts and technology which is not included in our curriculum and also sheds light on emotional intelligence.



FH 2021



SH 2020

VIDYUT SH2020



Date	Topic	Speaker	Class
23/10/2020	“Oral and Written Communication”	Dr. N.Apama Rao Sr.Manager, DS School of Entrepreneurship, IIT Bombay	Sem III
24/10/2020	“Decentralised Renewable Energy powered Small scale Enterprises for reviving Rural Communities”	Mr. Nitin Akhade Consultant,Rural Electrification & Livelihoods & Project Lead, MICRO Customised Energy Solution, New Delhi	Sem V
23/10/2020	“Project Management”	Ms. Deepti Goel Director, Harrisons Tech Consultants	Sem VII

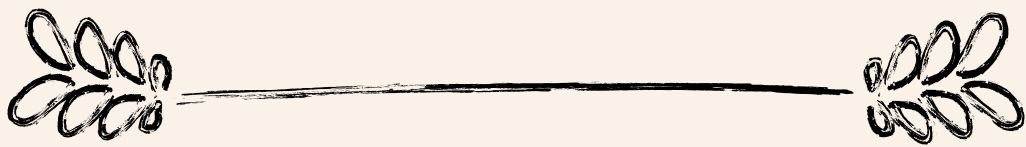
VIDYUT FH2021



Date	Topic	Speaker	Class
25/2/2021	“Financial Literacy”	Ms. Shikha Mittal Founder and Director, Be.artsy	Sem IV and Sem VI
25/2/2021	“Professional Ethics”	Ms. Prachi Salvi Manager, Business Ethics and Compliance,	Sem VIII



Events Under EESA



ONE WITH THE FLOW

"Yoga is a light, which once lit will never dim. The better your practice, the brighter your flame."

– B.K.S. Iyengar



Mrs. Sheetal Malhotra

The art of practicing Yoga helps in controlling an individual's mind, body and soul. It brings together physical and mental disciplines to achieve a peaceful body and mind; it helps manage stress and anxiety and keeps you relaxed throughout the day for years. It also helps in increasing flexibility, muscle strength and body tone. It improves respiration, energy and vitality.

The Electrical Engineering Students Association (EESA) Council organized a free online yoga session which was conducted on "Google Meet". This session was held early in the morning date -02/08/2020 at 8:00am.



ONE WITH THE FLOW

Mrs. Sheetal Malhotra is a diploma holder in yog vidya from a government recognised institute named Bhartiya Vidya Bhawan, New Delhi who underwent training for 2 years of Hatha yoga, Pranayam, Meditation and Shatkarmas and has been conducting daily yoga sessions in the morning as well as in the evening for many years. Mrs. Malhotra gave in depth insights and knowledge on yoga and its importance in a student's daily life. Regular practice of yoga can help lose weight, relieve stress, improve immunity and maintain a healthy lifestyle which is a need during this pandemic situation. The session was enriching for the students and teachers and it covered the history of yoga and contribution of yogic lifestyle towards total health. We also learnt asanas and breath control techniques important from a student's perspective. Yoga asanas build strength, flexibility and confidence. At the end students and teachers clarified their personal doubts with Sheetal Maam. To conclude it all, the session gave the students a sense of relief and helped improve their focus and concentration which was the purpose of this session.



- Muskan Saxena
(Electrical Sem 7)



LIVING WITH COVID



Dr. Ketan Pakhale

The Electrical Engineering Students Association (EESA) organized a free online Interaction Session on "LIVING WITH COVID-19" which was conducted on "Google Meets". This session was held in the evening after online college lectures dated - 15/08/2020 at 6:00pm.

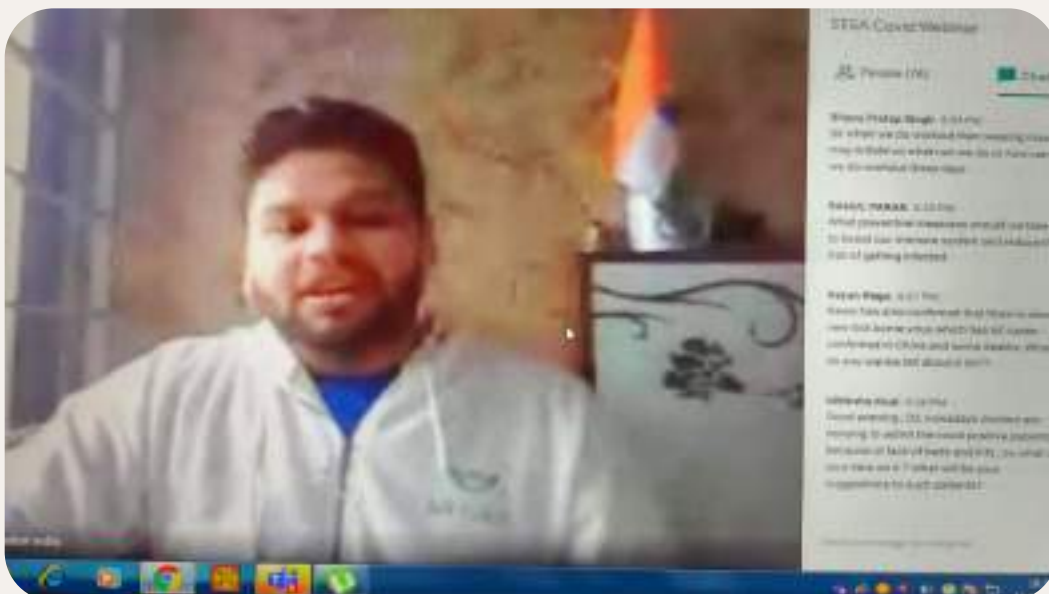
The session was conducted by Dr. Ketan Pakhale, a Bariatric Physician and a Specialist in Metabolic Syndrome. He is also the founder of Metabol: A Metabolic Syndrome Clinic in Ghatkopar and an Assistant Professor at DY Patil University, Navi - Mumbai. He is also serving as a Medical Examiner for Aviation - DGCA of India. He has been awarded with International Innovative Researcher in Health Science Award for the first concept Clinic Metabol by World Research Council and United Medical Council.

