MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
(A Unit of Rajalaxmi Education Trust®, Mangalore)
Autonomous Institute affiliated to VTU, Belagavi, Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

Department of Electronics & Communication Engineering

(Accredited by NBA)

ELECTRONICS & COMMUNICATION STUDENT'S ASSOCIATION (ECSA)

ANNUAL REPORT

Academic Year 2022-23

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
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Department of Electronics & Communication Engineering

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ECSA – Committee List

Name	Responsibility
• **Dr. Vinayambika S Bhat**	- Head of the Department
• **Ms. Deepthi Shetty**	- Faculty Coordinator
• **Mr. Uday J**	- Faculty Co-Coordinator
• **Mr. Sumukha P T**	- President
• **Mr. Dhanush**	- Vice President
• **Ms. Swcha S Jain**	- Secretary
• **Mr. Akash**	- Co-Secretary
• **Ms. Nisarga S**	- Treasurer
• **Mr. Akshay Nayak**	- Co-Treasurer
• **Ms. Samskruthi P K**	- Cultural Coordinators
• **Mr. Vikas Jain**	- Cultural Coordinators
• **Ms. Lekha K**	- Co-Cultural Coordinators
• **Mr. Roshan Chandrahas Hegde**	- Co-Cultural Coordinators
• **Mr. Sushan S Hegde**	- Sports Coordinator
• **Ms. Rakshitha Jain**	- Co-Sports Coordinator
• **Ms. Aditi V Shetty**	- Student Placement Coordinator
• **Mr. Shanush Kulal**	- Student Placement Coordinator
• **Mr. Sourav N Shetty**	- Student Placement Coordinator
• **Ms. Purohith Gouthami**	- Student Placement Coordinator
• **Ms. Nayak Gauri Hanumant**	- Co- Student Placement Coordinator
• **Mr. Alwin D'souza**	- Co- Student Placement Coordinator

Department of Electronics & Communication Engineering

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Preamble

The Department of Electronics & Communication Engineering has been supporting students by motivating to participate in Curricular and Co–Curricular activities. Electronics & Communication Student's Association (ECSA) is a forum for the overall skill development of students and it established on 16th April 2009. All the students of the Electronics & Communication Engineering department are the members of the ECSA forum. This forum provides ample opportunity for students to discover and exhibit technical skills, presentation skills, communication skills by organizing various events. Under this forum, the Department organizes many events, such as Invited/Technical talk by the experts from Academic/ Industry, Workshop, Aptitude session, Gate Training, etc. The Department forum publishes a newsletter periodically. It gives wide exposure to the students to express, share the knowledge, also it gives a bird's view of department activities, achievements of staff/students. Under ECSA forum, the Class Toppers and University rank holders are felicitated with certificates of appreciation and cash rewards.

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ECSA 2022-23 Activity List

Activity - 1

Title : **Three Days Training on VLSI Design using Cadence Tool Suite**

Resource Person : **Mr. Shivaprasad B K, Senior Field Application Engineer, Entuple Technologies Pvt. Ltd, Bengaluru**

Date : **8/09/2022 to 10/09/2023**

Profile of the Speaker: **Mr. Shivaprasad B K** is currently working as Senior Field Application Engineer at Entuple Technologies Pvt. Ltd in Bengaluru. He has completed his M.Tech from B.V. Bhoomaraddi College of Engineering and Technology, Hubli in the year 2014 specialising in the field of VLSI Design and Testing. He pursued his Bachelor of Engineering from SJM Institute of Technology, Chitradurga in the year 2012 specializing in Electronics & Communication Engineeringdepartment.

About the Event:

The Department of Electronics & Communication Engineering organized the three days training on "VLSI Design using CADENCE Tool Suite". The objective of the training was to expose the faculty members and students in emerging technologies in the areas of Digital and Analog IC design flow. Participants developed a basic understanding of Full custom IC design flow along with usage of tools such as the Virtuoso, Spectre Assura, Incisive Simulator and Genus.

The program was inaugurated by Dr. Vinayambika S Bhat, Professor & Head, Department of E&CE, Dean Quality Assurance. Resource person Mr. Shivaprasad B K Senior Field Application Engineer and Ms. Swapna Srinivasan, Senior Assistant Professor, E&CE were present for the inaugural session. Ms. Rithika, 7th semester student of E&CE department welcomed the participants. The guest Mr. Shivaprasad B K gave participants an overview about the three days training sessions to be conducted using Cadence tool suite.

Inauguration of Training by Dr. Vinayambika S Bhat, HoD, ECE.

A hands-on session was scheduled for every session which enabled the participants to learn the usage and application of Cadence tool suite in detail.

Day 1: 08/09/22

Session 1 (10:00AM – 01:00PM)

Speaker started the session by giving introduction to Full custom IC Design flow. He elaborated on the theoretical concepts of simulation, layout, physical verification, RC extraction to GDSII. Detailed session and exposure were given on Cadence Virtuoso design platform which is optimized solution for design migration and automation of TSMC FinFET technologies. Mr. Shivaprasad B K further gave hands-on session by considering CMOS Inverter as a design example and demonstrated the steps to do schematic capture using Virtuoso Schematic Editor. Further participants went on to create a symbol for the design example CMOS Inverter.

Session 2 (02:00PM – 05:00PM)

In the afternoon session test bench creation was done using Virtuoso Schematic editor to perform functional simulation of the design. Functional simulation is the process of verifying the functional behaviour of a design by simulating it in the software. The purpose of simulation is to verify the individual blocks of the IC. Spectre Classic Simulator to run fast and accurate analog simulations from the command line was explained and participants explored the ADE Explorer environment. Mr. Shivaprasad B K demonstrated how to set the Spectre Simulator settings, identify its language syntax. Further simulation results were analyzed using the Virtuoso Visualization and Analysis tool. With the help of netlist control statements, participants learnt how to control the flow of the Spectre command-line simulation. Finally, session ended with participants drawing layout of the inverter using the Virtuoso layout editor.

Day 2: 09/09/22

Session 3 (10:00AM – 01:00PM)

On day 2 during the forenoon session the fundamentals of what is physical verification, Design Rule Check and Layout Vs Schematic was explained by the speaker. He further demonstrated the process and steps involved in extraction. He talked about the Cadence® Quantus™ Extraction Solution which is the industry's most trusted signoff parasitic extraction tool and is a leader in 3nm design adoptions and tapeouts. As a single, unified tool, the Quantus solution supports both cell-level and transistor-level extractions during design implementation and signoff. Session was ended by developing an understanding of participants on Parasitic Extraction using Quantus need and how to do post layout simulation and generation of GDSII.

Session 4 (02:00PM – 05:00PM)

In the afternoon session speaker introduced participants to Semi-Custom IC Design flow. He explained how Cadence provides solutions for Semi-Custom IC Design. He elaborated on the tools used for functional verification and RTL Synthesis. Hands-on sessions were conducted to understand the design procedure and tools used for ASIC flow. Participants actively involved themselves and learnt how to perform functional simulation using Incisive. Speaker demonstrated the process and steps involved in synthesis and how timing report (pre- layout timing analysis) can be done using GENUS. Sessions were conducted on Semi-Custom IC Design flow using 8-bit counter as a design example.

Day 3: 10/09/22

Session 5 (10:00AM – 01:00PM)

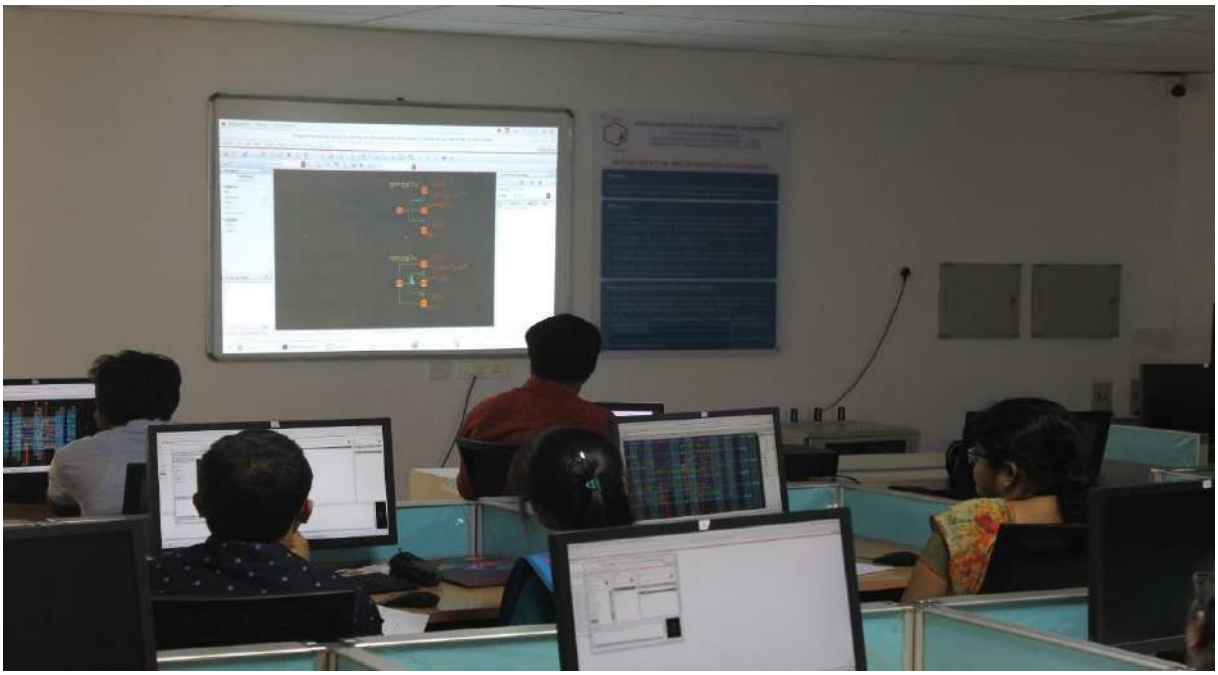
In the forenoon session the speaker briefed the participants on theoretical concepts of floor planning, power planning, placement, clock tree synthesis and Routing. He further demonstrated Physical Implementation using Innovus tool that includes Floor Planning, Power Planning, Placement, CTS, Routing. He explained how Innovus Implementation system is optimized for the most challenging designs. He further added the architecture minimizes design iterations and provides the runtime boost to get to market faster. Participants were demonstrated with the steps and they worked to use the Innovus tool to perform various physical design processes.

Session 6 (02:00PM – 05:00PM)

In the afternoon session of day three concluded with by learning how to generate various reports and design optimization. He explained how optimization can be done for both setup & hold, how to generate timing report for setup & hold individually. Participants were taught to generate area and power report using commands as well as graphical user interface. Resource person concluded the session by demonstrating parasitic extraction and generation of GDSII.

The three days training was attended by faculty members, laboratory instructors and 7th semester Electronics & Communication Engineering branch students. A total of 31 participants benefitted from the training sessions.

Mr. Shivaprasad B K giving an Overview on IC design flow



Mr. Shivaprasad B K demonstrating the usage of Virtuoso tool

Outcome:

- Students were exposed to Cadence tool suite which will enable them to perform efficiently in laboratory course.
- Laboratory Instructors could work on Cadence tool suite and enrich their knowledge and would be able to demonstrate students.
- Faculty got experience on working in modern tool which would enable them to guide students to do real time projects and pursue research in VLSI domain.

Activity - 2

Title : **A one-day workshop on "Literature review & reference management tools."**

Resource Person : **Mr. Ramalingam H M, Senior Assistant Professor, Department of ECE, is the resource person for the workshop**

Date : **27/09/2022**

Timings : **9:00 AM Onwards**

Profile of the Speaker: Mr. Ramaligam H M is currently working as Senior Assistant Professsor in the Department of Electronics & Communication Engineering, MITE, Moodabidri. His area of interest are IoT, wireless networks, Signal Processing, etc.

To kick start the academic year 2022-23 final year project work, a one-day workshop on "literature review & reference management tools" is conducted for all the final year students on 27-09-2022.. The event started in the Auditorium-2 by explaining various resources for the available literature and the reference management tools for writing journal papers and the project report; further, the student team had a practice session in the laboratory.

Poster of the Workshop

A glimpse of the Workshop

In the first session, the students are instructed about various sources available and accessing them using the college internet facility and the VTU consortium access through https://mite.mapmyaccess.com/ to get content from multiple journals. To improve the English writing, the students are introduced to https://lanquill.com/. Further, for the reference management, the Mendeley reference manager, from the installation to citation management, was explained to all the participants.

Students' Participation in the Session

A hands-on session concluded in the workshop's afternoon session for the student teams to practice all the software tools discussed in the morning. More than 75 students from the final year has participated and got benefited from the workshop.

Activity – 3

Topic : **Webinar on "Industry of Knowledge now and in the next decade"**

Resource Person : **Bhawik Raja, Principal Data Scientist, AT&Ts Customer Advocacy Group, Bengaluru**

Date : **07/10/2022**

Timings : **11:30AM**

About the Resource Person: Mr. Bhawik Raja works as the Principal Data Scientist at AT&T's Customer Advocacy Group. His career spans 15 years across different technical and data profiles. He started his career as a Software Engineer with HP where he worked on their Unix Operating System kernel. Later he was the Data Operations Manager with Cisco where he worked as the data liaison for the Mergers and Acquisitions group. He is a Computer Science Engineer from VTU and an MBA from DoMS IIT Madras. He is multi-lingual and can speak 5 languages.

About the talk: The speaker spoke about the journey of shifts in industrialization. He also briefed about the role of data scientists, who examine which questions need answering and where to find the related data. They have business acumen and analytical skills as well as the ability to mine, clean, and present the data. They are analytical data experts with technical skills to solve complex problems. They work with several elements related to mathematics, statistics, and computer science and collect, analyze, and interpret large amounts of data. They are responsible for providing insights beyond statistical analyses. A data scientist is a better programmer than an average statistician and a better statistician than an average programmer. He also explained about the skills make a good data scientist. The skills includes Mathematics and statistics, Programming Language – R / Python / Scala / Other emerging, Data Engineering Skills – Big Data, Databases,

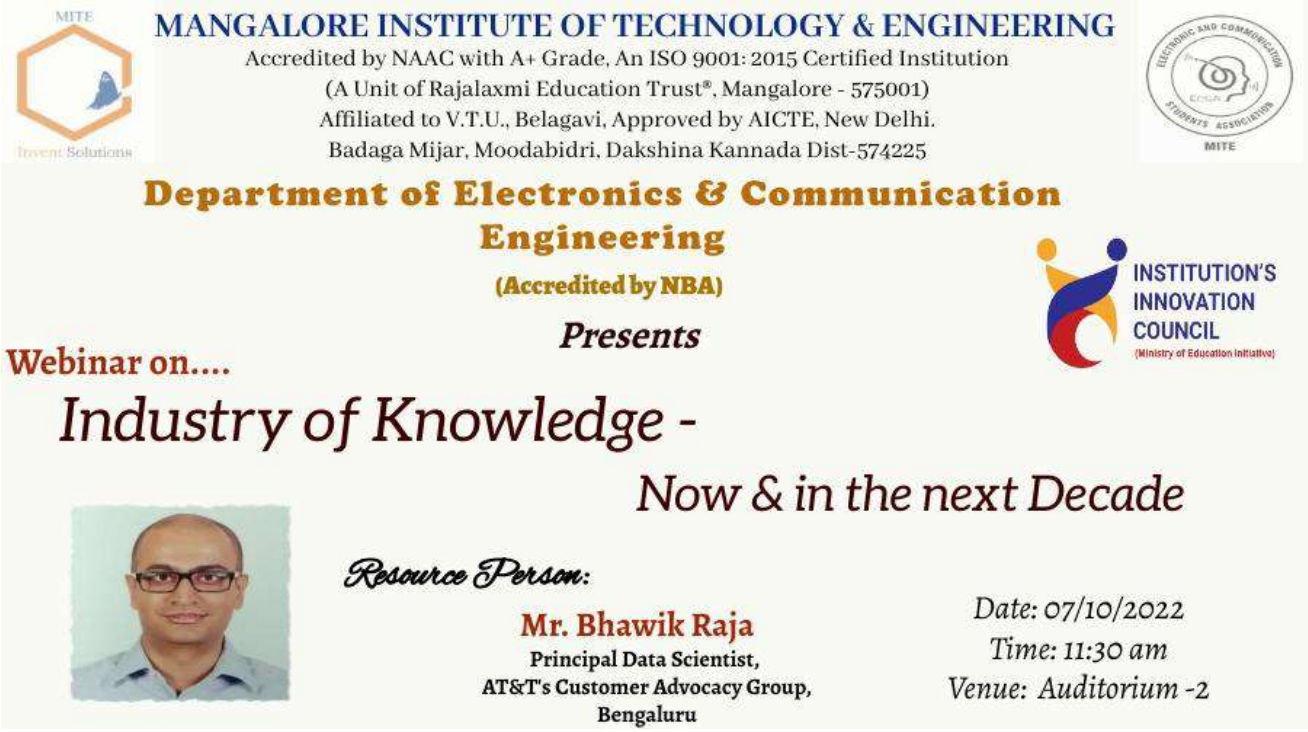
SQL, etc., Machine Learning, (Deep Learning – Off late), Communication Skills – Presentation, Visualization, Interaction.

The speaker also briefed about some important emerging industry trends such as Personalization, Automation, IoT, Security, Data Protection Legislations, Nanotechnology, Healthcare, Sports. More effective sales and marketing, better customer service, more efficient supply chains, products and services that are more aligned with customer needs, and streamlined manufacturing processes.

The speaker also explained about the benefits of student github portfolio, how to make portpolio on github, what is the need etc. He also explained the portfolio sample to the students. This portfolio has the benefit to showcase samples of work done which serves as a digital resume and proof for the skills that is mentioned in the resume. Ninety-five students were participated in this event.

Webinar Link: https://meet.google.com/jir-tuwu-oei

A Glimpses of Technical talk on Industry of Knowledge now and in the next decade



Poster of the technical talk on Industry of Knowledge now and in the next decade

Activity – 4

Topic	**: Invited Talk on "Creative Thinking, Innovation and Design Thinking"**
Resource Person	**: Dr Dasharathraj K Shetty, Associate Professor, Dept. of Data Science and Computer Applications, MIT, Manipal**
Date	**: 13/10/2022**
Timings	**: 10:00AM**

About the Resource Person: Dr Dasharathraj K Shetty is an Associate Professor in the Department of Data Science and Computer Application at Manipal Institute of Technology, MAHE, Manipal. He is the Co- Founder and Director of Micro Souharda Credit Cooperative. Ltd, Udupi. Co- Founder and Managing Director of Ganglia Technologies, Manipal Government of Karnataka Bio- Incubator. He is also Secretary General, Indian Bureau of Administrators and Technocrats that is I-BAT- The Think Tank. "Learning curve must meet no ends"- this adage fits Dr Dasharathraj K Shetty.