The session had a whopping number of participants with a total count of 63 members. The session was basically a Q & A between doctor and the participants about the various misconceptions of COVID-19 during the outbreak when it was at its peak. Session included various important role playing scenarios designed by Dr. Ketan to test the student's understanding of the pandemic.



The role role playing scenarios targeted on the etiquettes or human behaviour when a person is infected or shows his symptoms in public. Insights of his personal experiences on COVID-19 and his work with COVID patients gave students and teachers a gist of the conditions that arose during the pandemic and cleared most of the myths.

The session was concluded by him giving us healthy tips for maintaining this sedentary lifestyle and keeping an optimistic mind – set during those difficult times. A doubt session was kept at the end of the main event, in which students, teachers and staff members asked their personal doubts to Dr.Ketan. It was overall an interesting and informative event.



TALENT HUNT



Category
Entertainment

Geo Rocky
Kolenchery



TALENT HUNT

Category
Entertainment



Shivani Sharma



TALENT HUNT

Category
Social Cause



SPOKEN TUTORIALS ON EXCEL

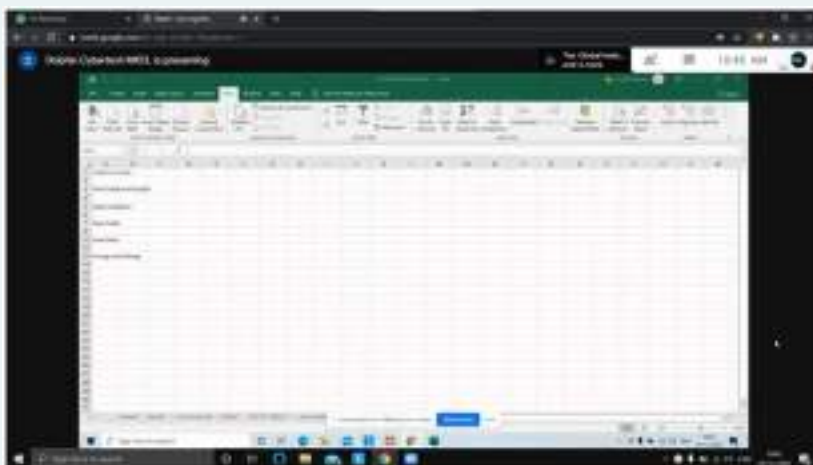


“A skilled woodworker is respected because he is excellent with his tools”.

Mr. Cedric D'souza

Excel is clearly not a specialized engineering software. However, it is a jack-of-all-trades. One of the things that makes Excel a great engineering tool is that it is capable of handling both equations and tables of data. Excel is a blank canvas for any calculation you need to make. You can quickly create and repeat repetitive calculations to speed up and organize your workflow. You can complete reports, forms, create charts, tables, organize content, or use any of highly powerful tools.

The EESA Council of FCRIT organised an online certification program on the various functionalities of MS-Excel from 7th December- 28th December, 2020. The sessions included pre-recorded videos and 2 live sessions. The session was hosted by the EESA Council members along with an expert lecturer Mr. Cedric D'Souza who hosted the sessions.



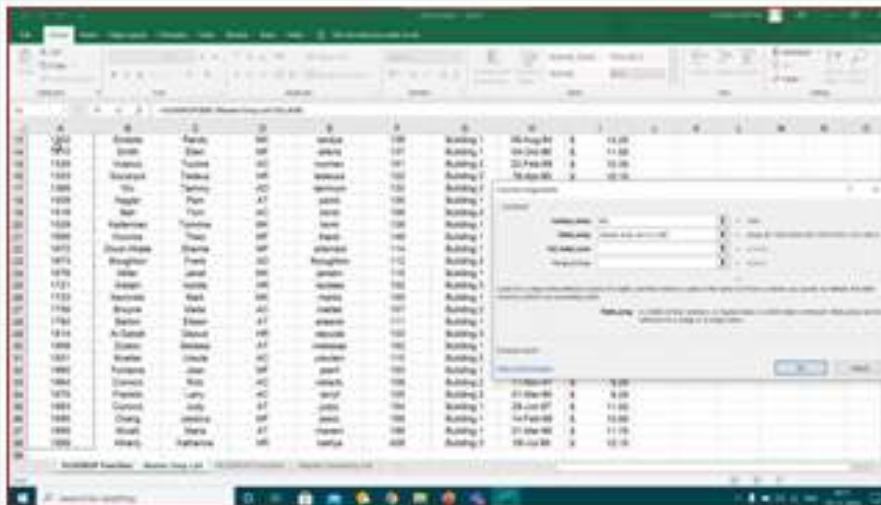
The first session hosted by Yashwant Patil and Bhanu Pratap Singh gave a brief idea about the basics and functioning of Microsoft Excel. It covered topics such as Excel Syntax, editing worksheet, cell formatting, rounding and remainders etc

SPOKEN TUTORIALS ON EXCEL

The second session was conducted by **Shreya Shinde** and **Sankita Gorule** which covered the application-based topics of Excel. It included If /And/Or function, advanced logical functions, array formulas, sorting data etc

The third session was taken up by **Shriraj Lakhapati** and **Aditya Kumar Jaiswal**. Various functionalities of MS- Excel necessary for day-to-day applications were covered in depth.