Dr Shetty's qualifications include a Ph.D. in Computer Vision, MBA in Finance and MPhil in Management, over and above his qualifications as MTech in CSE and BE in CSE. He is an ISAC Certified Cyber Intervention Officer and he is enrolled National Security Database. He is an AIMA(All India Management Association) Certified Management Trainer. He is an avid researcher with 100+ publications and 37 publications in Scopus and Web of Science. He is currently guiding 8 PhD students. He had filed three patenst, out of which two are already published. He is also and author of the best selling book Learning Like a Lion. He has organized 30+ workshops and guest lectures.

About the talk: The speaker spoke about the **design thinking is an iterative process in which you seek to understand your users,** challenge assumptions**, redefine problems and create innovative solutions which you can prototype and test.** The overall goal is to identify alternative strategies and solutions that are not instantly apparent with your initial level of understanding. Design thinking is more than just a process; it opens up an entirely new way to think, and it offers a collection of hands-on methods to help you apply this new mindset.

He also stated in essence, design thinking is :

- Revolves around a deep interest to understand the people for whom we design products and services.
- Helps us observe and develop empathy with the target users.
- Enhances our ability to question: in design thinking you question the problem, the assumptions and the implications.
- Proves extremely useful when you tackle problems that are ill-defined or unknown.
- Involves ongoing experimentation through sketches, prototypes, testing and trials of new concepts and ideas.

He mentioned that the design thinking begins with skills designers have learned over many decades in their quest to match human needs *with available technical resources within the practical constraints of business. By integrating what is desirable from a human* point of view *with what is technologically feasible and economically viable, designers have been able to create the products we enjoy today. He told design thinking takes the next step, which is to put these tools into the hands of people who may have never thought of themselves as designers and apply them to a vastly greater range of problems.*Creativity is the development of fresh ideas while innovation is the procedure of making these ideas tangible so that they can be used in a design process, for instance. Then the creativity is often an individual activity and innovation is a team process, the process of innovation creates a need which leads to creativity.

*He mentioned that t*he scientific activities analyze how users interact with products, and investigate the conditions in which they operate. It includes tasks which:

- Research users' needs.
- Pool experience from previous projects.
- Consider present and future conditions specific to the product.
- Test the parameters of the problem.
- Test the practical application of alternative problem solutions.

Around 84 students of 3rd year**,** Electronics & Communication Engineering attended, which benefited the students in understanding the creative and design thinking.

Poster of the event "Creative Thinking, Innovation & Design Thinking"

A glimpses of the event " Creative Thinking, Innovation & Design Thinking"

A glimpses of the event " Creative Thinking, Innovation & Design Thinking"

Activity – 5

Topic	**: Technical talk on "Embedded Control Systems and Opportunities"**
Resource Person	**: Dr Kanthi M, Professor in the Department of Electronics and Communication Engineering, Manipal Institute of Technology, Manipal**
Date	**: 14/10/2022**
Timings	**: 10:00AM**

About the Resource Person: Dr Kanthi M is working as the Professor in the Department of Electronics and Communication Engineering, Manipal Institute of Technology, Manipal, since 2014. She completed her Ph.D. from Manipal Academy of Higher Education, Manipal, M.Tech in Digital Electronics and Advanced Communication from NITK, Suratkal, and B.E in Electronics and Communication Engineering from Mysore University. She has twenty three years of teaching experience. Her area of interest is Embedded system, Embedded Control system,Internet of Things, Artificial Intelligence, Wearable devices and Biomedical Instrumentation.

About the talk: The speaker spoke about the embedded system is a computer system, combination of a computer processor, computer memory, and input/output peripheral devices that has a dedicated function within a larger mechanical or electronic system. It is embedded as part of a complete device often including electrical or electronic hardware and mechanical parts. Because an embedded system typically controls physical operations of the machine that it is embedded within, it often has real time computing constraints. She also told about the embedded system is defined as the system that is placed in another system. It is defined as a group of a system that is used to design some particular task. In the embedded system the software system is placed in a hardware system for some particular task. The embedded system can be categorized as a

microcontroller-based system that can be used to serve any particular type of operation. She mentioned embedded system can be independent or can reside in another large system. The embedded system is a type of system that is very powerful, fast, and small size in nature so that it can easily fix in other systems and perform their task. She told the embedded system can be categorized as a computer system but they do not perform the operations performed by computer systems. The embedded systems can be used in mobile phones, medical devices, or any other manufacturing equipment. Various types of operations and functions can perform by embedded systems and used to control smaller parts of a larger system.

She also said embedded system is generally a combination of software and hardware system and other components parts so that a particular operation can be executed. The embedded system is widely used in designing the system having different functions that are cheap rate devices compared to computer systems. Using embedded systems in a larger system can reduce the overall cost of system and functionality can be performed easily by the system. The embedded systems are also preferred because as the power consumption of this system is very less compared to the general-purpose system, the size limitations are not there for embedded systems, and performance is much better compared to other systems.

She mentioned that the embedded systems act as a perfect solution for designing the system that can use less power, cheap cost, reliable performance, and can serve several functions. The embedded system can easily fit in the large system that can be used to control the other devices in the system. The power consumption of embedded systems us very less that helps to reduce the device cost and enhance the importance of the use of embedded systems. All the microprocessors developed in the current time are mostly used in the embedded system. For any type of integrated circuit, the embedded system act as the heart of the system as all operation are controlled by the embedded system. The embedded system is different from microcontrollers as the microcontroller has a different architecture that requires RAM, flash memory to control the system but in an embedded system, the external memory is not required and helps to control the system. It also has a certain importance in the current technological world as almost every device

is using the embedded system to perform any specific task. Total 94 students were participated in this session.

A Glimpses of Technical talk on Emmbedded Control System & Opportunities

Poster of the technical talk on Emmbedded Control System & Opportunities

Activity – 6

Industry : **Leksa Lighting Technologies Pvt. Ltd.**

Date : **21/10/2022**

Timings : **10:00AM &2:00PM**

About the Industry: LEKSA Lighting Technologies Pvt Ltd., was started with the vision to create an admirable company focusing on Manufacturing and providing total lighting solutions in specialised lighting as per International Standards. We are here to build an enterprise that is more than a business. Leksa Lighting is having Largest Manufacturing Facility for Specialised Lighting Equipment's in South East Asia, located in Mangalore, India.

Leksa Lighting is known for its Excellent Team Work, Respect for People, Professional Work Ethics with Excellent Knowledge in lighting. Brand Leksa Lighting committed to serve and add value to the specialized lighting and give the best experience to our respected customers in this new era of smart lighting. We manufacture our products and provide solutions with a personal touch. A bunch of experienced professionals moving forward completely by focusing on Lighting excellence with customer satisfaction and continuous improvement. Our skilled and talented Research and Development Team is always ahead of time to give customers innovative products.

Leksa Lighting is recognised and awarded as the "Fastest Growing Indian Company Excellence Award" in June 2019 and "Manufacturing Excellence & Customer Satisfaction Award" in December 2019. Leksa Lighting has a reputed list of high end clientele within India and all over the world. Its expertise in handling and execution of projects is appreciated worldwide. Leksa Lighting is a Pioneer of introducing Green Technology with 100% LED Lighting solution for Fiction shoot in India.

Industrial Visit Details: Mr.Ganesh briefed about LEKSA Lighting industry. The entertainment industry is a vast playing field with increasing volume. There is a need for change in thinking, work way and technology innovation for the future growth. One of the key requirements of the entertainment industry is lighting. From live, recorded broadcasting to theatre and music festivals, lighting is one of the most important aspect.Similar to other technologies, there is a constant demand for dynamic and ever changing professional lighting solutions. But this comes with a literal cost, as professional lighting gets less and less affordable.

Leksa Lighting plays a key role in quenching the thirst of innovation demanding customer base with affordability. The mission of Leksa Lighting is in the very name of it. 'LE' in LEKSA stands for 'Lighting Excellence'. It is also the company's tagline and indicates Leksa's goal to be a global leader in professional lighting technology. Leading this mission with the dedicated R&D staff, the company brings Leksa's trademark modern and efficient technology combining with affordability. As a part of this goal, the company strives to be independent with completely in-house design and development of products which reduces the dependency on external resources and gets a better control of the quality and standards of our products. This drive to be independent and self-reliant, is in-line with India's 'Make in India' initiative and also helps in achieving company's goals of aiding the growth of local economy, ultimately fuelling national prosperity. The second part of the name 'KSA' stands for 'knowledge shared adequately', bolstering thier mission to educate and share the knowledge to the masses, especially to the younger generation. Leksa has conducted many training sessions on the importance of lighting and the current technology of lighting for many, including the film fraternity and to the students of numerous film and engineering institutes. It is the company's way of giving back to the society.

Leksa manufactures a huge array of professional lights. Starting with auditorium lighting, the company offers LED light fixtures from profile lights to RGBW par lights with seamless control of every single light using various wired and wireless control systems. The company also gives a turnkey solution for auditoriums and stages by supplying and erecting stage mechanism systems

such as motorized lighting grids, motorized curtain systems, control systems and power solutions in a professional manner.

The company provides a similar turnkey solution for TV studio lighting by providing state of the art LED lighting fixtures like various types of panel lights to Fresnel lights along with control system and rigging system. These light fixtures are also used for film and fiction shoots as they are extremely efficient and abundant in feature sets such as range of colour temperatures, dimming controls, etc., without use of external devices. The light output is of the highest quality suitable for broadcast with CRI, R9 and TLCI values being more than 96 for all our lights resulting in supremely accurate colour reproduction. The light fixtures are also capable to illuminate scenes to shoot in Ultra HD 8K and beyond 10,000 frames per second.

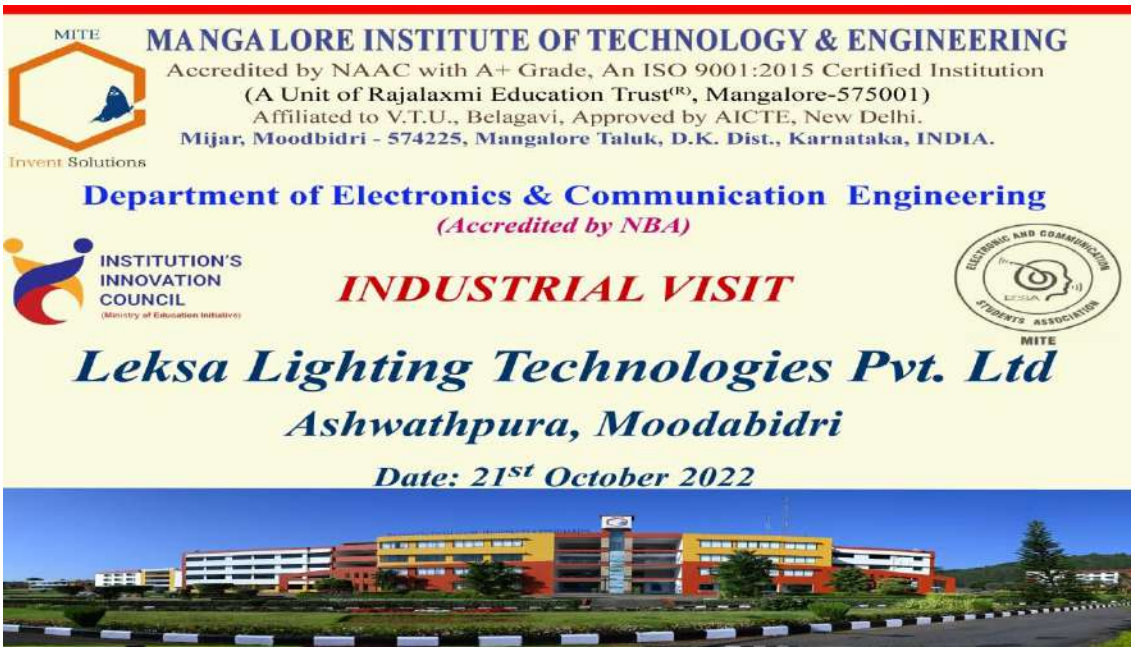
Additionally we also manufacture architectural lights to decoratively illuminate structures ranging from historical monuments to buildings of significance and everything else that requires to be beautified. Leksa has a wide range of lights with any colour of the spectrum and varying beam angles all capable of installing outdoors, withstanding harsh weather conditions and equipped with the same reliable control systems that are used for auditorium and studio lighting fixtures.

One of Leksa's earliest and proudest projects was the auditorium lighting and drapery system installation at Rajagiri School of Engineering and Technology, Kochi. The project included designing, manufacturing and installation of stage lighting and drapery with 210+ light fixtures, 19 motorised bars and complete power solution. Leksa also got a prestigious opportunity to execute stage lighting project at Mahatma Gandhi International Convention Centre, Niamey, Niger. This was a project funded by government of India. TV studio lighting has been Leksa's stronger suits. Some of the most popular News studios in India are lit with Leksa Lights namely AajTak, Times Now, Tv9 Bharatvarsh, Tv9 Bangla, Asianet, Suvarna News, Public TV and many others to name a few. They have also executed studio lighting projects in Sri Lanka, Tanzania and Canada.

Another segment Leksa is one of the leaders is architectural lighting. The company has executed the façade lighting project of Kalinga Hockey Stadium, Bhubaneswar, which held a world cup hockey game. Another popular stadium beautified with Leksa Lighting is the Jawaharlal Nehru Indoor stadium in Cuttack. Leksa also executed a monument lighting project under CIDCO - Navi Mumbai, the dynamic lighting of Utsav Chowk at Kharghar. The company has dipped its toes in fountain-light and sound show in one of its most ambitious projects, the Dr Shivaram Karanth Theme Park at Kota, Karnataka. Leksa has also supplied LED lights to many TV shows for Sony TV and Star Network. The company is a pioneer in introducing LED lighting to the film and fiction industry replacing all the conventional halogen and HMI based lighting. One of the most popular pubs in Hyderabad, the 9O9 pub is lit up by LED pixel lighting from Leksa.

LEKSA Lighting Technologies Pvt Ltd. provides the excellent knowledge about the specialized lighting verticals. It is more dedicated towards the quality, technology and service. The design and solutions for the high quality products is provided under the one roof and assured for the innovation, creativity, commitment and professionalism. As per the requirement unique products are designed.

Towards the end of the visit, the students were given an opportunity to clarify their queries. Around 114 students of 2nd year**,** Electronics & Communication Engineering attended, which benefited the students in understanding the working environment and career opportunities in Leksa industry.



Poster of the Industrial Visit

A glimpses of Leksa Lighting Industrial Visit

A glimpses of Leksa Lighting Industrial Visit

Activity – 7

Topic : **Technical talk on "MIMO Technology"**

Resource Person : **Dr. Prashanth Kumar H, Assistant Professor, Department of Electronics & Communication Engineering, NITK Surathkal.**

Date : **04/11/2022**

Timings : **11:30AM**

About the Resource Person:

Dr. Prashanth Kumar H completed his B.E. in E & C Engineering from MCE, Hassan during 1994-1998 and M.Tech in Digital Electronics and Communication from MIT Manipal during 1999-2001. He obtained his Doctoral degree on 10-11-2012 from NITK Surathkal for the dissertation titled "Decoding Algorithms for Linear Block Codes Based on Tree Structure and their Applicability to Wireless and Data Storage Systems", under the guidance of Dr. U. Sripati, Professor, E & C Department, NITK Surathkal. He published more than 20 reseach article in international journal/conferences. His area of intrest are error control coding, signal processing for communication, RF design. He is a coauthor for "MATLAB/Simulink for Digital Signal Processing" book published by Hongrung Publishing Company, Seoul, Korea. Currently he is working as Assistant Professor in the Department of E&CE, NITK, Surathkal.

About the talk:

The speaker spoke about the history of Multiple-Input Multiple (MIMO) technology and its importance. MIMO is a wireless technology that uses multiple transmitters and receivers to transfer more data at the same time. All wireless products with 802.11n support MIMO. The technology helps allow 802.11n to reach higher speeds than products without 802.11n. In short, he defined it as a method used by 4G LTE and 5G signals to multiply the capacity of a connection, by using multiple antennas to send and receive signal. He also mentioned some of

advantages of MIMO Technology like improved signal range, reduced bit errors, lower power consumption, reduced interference.

He explained about some Standard Propagation Channel Models for MIMO Communication Systems. The basic MIMO channel model and its core requirements, multilink channel sounding techniques, MIMO technology classification, and MIMO channel modeling are presented in the session. First, the generalized MIMO channel model and MIMO channel modeling techniques are briefed. Second, the concept of multilink channel sounders is presented. This covers the single-sounder sequential measurements, single-sounder multinode measurements, and multisounder measurements. Further to this, a highlight on the basic classification of MIMO channel models, point-to-point, multiuser MIMO, and massive MIMO, and provided a concise description of the multiuser MIMO for the uplink and downlink scenarios.

Further the performance of binary signaling on a Rayleigh fading channel is discussed in the session. with certain examples. Finally he concluded the session by briefing about the different technologies like SISO, MISO, SIMO and MIMO and a wide range of markets, including law enforcement, broadcast TV production and government.

Glimpses of Technical talk on MIMO Technology

Activity-8

Title : **Inaugural function of "Electronics & Communication Students' Association (ECSA) Activities 2022-23"**

Chief Guest : **Mr. Ronald S D'Souza, Executive Director, Leksa Lighting Technology Pvt.Ltd**

Date & Time : **08/11/2022 & 2.00 PM**

Profile of the Guest: Mr. Ronald S D'Souza, Founder and Executive Director of Leksa Lighting Technologies Pvt Ltd.and running it professionally with over 200 employees. Travelled widely to many countries and has international exposure, has strong problem-solving and Team based leadership ability, highly professional having hands on experience with worlds best Management and operation systems. Leksa is engaged in Manufacturing and giving Specialised lighting solutions for TV Channels, Film and Serial Shoots, Auditoriums & stages, Stadiums, Projection mapping and Architectural façade lighting, sound and light shows.

Program Details: The inaugural ceremony of "ECSA Activities 2022-2023" was held on 08/11/2022. Ms. Nisarga, ECSA Treasurer, welcomed the Chief guest Mr. Ronald S D'Souza, Executive Director, Leksa Lighting Technology Pvt.Ltd, Dr. M S Ganesha Prasad, Principal, Dr. Vinayambika S Bhat, Dean Quality Assurance, Head of the Department, Mrs. Deepthi Shetty, ECSA Coordinator, Heads of other Departments, and Faculty members of E&CE Department. The newly elected ECSA President, Mr. Sumukha, introduced Office bearers of ECSA and welcomed the second-year students.