Furthermore, the last 2 sessions were conducted by the expert lecturer Mr. Cedric D'Souza live on Google Meets. The session was interacted well and the topics related to industrial applications such as data validation, pivot table, data function, sort and sort by functions were covered. The Session ended with a live Q&A session.



The screenshot shows an Excel spreadsheet with a list of students and their details. A data validation dropdown menu is open, showing a list of building names. The spreadsheet has columns for ID, Name, Roll No., Address, and Building. The data validation dropdown menu is open, showing a list of building names: Building 1, Building 2, Building 3, Building 4, Building 5, Building 6, Building 7, Building 8, Building 9, Building 10, Building 11, Building 12, Building 13, Building 14, Building 15, Building 16, Building 17, Building 18, Building 19, Building 20, Building 21, Building 22, Building 23, Building 24, Building 25, Building 26, Building 27, Building 28, Building 29, Building 30, Building 31, Building 32, Building 33, Building 34, Building 35, Building 36, Building 37, Building 38, Building 39, Building 40, Building 41, Building 42, Building 43, Building 44, Building 45, Building 46, Building 47, Building 48, Building 49, Building 50, Building 51, Building 52, Building 53, Building 54, Building 55, Building 56, Building 57, Building 58, Building 59, Building 60, Building 61, Building 62, Building 63, Building 64, Building 65, Building 66, Building 67, Building 68, Building 69, Building 70, Building 71, Building 72, Building 73, Building 74, Building 75, Building 76, Building 77, Building 78, Building 79, Building 80, Building 81, Building 82, Building 83, Building 84, Building 85, Building 86, Building 87, Building 88, Building 89, Building 90, Building 91, Building 92, Building 93, Building 94, Building 95, Building 96, Building 97, Building 98, Building 99, Building 100.

Each student had to write a quiz related to the respective topic covered and certificates were given on successful completion of the course

-Dylan Pinto
(Electrical Sem 7)

TECH-TONIC



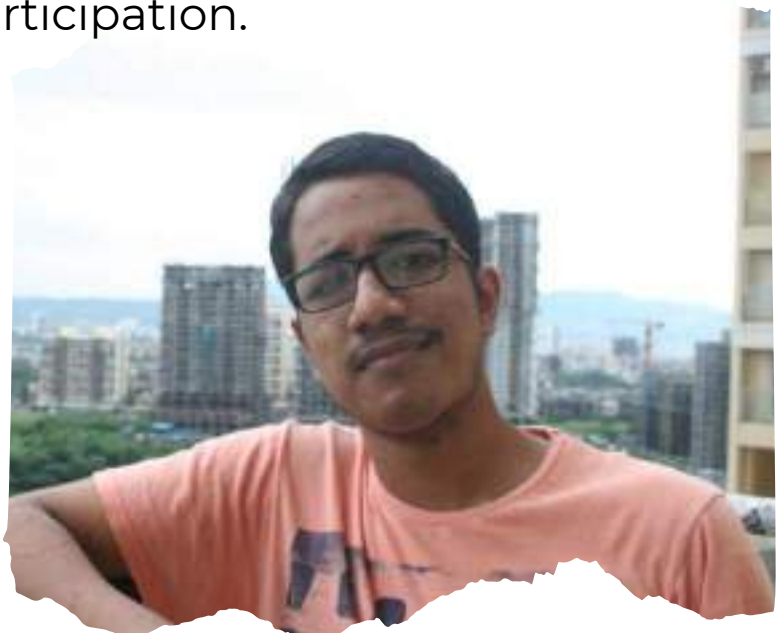
EESA council under the guidance of HOD Dr. Bindu S. and Convener Mrs. Harshada B. organised departmental Fest named "TECH-TONIC" on 20th March 2021, comprising of two brainstorming and fun events in which students participated with full enthusiasm and joy.

TRIVIA JUNKIES

TRIVIA JUNKIES comprised of Two Rounds. First round consisted of technical questions and the second round consisted of aptitude questions. Questions were displayed as well as read and the participants had to answer by raising the hand ("raise hand 🙋" option available in Microsoftteams). The person who raised their hand first got to answer the question. For each correct answer, the participant got +10 points and for each wrong answer, a deduction of - 5 points. The participants with highest points qualified for the second round. In second round out of all finalists one was declared as the winner depending on the correct answers given by the participants. It was a fun event with active participation.

Anand Unnikrishanan (Sem V)

Winner of Trivia Junkies





Management Team for Trivia Junkies

1. Shreya R. Shinde
2. Yashwant S. Patil
3. Sankita Gorule
4. Bhanu Pratap Singh

R A Z Z L E D A Z Z L E

This event consisted of a game called “SCRIBBLE”.