Mr. Chintan, began the session by an invocation of God which was followed by the lighting of the lamp as a tribute to Mother Saraswathi, the Goddess of knowledge. Mr. Sumukha briefed the annual report of 2021-2022. He began with the presentation of Webinars/Seminars/Technical Activities report. He then spoke about the student's achievements in various competitions, like National and State level Innovation Challenges and Contests,

Curricular and Co-Curricular Events. The presentation highlighted student's achievements in the Hackathon, Projects, Quizzes, Cultural and Sports. Mr. Sumukha also gave details about the student publications in International Journal, National & International Conferences. An action plan for the upcoming academic year 2022-2023 was presented.

During the function, the prizes were distributed for various competitions conducted during the academic year 2021-22. Chief guest Mr. Ronald S D'Souza honored achievers.

The Chief Guest, Mr. Ronald S D'Souza shared his words of wisdom with students. He congratulated the new office bearers and explained the responsibilities to fulfill. He shared a brief thought on the corporate life and he built a Lighting Industry. He also presented the progress the industry achieved during short period of time. He suggested the students to cultivate the habits of working on new technology and to update them with the present industry era.

The program was followed by the unveiling of the Newsletter "CONNECTCHIP" 2021-22, with the ceremonial opening by the Chief guest. The News Bulletin is a podium that depicts the various achievements of students and faculty members of the E&CE department and encourages them to involve and showcase their accomplishment.

Addressing the forum, Dr. Vinayambika S Bhat, Head of the Department, welcomed the 2nd year students to the department. She highlighted the achievements of ECSA in her speech. Further, she italicized that the illiterates of this century are not the ones who do not know to read and write but are those who do not know to keep themselves updated on the changing trends. She motivated the students by briefing the importance of team work towards the achievement. At the outset, she urged the students to start the preparations to strengthen the resume with the active participation from day one.

Dr. M S Ganesha Prasad, Principal motivated the students in his presidential address. He briefed about the roles of an individual in an association where it plays a very important role in giving opportunities to each and every one. He reminded the students to have an active

participation in academic as well as extra-curricular activities and suggested to get individual recognitions for the lifetime. He suggested to have many more achievements in industry related competitions. He wished everyone a great successful academic year.

To conclude the session, Mr. Dhanush, Vice President, ECSA, offered the vote of thanks to all & expressed his gratitude to Chief Guest, Mr. Mr. Ronald S D'Souza for gracing the occasion with his solemn presence. The students from 2nd, 3rd, and 4th years of Electronics & Communication Engineering and faculty members had attended the ECSA inaugural event.

Inaugural function of "ECSA Activities 2022-23" by Mr. Ronald S D'Souza, Executive Director, Leksa Lighting Technology Pvt.Ltd

Unveiling of the Newsletter "CONNECTCHIP" 2021-22, during the Inaugural function of "ECSA Activities 2022-23

Snapshots of prize distribution during the Inaugural function of "ECSA Activities 2022-23"

Invitation of Inaugural function of "ECSA Activities 2022-23"

Activity-9

Title : **Invited Talk on "Career Building Towards Success"**

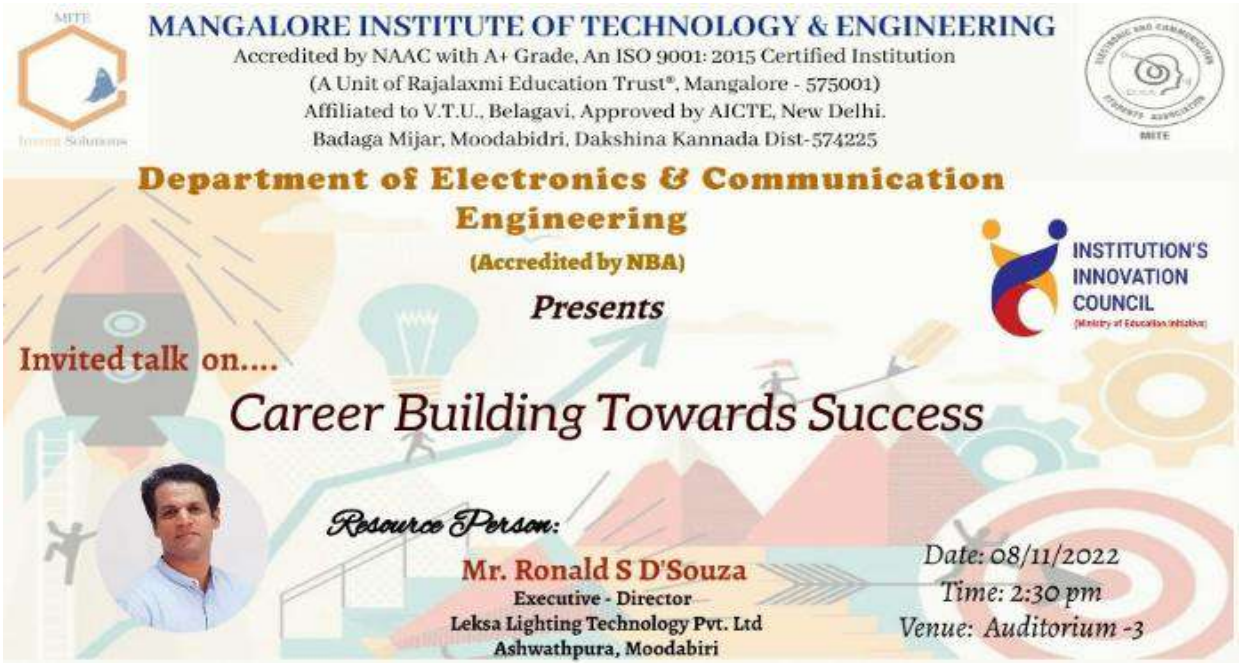
Resource Person : **Mr. Ronald S D'Souza, Executive Director, Leksa Lighting Technology Pvt.Ltd**

Date : **08/11/2022**

Timings : **2:30 PM Onwards**

Profile of the Speaker: Mr. Ronald S D'Souza, Founder and Executive Director of Leksa Lighting Technologies Pvt Ltd.and running it professionally with over 200 employees. Travelled widely to many countries and has international exposure, has strong problem-solving and Team based leadership ability, highly professional having hands on experience with worlds best Management and operation systems. Leksa is engaged in Manufacturing and giving Specialised lighting solutions for TV Channels, Film and Serial Shoots, Auditoriums & stages, Stadiums, Projection mapping and Architectural façade lighting, sound and light shows.

About the Talk: Mr. Ronald S D'Souza briefed about the different factors to be considered while building a career which leads towards successful life. The speaker also emphasised more on how to make oneself as an asset by following the ten important tips for success. In order to make use of these tips process to be followed are Plan, Do, Check and Action. He explained that the definition for success is increasing the materialistic possession in all the ways in the process of growth. Growth in combination with Ethics always gives us Progress he said. He also highlighted that problems are Golden Eggs for improvements. Just in Time & Quality Actions are the two pillars for the standardised way of life. He also advised the students to always set direction-based targets. Total 295 students were got benefited from this talk.



Poster of the Workshop

A Glimpse of the Talk

Students' Participation in the Session

Activity – 10

Title : **Outcomes of Inter/ Intra Institutional Internship**

Date : **15/11/2022**

Time : **2.00 PM - 4.30 PM**

Venue:

1. Coding : VLSI Lab

2. Short Film Production : DSD Lab

3. Survey & Study on Published Literature: Basic Electrical Engineering Lab

4. Hackathon : Communication Lab

About Program : An exhibition on the Outcomes of Inter/ Intra Institutional Internship was held on 15th November 2022. The students of the 3rd semester Electronics and Communication branch participated and presented their exhibits. The exhibition was reviewed by the Expert committee headed by the Principal of MITE Dr M S Ganesha Prasad and various other Heads of the Department.

The students demonstrated the Coding Projects and various other Software models based on the problem definition provided by the internship mentors. The problem definition was based on Mixed circuit design based on NGSpice, Library Management System using C/C++, to encode and decode a theme using Python, Alarm Clock with GUI using Python, I2C Communication using MSP430, Virus Outbreak, Prime Game, Sorting the Mess, Displaying the Election Results, Seat allotment. The demo was held in VLSI Lab. The Expert Committee headed by the Principal appreciated the students efforts in Coding. The Principal also suggested the students to involve in more such activities on a variety of cross-platforms.

The Expert committee also visited DSD Lab where the students showcased a variety of Short Films. The students presented short films that were based on Rural Electrification, E-Waste management, Water sewage, Hydro power generation, Solar Energy Conversion, FM Transmission, Design and implementation of FPGA carry adder, Short Film on Waste Management, Working of Electric Vehicle, Solar Electrification and its Real Time Implementation. The Principal and other HoDs lamented the students efforts in producing a

variety of short films on different themes in a very short time. The Principal also praised about the students' skill in developing such good Short Films and appreciated their team work.

The survey and Study on Published Literature was held in Basic Electrical Engineering Lab. The students showcased a number of Posters and reports on variety of Technical concepts and knowhow. Technical Reports were presented on IoT based on Agricultural system, Humanoid Robots, Nano materials in the construction application, 5G network architecture and emerging technology, Smart grid Communication: Challenges & Technology, Covid 19 tracking using Image Processing, Fake product detection, Artificial Intelligence in health care, Automotive Radars, AI in Robotics. The expert committee reviewed the literature presented by the students. The expert committee was of the opinion that these literary works must be converted into papers and patents and must be published so that the students will achieve recognition to their work.