Scribble.io is a cool doodling game where players have to guess the right word through the drawings. It might be difficult to understand at first, but it will be easy once you get used to the suggestions. Scribble.io is a game that stimulates the imagination and agility of the brain, you will join a group of other players to show their creativity and intelligence. It will help you in improving your vocabulary with your opponents. With lots of time and little to do, you need to connect with more people during this time. This game consists of few rounds; when it's your turn to draw, you choose one of the three words suggested in the game, you need to visualize that word by drawing it within 80 seconds. The others see you draw in real-time and try to guess what the word is. Similarly, when other players draw, you need to enter the correct answer to review, the faster you answer, the higher the score. If you don't guess the word in the given time, you don't gain any points. The person with the most points at the end of the game will be crowned as the winner.



What if the answer is wrong? If you or the other player submits a wrong guess it will be shown in the chat and any letters that happen to correspond to the real answer will be added to the board as hints. The event was a fun game enjoyed by all the participants

Management Team –

1. Dylan Pinto
2. Shriraj S. Lakhapati
3. Aditya Kumar Jaiswal
4. Lennard F. Dsouza

Winners of Razzle Dazzle



Ayush Misra
(Elec Sem 7)



Rishabh Mhatre
(Elec Sem V)

-Bhanu Pratap Singh
(Electrical Sem 7)

EDITOR'S PICK

Fossil VS Renewable



All over the world, scientists are working hard to incorporate ways to switch from fossil fuel energy into renewable energy efficiently and economically.

Several renewable energy sources, like geothermal, hydroelectric, and geothermal, comprised more than one-fifth of all electricity generated in the world. Next on the list was nuclear power, at 20%, with coal at 19%. Fossil fuel-powered electricity is still number one in the country by a substantial margin, comprising 40% of all electricity generated in 2020. While this is kind of disappointing, it also represents a big step forward for renewables, showing the ongoing decline of coal's role as an energy source, which fell 20% from 2019 to 2020, whereas renewables jumped 9% in the same timeframe. And if this progress continues, renewables might overtake fossil fuels as the number-one energy source pretty soon than imagined. But it may surprise you that, natural gas now accounts for more energy generation than coal. Even though natural gas increased its market share dramatically over the past decade, renewable energy grew faster than any fossil fuel.

EDITOR'S PICK

Fossil VS Renewable

In 2016, renewable energy generation in the US grew to a record 22 gigawatts of capacity—burning fossil fuel growth. The old excuse that renewable energy is too expensive is just an excuse. These days, the energy produced by renewables is just as affordable as energy produced by fossil fuels, if not cheaper in some cases. Some solar panel projects can even generate power at roughly half the cost of fossil fuels like coal. That's a lot of potential savings. And, what's more, renewable energy is only projected to get cheaper over time.



-Lennard D'souza
(Electrical Sem 7)

EDITOR'S PICK

Nuclear VS Renewable

Since past few decades, an ongoing debate of Renewable Energy over Nuclear Energy being harmful due to production of Radioactive waste has been outsmarted due to its zero waste production. Renewable energy is cheaper and reduces emissions faster than nuclear power, according to the World Nuclear Industry Status Report from French industry consultant Mycle Schneider. "The closure of uneconomic reactors will not directly save CO2 emissions but can indirectly save more CO2 than closing a coal-fired plant, if the nuclear plant's larger saved operating costs are reinvested in



efficiency or cheap modern renewables that in turn displace more fossil-fuelled generation," Schneider argues. Technologically nuclear systems have been prone to greater construction cost overruns, delays, and longer lead times than similarly sized renewable energy projects. Thus, per dollar invested, the modularity of renewables projects offers quicker emissions reductions than large-scale, delay-prone, nuclear projects.

EDITOR'S PICK

Nuclear VS Renewable

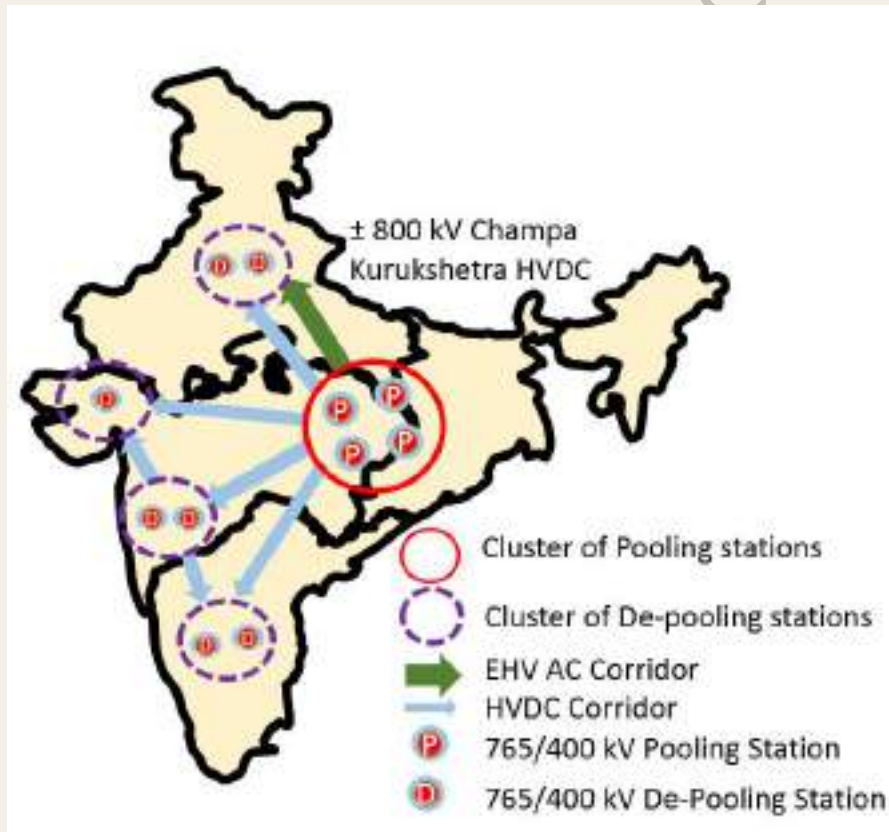
Furthermore, renewables tend to display higher rates of “positive learning” where increased deployment results in lower costs and improved performance, especially for wind farms and solar energy parks. This contrasts with the experience of nuclear power in France which has been prone to “negative learning,” rising costs or reduced performance with the next generation of technology. The most important low-carbon energy sources, renewables and nuclear, compete for investment funds. But if we are not mistaken, the dice have already been thrown in this contest of renewables versus nuclear. Renewables have won. Although it might still take a decade or more for parties involved to agree on that.



**-Yashwant Patil
(Electrical Sem 7)**

POWER POOLING

"What is a soul? It's like electricity – we don't really know what it is, but it's a force that can light a room."



Most European countries have adopted a power model with bilateral contracts and a voluntary power exchange. However, others, like several Asian countries, are implementing pool models which specifically offer advantages for smaller power systems in developing countries. Power pooling is used to balance electrical load over a larger network (electrical grid) than a single utility. It is a mechanism for interchange of power between two and more utilities which provide or generate electricity. In one model, the power pool, formed by the utilities, has a control dispatch office from where the pool is administered. All the tasks regarding interchange of power and the settlement of disputes are assigned to the pool administrator.

POWER POOLING

The formation of power pools provides the following potential advantages:

- Saving in reserve capacity requirements
- Help from pool in unit commitment
- Minimization of operating cost and maintenance scheduling
- More reliable operation

When a power utility enters a power pool, it is joining and communicating with a coalition of other power generation facilities. This cooperation leads to less expensive and more reliable energy throughout the power pool's region. The World Bank describes the benefits of these agreements, explaining, "Regions with low cost generation resources could become net exporters of power, while electricity customers in high cost areas could benefit from cheaper imports."

In power pools, communication and joint planning can include co-ownership of power plants, sharing of reserves and using the lowest-cost energy option within the power pool first. These joint ventures come with positives, as discussed above. There are also negatives. These include the time required to come to joint decisions and the loss of autonomy or flexibility for individual utilities.



- Muskan Saxena
(Electrical Sem 7)

STUDENTS CORNER



GLADSON NADAR
(ELECTRICAL SEM 7)



STUDENTS CORNER



EXHIBITS

GLADSON NADAR
(ELECTRICAL SEM 7)



STUDENTS CORNER

The scarred moon

Perseverance is all she had,
When fate turned its back with cruelty,
Like the bark of a tree she was rough,
Screening her softness beneath it,
Every steps left some traces of existence,
But washed away with the storm of guilt,
This plot may be exigent to understand,
But this is how she merely lived,
There was a moment of infatuation at a tender age,
As endearment was really rare to her,
The time drifted and her admiration was misconceived,
" my feelings!! it must be love..yes it is! " she believed,
She confessed the very moment gathering all her wits,
Rejection didnt saddened her and never pondered why,
With gush of blissful words she was awakened by her prince,
It started from nowhere professing its end soon,
Being polar opposite she agreed on the differences,
Limiting her boundaries and customizing her ways,
She idolized him but was not contented,
The moment of apprehension forced her,
To break his tender heart without empathizing the reason,
His pain turned into hatred towards her,
For his welfare she had to bear it,
Years grieved for forgiveness with all sincerity,
Until one day she was asked to stop ,
She believed to get a new start as she is still young,
With pages turning with a promise of more lessons,
Valuable enough to mould and fix her flaws,
Her stains from the past remained,
Adding to her beauty just like the moon she admired.

**-Shikha Menon
(Elec Sem 7)**

STUDENTS CORNER

Hang on! It will end one day

The world now needs a dose of kindness,
Clouds of sorrows everywhere, we need showers of happiness.

Mental health in this times is first to be looked before physical,
Old beliefs are hurting us, it's time for us to think radical.

People now is the time for us to show big hearts, Offering a
helping hand is all where it starts.

Every form of life is suffering, so let's be kind, This is not the time
for differences to make us blind.

The going might get tougher, but don't lose hope, Be strong,
Hang on tightly and climb up the rope.

This is the time when our loved ones get care, Sorrows seem
small when people start to share.

Fighting this together we would see the shining sun on the
other side, Dealing with kindness we leave no space for
discriminations to hide.

**-Harshal Mishra
(Electrical Sem 5)**

STUDENTS CORNER

Sunlight

Forget Earth, Travelling through galaxies and space,
It's somewhere through sunlight start it's race.

Being punctual everyday, What is it's thing? What is the package
that it has to bring.