Hackathon was conducted in Communication Lab. The students presented a variety of Models based on the themes like Video Analysis, Web 3.0, Object recognition, Healthcare data analysis, Fire detector and Alarm system, Water level monitoring and Control system, Arduino based Object detection, Home Automation System, Microcontroller based weather monitoring System. The Principal appreciated the students' projects based on various aspects of Electronics & Communication. The Principal was of the view that these projects could be further developed into efficient models which could be published as patents. The projects would in a great way serve the societal needs. Finally the HoD thanked the students and the internship mentors for coming up with such useful themes and ideas and making the Inter/ Intra Internship Exhibition a success. Total 114 students were participated in this event.

Poster of Outcomes of Inter/ Intra Institutional Internship

Snapshot of Outcomes of Inter/ Intra Institutional Internship Report

Snapshot of Outcomes of Inter/ Intra Institutional Internship Report

Activity – 11

Title : **Three Days workshop on Signal and Image Processing using Python**

Sponsored by: **IEEE-MITE**

Date : **23/11/2022 to 25/11/2022**

About the Workshop:

The field of signal and image processing encompasses the theory and practice of algorithms and hardware that converts signals produced by artificial and natural means. Current research in Digital Signal Processing includes robust and low complexity filter designs. Image processing research is in restoration, compression, computer vision, and medical image.Signal processing applications include audio, speech, biomedical signals like EEG and ECG, and other physical signals available in nature. Image processing applications include medical, biological, and other physical applications for which the images are acquired via the Image sensors.

Python is a well-established programming language in the web, scientific, and engineering fields and is a platform for high traffic sites like YouTube. It has been used for computing in government, academia, and industry. It is used for interfacing libraries for planning and Visualisation of Spacecraft trajectories. Signal and Image Processing using Python Workshop aims at facilitating participants to develop systems, applications, and algorithms for real-life problems. The workshop will help train the participants on various tenets of Signal and Image processing beginning from Various machine learning algorithms to deep learning principles. The workshop will extend from the basic aspects of Physical Image processing acquisition, restoration, compression, Segmentation, Augmentation, and other principles for Physical signals and Images to more important Medical Images. The workshop will give special emphasis on 2D and 3D visualization, DICOM Image processing, SMS text classification, and other gamuts of Image processing.

Workshop Outcome:

Participants will be familiar with the theory and practice of Signal and Image processing applications using Python.

The resource persons for Three Days workshop on Signal and Image Processing using Python were:

	**Dr. Sunil Saumya** **Assistant Professor** **Department of Computer Science & Engineering** **Indian Institute of Information Technology,** **Dharwad**
	**Dr. Ramakrishna Mundugar** **Associate Professor** **Department of Data Science and Computer** **Applications (DSCA),** **Manipal Institute of Technology (MIT)** **Manipal**

	**Dr. Manjunath K N** **Associate Professor** **Department of Computer Science & Engineering** **Manipal Institute of Technology (MIT)** **Manipal**

Day 1, 23rd November 2022

INAUGURAL FUNCTION

The inaugural session of three-days workshop on Signal and Image Processing using Python was held on 23rd November 2022 at 9:00am in Auditorium - 2. The workshop was co-sponsored by IEEE Mangalore Sub-section in association with Electronics & Communication Engineering Department. Dr. Ramakrishna Mundugar, Associate Professor, Department of Data Science and Computer, Applications (DSCA), Manipal Institute of Technology (MIT) Manipal, was the guest of honour and inaugurated the workshop. The inaugural session was presided over by the Principal Dr. M S Ganesha Prasad. Mr Sathisha, Associate Professor, Department of Electronics & Communication Engineering and Dr Vishwanath M S the Co-coordinator of the workshop was present on the dais.

Prof. Sathisha gave a brief outline about the workshop. Dr. Ramakrishna Mundugar in his guest speech gave an insight about the importance of Signal and Image Processing Applications and Programming using Python. Principal Dr. M. S. Ganesha Prasad in his Presidential Address gave

a glimpse of how important it is for the students to take part in such workshops for enhancing their knowledge & develop their skills. A total of 50 students from various departments in the institution participated in the workshop. Ms Swapna Srinivasan, Senior Assistant Professor from Department of Electronics & Communication Engineering rendered vote of thanks.

Inauguration of the workshop by Dr. Ramakrishna Mundugar

Inaugural Session - Guest Speech by Dr. Ramakrishna Mundugar

SESSION-1

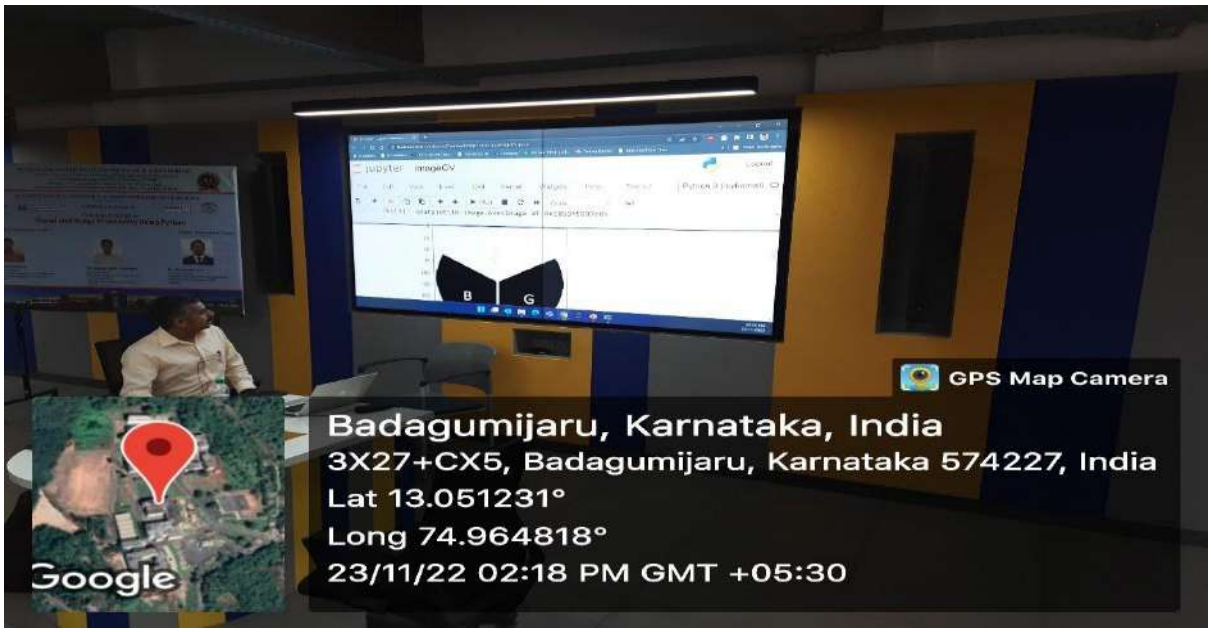
Resource Person: Dr. Ramakrishna Mundugar

Dr. Ramakrishna Mundugar, delivered a session on **"Introduction to Digital Image and Video Processing Techniques"**.

The speaker started the session with the introduction about what is an image. He added details on techniques of Image capture and Video Capture techniques that are used in Digital Imaging. He explained about different Image and Video capture methods using Image Sensors. The speaker also explained about the different color components in an image and explained about Pixel Processing. He added that color image has three components namely Red, Green and Blue.

Different combinations of color components resulted in different color Images. He also gave examples and explained about binary Images and Gray scale Images.

He briefed about Binary Images which consists of only two levels namely 0 and 1 that indicates presence or absence of the Images. He later explained about gray scale images that consisted of various levels of brightness varying from 0 to 255. He later also explained that by varying these brightness levels various gray levels could be obtained. He told that 0 indicated dark color while 255 indicated white color.



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Introduction to Digital Image and Video Processing Techniques

Introduction to Binary and Gray scale Images

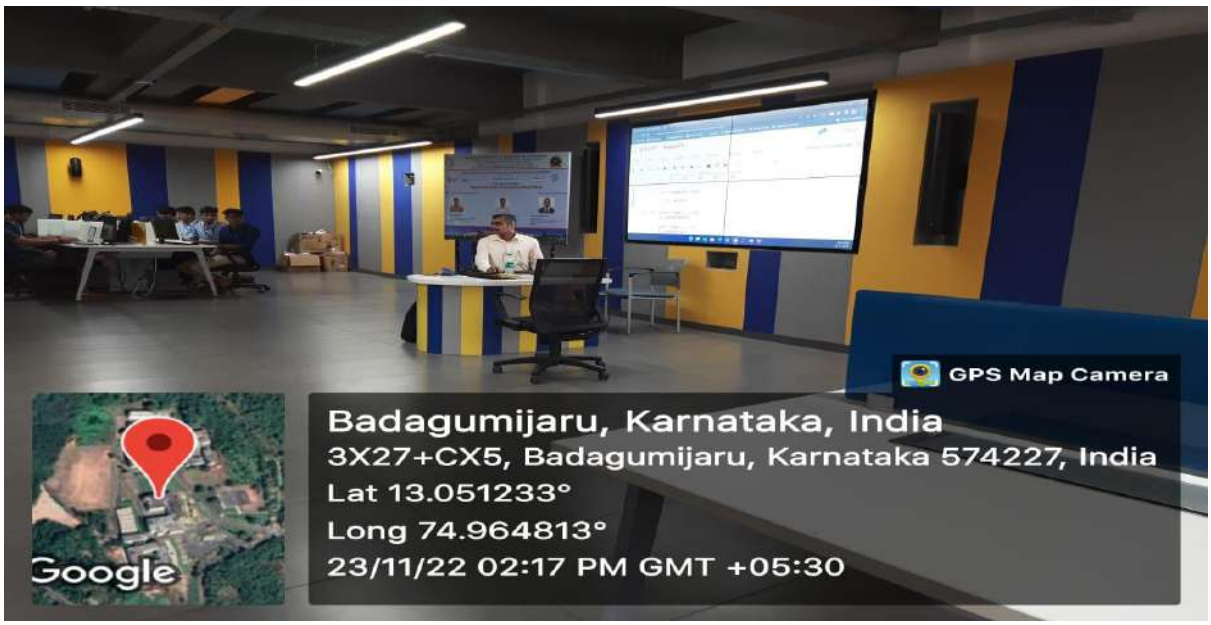
SESSION-2

Resource Person: Dr. Ramakrishna Mundugar

Dr. Ramakrishna Mundugar, delivered a session on **"Introduction to Digital Image and Video Processing Techniques"**.

Dr. Ramakrishna started the session with an overview of Image Processing using Python. He briefed students about how CoLAB is a useful tool to implement Signal and Image Processing applications. He started with the fundamentals of CoLAB and explained how to load an image and perform various Image operations like Edge detection, Rotation, and Segmentation on different types of images. He explained to the students on how to write Python code for performing various mathematical operations on Images. The students were made to log in to their Google Account and were asked to open CoLAB. The students were then asked to open an image from Google drive and perform various pixel wise manipulation of the image. The

students were able to convert the color image into gray scale and binary image. Later the students were taught hands-on to use various image processing operators to perform edge detection. During hands-on, he explained to the students that during edge detection the remaining portion of the image gets removed and only edges are retained. Later the resource person explained the Segmentation of the Image. Segmentation is used to retain the desired portion of the Image and remove the unwanted portion of the Image. Using the Images, he explained to the students how to perform Image Segmentation in Python language. Students learned how to write Python code for performing the segmentation of the desired region in a given Image.



Hands-on session on "Introduction to Digital Image and Video Processing Techniques".

Hands-on session on "Binary and Gray scale Image Processing Techniques".

Day 2, 24th November 2022

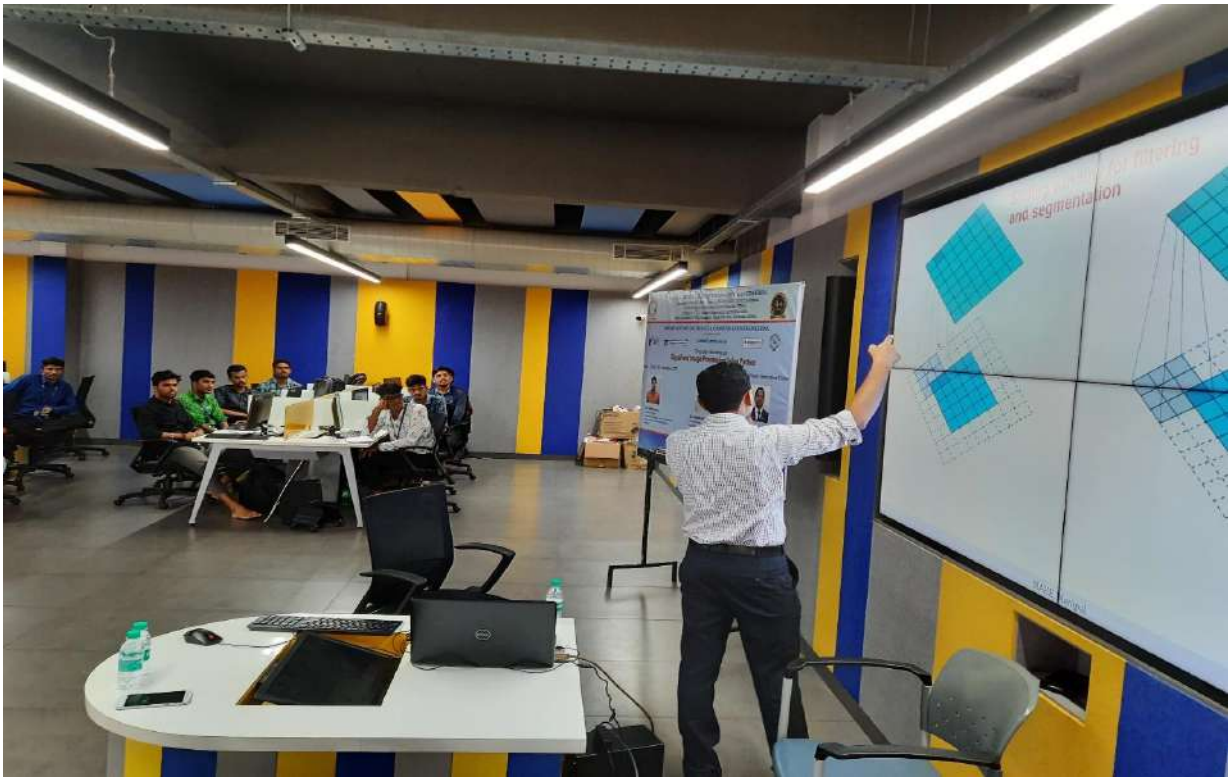
SESSION-1

Resource Person: Dr. Manjunath K N

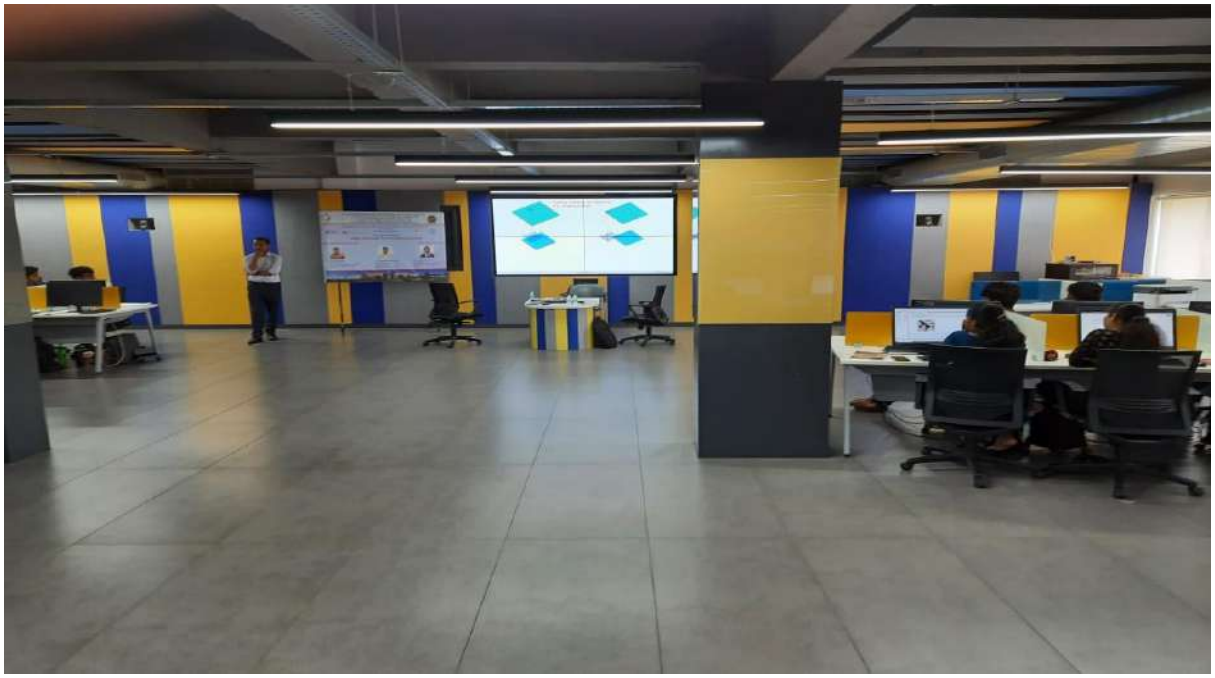
Dr. Manjunath K N delivered a hands-on session on **"Introduction to Medical Image Processing Techniques using Python"**.

On Day 2, the session started with an introduction to Medical Image Processing which is a current trend after Covid-19. During his initial presentation, Dr Manjunath stressed on the definition of medical image. He gave an insight into the Medical Image workflow and modalities. He later explained what is a CT Image and how a CT Image is acquired. Later on, he explained how a medical image can be stored in different formats. He introduced the DICOM image format for storing the medical Image. He elaborated that DICOM is the most popularly used medical Image format that is used in a variety of medical applications for the management and transmission of medical data. He later emphasized the applications of medical images in the

diagnosis of various types of diseases and associated therapy. At the end of Session 1, he threwlight on the various aspects of medical image segmentation, Shape analysis of medical Images, Visualisation of medical images, and their validation. Students understood the theoretical concepts behind Medical Image analysis and how to perform various mathematical tasks on the Image so that it can be easily processed and transmitted. The students also got a deep insight into the various medical image formats for storing of those images.