Answers to these entangling queries are too simple, Complications
of ours it has to kindle.

Blinding our vision it shines so bright, Lighting the fire in us for a
constant fight.

Travelling along millions of stars to give us hope,
Boosting our confidence, refraining you from saying nope.

Journey through the light years and it still possess the power to
burn,
My friend don't be afraid of the dark all you need to do is just turn.

It makes your strength to reflect shine so bright,
Helping us by hiding our weakness from world's dark sight.

And when you feel you are too weak with no place to hide, You need
to turn around because you are facing the wrong side.

Remember how much ever difficult the situations might,
All it takes is a light within yourself to kiss the dark good night.

**-Harshal Mishra
(Electrical Sem 5)**

ELECTRICAL PLACED STUDENTS LIST 2020-21

SR. NO.	NAME OF THE STUDENT	ROLL NO.	NAME OF THE COMPANY
1	Manasi Bansode	401701	TCS Ninja
	Manasi Bansode	401701	Cognizant
2	Nikita Bhole	401703	TCS Ninja
3	SWAPNALI BHOSALE	401704	Burns Mcd
4	Akanksha Chawla	401705	Multidimensions
5	Vaibhav Chidrawar	401706	TCS Ninja
	Vaibhav Chidrawar	401706	Cognizant
6	Anuja Fegade	401710	Torrent Power
7	Mihir Gawand	401711	TCS Ninja
	Mihir Gawand	401711	Burns Mcd
8	Joel Goveia	401714	Torrent Power
9	Govind Chandrababu	401715	Torrent Power
10	Dhanashree Gujarathi	401716	Cognizant
11	Santosh Jaiswar	401717	Multidimensions
12	Jobis Johnson	401720	TCS Ninja
13	Rahul Kalva	401723	TCS Ninja
	Rahul Kalva	401723	Cognizant
14	VIVEK KUSHWAHA	401724	Burns Mcd
15	Sanmitra Mandal	401726	TCS Ninja
	Sanmitra Mandal	401726	Torrent Power
16	Swapnika Mishra	401732	TCS Ninja
17	Shubham Mohite	401733	Godrej
	Shubham Mohite	401733	Torrent Power
18	Anjali Nair	401735	TCS Ninja
	Anjali Nair	401735	Burns Mcd
19	Rushikesh Padir	401738	Torrent Power
20	Aniruddha Parab	401740	SN Mercantiles

ELECTRICAL PLACED STUDENTS LIST 2020-21

21	Jay Patil	401743	Sarman Engineering
22	Anvesh Rane	401744	TCS Ninja
23	Ruchit Patil	401745	Torrent Power
24	Amol Pednekar	401746	Tata Power
25	Mandar Sase	401749	TCS Ninja
	Mandar Sase	401749	Torrent Power
26	AMEYA SATPUTE	401750	Burns Mcd
27	AJINKYA SHIRUDE	401753	TCS Ninja
28	Shradha Namboodiri	401754	TCS Ninja
29	Reetesh Singh	401756	TCS Ninja
30	Aditya Prakash Tare	401757	Godrej
31	Nisha Thite	401760	SN Mercantiles
32	Prasad Bankar	401764	Torrent Power
33	Paulson	401766	Buildtrack
34	Tanay Mistry	401769	Godrej
35	AMITKUMAR NALAVADE	401770	Torrent Power
36	Alex Noronha	401771	Multidimensions
37	Ganesh Patil	401774	Burns Mcd
38	Mahesh Potdar	401776	Torrent Power
39	Gaurav Surve	401777	TCS Ninja
	Gaurav Surve	401777	Burns Mcd

ELECTRICAL ENGINEERING STUDENT ASSOCIATION (EESA)



Convener

Council Members'

DESIGNATION	NAME
Chairperson	Lennard Felix D'souza
Secretary	Yashwant Sachin Patil
Asst. Secretary	Aditya Kumar Jaiswal
Treasurer	Shreya Rajendra Shinde
Editors	Dylan Dominic Pinto Bhanu Pratap Singh Muskan Saxena
Program Coordinators	Sankita Vishwanath Gorule Shriraj Lakhapati

Student Members



Lennard D'souza



Yashwant Patil



Aditya Jaiswal



Shreya Shinde



Dylan Pinto



Muskan Saxena



Bhanu Pratap



Sankita Gorule



Shriraj Lakhapati



Thank you

Ere long intelligence—transmitted without wires—will throb through the earth like a pulse through a living organism. The wonder is that, with the present state of knowledge and the experiences gained, no attempt is being made to disturb the electrostatic or magnetic condition of the earth, and transmit, if nothing else, intelligence.

— Nikola Tesla



The Institution of Engineers (India)



Students' Chapter (Electrical)

Fr. C. Rodrigues Institute of Technology
Agnel Technical Education Complex
Vashi

IEI

NEWS LETTER

2020-21

About Institute

Fr. C.R.I.T. has, within a short span of time, established itself as a leading engineering college in

Mumbai University. Though its reputation rests mainly on the high quality, value-based technical education that it imparts, it has to its credit a verdant, well-maintained Campus and extensive facilities. Its location in the vicinity of the holy places of various religious denominations underscores its secular credentials and its philosophy of "Vasudha Iva



FCRIT, Vashi Campus

Kodambakkam". The college prides on being one of few that as accreditation for all five branches vide file

no. 28 - 41 / 2010 - NBA
dated 18. 12. 2018.

About Department

Electricity has been a subject of scientific interest since at least the 17th century and hence is considered as one of the oldest branches of engineering. The students are taught to design, analyze, implement and operate electrical and electronics systems efficiently, thus opening the doors to new challenges. In this aspect the students are given in-depth knowledge in Machines, Power Systems, Control System, Signal Processing, Drives, Power Electronics, Microprocessors and Switched Mode Power Supplies. To impart this, we have well qualified experienced and dedicated staff in the department. Moreover, students have access to well-equipped labs such as Renewable Energy Lab and Project Lab for sharpening the mind of the students with practical knowledge. The department Vision and Mission are:

Department Vision:

To evolve as a progressive center for modern technical education in the field of Electrical Engineering to produce self-sustainable professionals through value-based education.

Department Mission:

- To provide modern technical education in the area of Electrical Engineering.
- To collaborate with industries and institutes of repute to grow progressively.
- To provide holistic environment for the development of socially responsible citizens.

Program Educational Objectives (PEO):

Graduates will be able to...

- Demonstrate core competency in the areas of power system, power electronics, machines, renewable energy and allied disciplines
- Contribute to environmental sustainability through design, development and commissioning of green energy or clean energy systems
- Excel in professional career and higher education with ethical values.

Program Specific Outcomes (PSO):

Graduates will be able to...

- Comprehend and analyze the problems in power generation, transmission and distribution systems.
- Acquire technical knowledge, skill and competency in development of Renewable energy system and contribute to energy efficiency

About IEI

The Institution of Engineers (India) [IEI] is a statutory body to promote and advance the engineering and technology, established in 1920 and incorporated by Royal Charter in 1935. It is the largest multi-disciplinary professional body of engineers encompassing 15 (fifteen) engineering disciplines with a membership of more than

820 thousand, and serving the nation for more than 9 decades.

IEI has bilateral agreements with a number of Professional societies across the globe. It Holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance (IntPEA). The Institution also awards the Professional Engineers (PE) Certification. The Institution of Engineers (India), with its headquarters in Kolkata, India, is administered by a National Council with the President of IEI as its Head.

IEI Students' Chapter (Electrical)

All the students of electrical department are members of the IEI students' chapter. From the second-year students four members are selected as the council members for the academic year 2020-21. The duration of the council is for one year.

Under IEI the following events were conducted for academic year 2020-21.

IEI EVENTS 2020-21

- LATEX Workshop
- Poster presentation competition
- AVISHKAR Project/Poster Presentation Competition
- Expert Lecture

LATEX WORKSHOP

A LATEX Workshop was organized and conducted by

the IEI Student Council on 5th, 7th and 8th December 2020 on Microsoft's Teams platform. The workshop was conducted by Mr. Joel Tom Shaju, Mr. Bhavesh Hariom Sharma, Mr. Chaitanya Sanjay Thakare and Mr. Nishil Praful Lathia.

The attending students were guided from the installation process, also from the very basics of how to save a .TEX file, to make a project report in the LATEX software.



LATEX Workshop Banner

On the first day students were introduced to the software and were guided stepwise through the downloading and installation procedure of the software. The students then had an interactive session and learned the basics tools and codes of the software and were given an assignment of the above.

On the second day students were taught more advance features and codes which were helpful for making a professional report.

After the session on the third day a concluding ceremony was given and students were given a final assignment of making their own report.



Event photograph

POSTER PRESENTATION COMPETITION

A poster presentation competition was organized and conducted by IEI Council on 18th December 2020 on Microsoft Teams platform. In this competition 70 students of third year were participated. The main objective was to enhance student's knowledge with their creative streak and express their ideas. Firstly, the poster presentation template was circulated among students for preparing the poster. The poster was prepared based on the mini project. There was total 15 poster in the competition. The judge for poster presentation was Mr. Shashank Push, Research Scholar from IIT Bombay. The poster with title "Light control using proximity sensor" bagged the first position and "Night Vision Camera" won the second position. After the competition the students were able to show case their ideas and presentation skills.

The summary of feedback was observed that most is the students found the session useful and knowledgeable.

Based on feedback action to be taken is that many such competition has to be conducted in future.



Event Photograph

AVISHKAR Project/Poster Presentation Competition

The technical competition events that were conducted by the IEI Council, project and poster presentation competition 'AVISHKAR' is a Bi-level National Competition held after very two years.



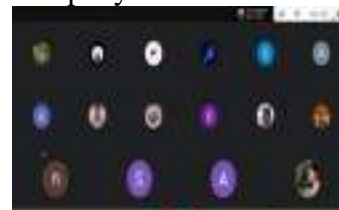
Event banner

In view of globalization to survive in a competitive environment, it is necessary for students to have technology related innovative ideas.

AVISHAKAR aimed to provide a platform for engineers to exhibit their ideas and share their knowledge with each other. The objectives of this competition were to provide a platform for technology related innovative ideas from the student community as well as to motivate young professionals but not least to share new ideas.

Poster Competition:

A Poster competition was held on 15th April 2021 for engineering students All Over India. In this competition 8 groups of 4 members each participated and these groups were judged acutely by Ms. Rachel Philip, looking after Vision Inspection Systems at Tej Control Systems which is her own company.



Event Photograph

The students had enthusiastically made attractive posters with innovativeness and very much impressing the judge. She was feeling very much pleased and privileged to judge the students.

After critical judgement top two winners were selected.

First prize was awarded to FCRIT, Vashi with project title "Remote Access Remote Control (RARC)" with a cash prize of 1000/-.



Event Photograph

Second place was awarded FCRIT, Vashi to with project title as “Automatic wireless water level controller” along with a cash prize of 500/-

Project Competition:

A Project competition was held on 15th April 2021 for engineering students All Over India. In this competition 16 groups of maximum 4 members participated and these groups were judged acutely by Mr. Bennadit Nadar, Power System Consulting Engineer at ETAP.



Event Photograph

The students had enthusiastically made attractive projects with innovativeness and very much impressing the judge. He was feeling very much pleased and privileged to judge the students. He even gave his own suggestions as to how to enhance the project and upgradations that can be done so that it becomes useful for the society and they can achieve even greater fame and rewards.



Event Photograph

After critical judgement top two winners were selected.

First prize was awarded to St. Francis Institute of Technology with project title “Electromyographic Signal Processing with Application to Bionics” with a cash prize of 2000/-.

Second place was a draw.

Awarded to Atharva College of Engineering and Theem College of Engineering, Boisar & Vishwaniketan's Institute Of management entrepreneurship and engineering technology, Khalapur with project titles as “Covid-19 Screening Bot” and “Onion Ride Search engine and Privacy android browser” respectively along with a cash prize of 500/-.



Event Photographs

The event was concluded by a giving vote of thanks to the judges for their dedicated contribution as well the participants who showed their courage to stand out from the crowd and stepping up to take on the challenge that helped in making our event a huge success. This event was conducted on online platform that was very much challenging to organizers as well as this was a totally a new concept

everyone is just starting to adapt themselves to this world of online exposure. The event was conducted smoothly and received a great amount of appreciation from the judges, participants as well the teachers who had headed for the event management.

A brochure was prepared for the competition and circulated among various engineering colleges in India.

Both the judges motivated all of the engineering aspirants as to how about go ahead with the career plans and showing a glimpse of the vast worlds of engineering and as to how we need to make a mark of ourselves in this ongoing development of technicality.

Also, the markers for adaption into the field still being a student.

Expert Lectures:

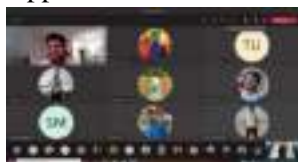
A total of 21 expert lectures which were conducted by the council in second half of 2020 and first half of 2021. The lectures were so informative and interesting which motivated the students to learn and explore new concepts which would be beneficial to enhance their knowledge. Following are few of them:

- **Sangeeta Godbole** (Assistant Director, Regional News Unit) organized a “motivational talk” on 13th of august 2020; also

“Introduction to Procurement” seminar was conducted by **Saumya George** (Assistant Manager, Procurement Division) on 17th of September.



- **Prathamesh Joglekar**(alumni) had a motivational talk on his journey from FCRIT to Apple USA.



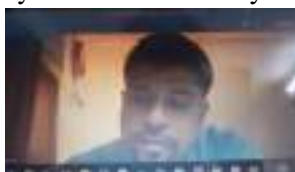
Lecture by Mr. Prathmesh Joglekar on Motivational Topic

- On 31st Oct, 2020 **Prathamesh Mhamane** (Assistant Manager, Godrej and Boyce Mfg. Co. Ltd) conducted lecture on “EHV Substations” and “Preparation for handling engineering projects”.
- **Shekhar Prasad** (Electrical Design Engineer) conducted an expert lecture on “Campus to corporate transition” topic.
- On 13th November, 2020 **Shubham Pandita** (GET Electrical, Stelmec Ltd.) discussed on “EPC Business”, followed by our last expert lecture which was

delivered by **Rahul Deo** (Manager -Electrical) on “Electrical Fire Prevention and Safety”.

Throughout semester in FH2021 total 11 Expert lectures were conducted from areas of Power System, Electrical Protection, HVDC, Electrical Networks etc. and non-technical topics also:

- **Mr. Rangarajan Swaminathan** (Project Engineer, Electrical Company-Wartsila India Pvt Ltd.) had a Motivational Talk on “Electric Vehicle-The Pioneering Technology” on 18th of March 2021 followed by a seminar on “Experience Sharing & briefing on Sustainability” conducted by, **Aditya Golatkar** (Senior Manager-Group CSR).
- On 5th of April 2021 **Mr. Aditya Bhattar** (Software Development Engineer-II) had an expert lecture on “Application of control system in Industry”.



Event Photograph

- Also, on 22nd of April 2021 **Dr. Sushil Thale** (Professor, FCRIT, Vashi) discussed on “LED Street Lighting Design”.
- On 24th of April, 2021 **Mr. Arnab Panja** (Senior Executive Engineer, L&T,Mumbai) conducted a seminar on “At Cross Roads”.



Event Photograph

- **Pooja Jadhav** (Purchase Executive) conducted a lecture on “Power Transformer Erection, Testing, and Commissioning” on 12th June 2021.

IEI COMMITTEE

The committee for the year
2020-21:

			
Johny George Joseph (Secretary)	Sanskruti Raju Deshmukh (Editor)	Shruthi Shrikant Mayekar (Editor)	Abhishek Nair (Editor)
 Prof. Divya Sajeesh (Staff Advisor)			