Introduction to Digital Medical Image Processing Techniques



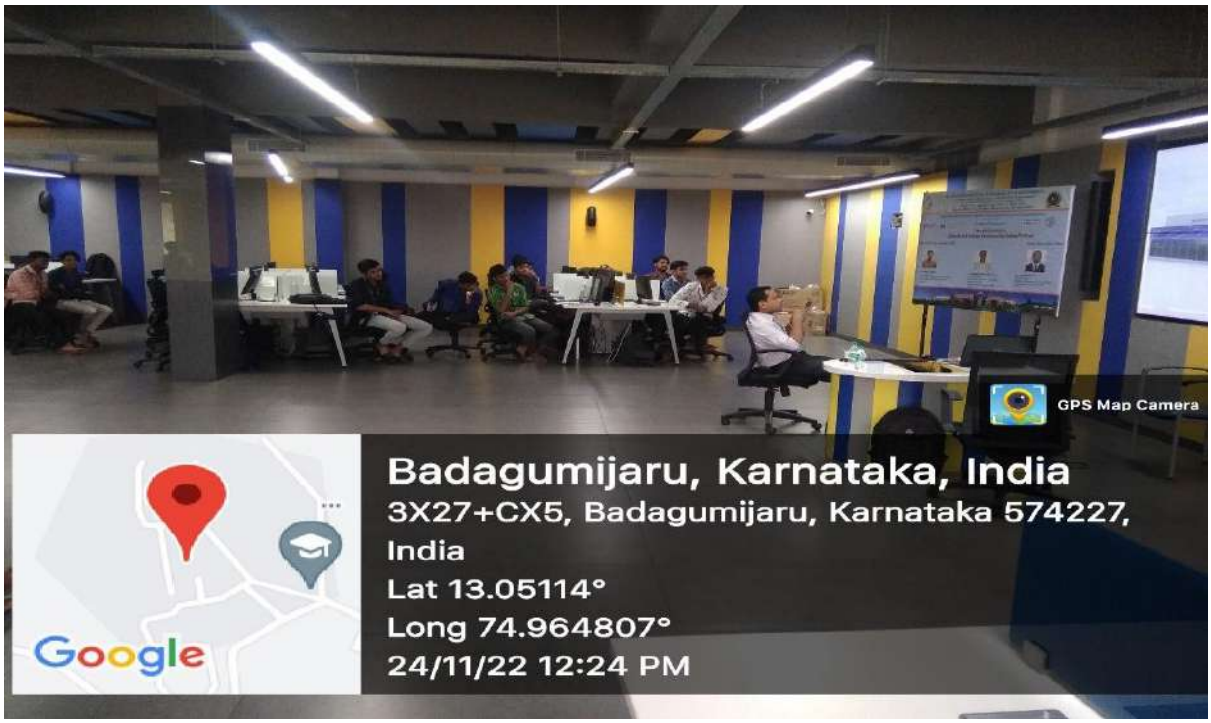
Introduction to DICOM Image Format

SESSION-2

Resource Person: Dr. Manjunath K N

Dr. Manjunath K N delivered a hands-on session on **"Introduction to Medical Image Processing Techniques using Python"**. The session began with an introduction to digital medical Images. The resource person Dr. Manjunath during the hands-on session, taught students to read DICOM medical images from the repository. They were also taught to read the images serially. The resource person then explained to the students how to display the medical images in a 2D Grid. Emphasis was given to exporting of the medical image and header details to other formats. The students were also taught on topics covering the segmentation of the region of interest and 3D visualization of the volume. Students gained more practical exposure while working with DICOM images while practicing on covered topics of Image processing. More emphasis was given to develop an understanding of diagnosis of diseases using Artificial

Intelligence. The resource person then gave an insight into the various advantages and limitations of Artificial Intelligence.



Hands-on Session on DICOM Digital Image Format

Day 3, 25th November 2022

SESSION-1

Resource Person: Dr. Sunil Saumya

Dr Sunil Saumya delivered a session on Introduction to fundamentals of Image Processing. He brought forth the concept of Machine learning and explained the correlation between Artificial Intelligence, Machine learning, and Deep learning. Artificial Intelligence is a bigger domain that includes Machine Learning. Inside the larger domain of Machine learning resides Deep learning. The resource person highlighted the importance of Machine Learning algorithms in the classification tasks with respect to Images. He gave an example of K Means clustering of Images. The students were made to write and execute python code for K Means clustering. By K Means it is possible to predict abnormality by classifying the image as Normal or Abnormal. The resource person added that we can have multiple clusters of image features belonging to various categories. Through hands on, the students were made aware of the classification procedure and its importance in Image classification.

Introduction to Fundamentals of Image Processing Techniques

Dr Sunil Saumya explaining various Image Processing Techniques

SESSION-2

Resource Person: Dr. Sunil Saumya

Dr Sunil Saumya first introduced the usage of Python language for understanding the fundamentals of Image Processing. He gave a brief introduction to how to create CoLAB account and perform Image processing. He also explained how to load an image from Google drive using CoLAB. In this hands-on, session the students were made to write and execute python code for K Means clustering. By K Means it is possible to predict abnormality by classifying the image as Normal or Abnormal. The resource person added that we can have multiple clusters of image features belonging to various categories. Through hands-on, the students were made aware of the classification procedure and its importance in Image classification. The resource person took examples of some images to highlight the importance of K Means method.

Hands-on to Fundamentals of Image Processing Techniques

Sunil Saumya Explaining the usage of CoLAB

VALEDICTORY PROGRAM

The valedictory program of the three-day workshop on Signal and Image Processing using Python was held on 25th November 2022. Participants from various departments shared their experiences about the workshop. Dr. Vinayambika S Bhat, HoD presided over the function. Participation Certificates were distributed by the resource person, and HoD.

Participants Giving Feedback About the Workshop Participants Receiving Certificates

Group Photo

Activity – 12

Title : **Coding Competition – "Fanatico del Codigo"**

Date : **29/11/2022**

Time : **2.00 PM - 4.30 PM**

About Competition: The Department of Electronics & Communication Engineering organizes coding contest – Fanatico del Codigo on 29/11/2022 for 2nd & 3rd year E&CE students. The aims of this coding contest are as follows,

- To helps the students more focused on their goal
- To makes a good team player
- To provides the much-needed exposure
- To enhance their programming skills

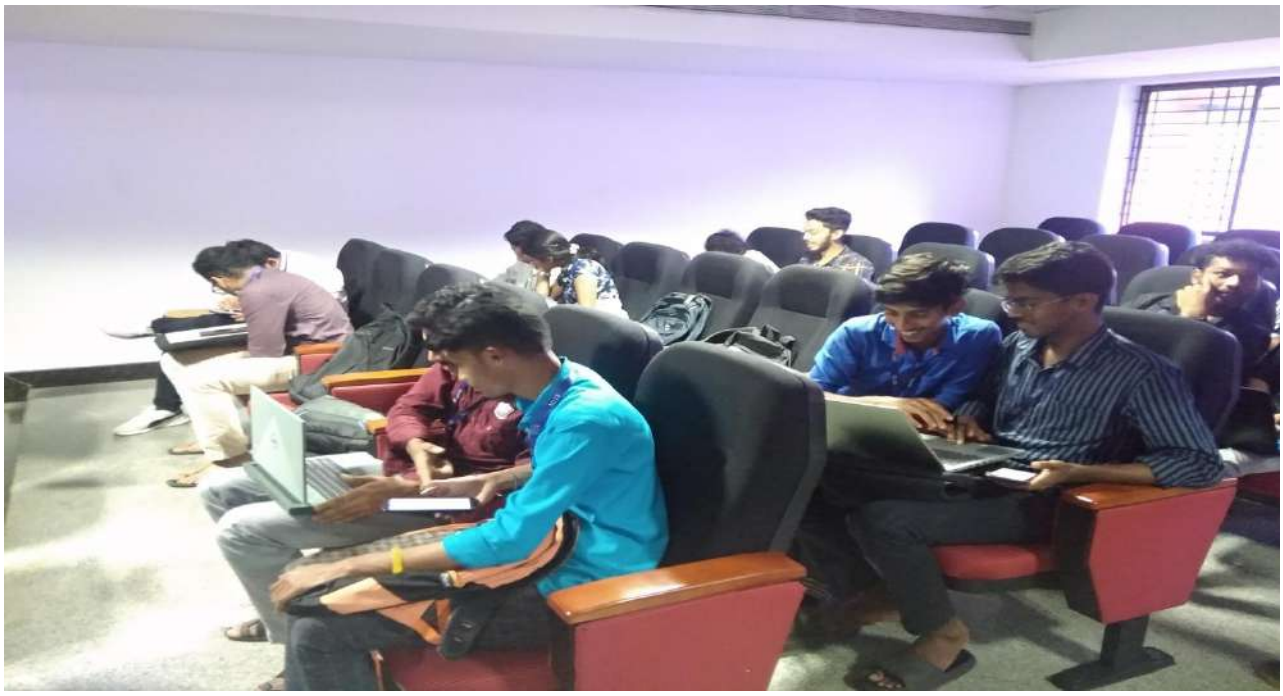
It thoroughly prepares students for coding interviews purpose of participation in coding competitions and it will also influence the students to work on the most interesting projects.

Competition Rules: Participants must make a team of 2 members. It consists of two rounds, in first round 9 questions was set for the students to solve within 30 min. The questions were based on C programming. Total 28 teams were participated in first round. Top 15 teams selected for second round. In second round, each participant team has to execute the code based on C programming & Python. The complexity of the questions was also increased compare with first round. The top two teams selected as winners.

The winners of the competition were announced under ECSA.

First Place : Mr. Nithish S Hegde [4MT20EC048] and Mr. Vaibhav Hegde [4MT20EC081]
Second Place : Mr. Ruchira R [4MT20EC062], Mr. Sathwik Bhat M [4MT20EC065]

Registration form link: https://forms.gle/j6DPZoBVuQxPEpM5A



Snapshot of Coding Competition – "Fanatico del Codigo"


MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
Accredited by NAAC with A+ Grade, An ISO 9001: 2015 Certified Institution
(A Unit of Rajalaxmi Education Trust ,Mangalore)
(Affiliated to Visvesvaraya Technological University,Belagavi)
Badaga Mijar,Moodabidri-574227
MITE
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
(Accredited by NBA)
ECSA PRESENTS
Fanático del código
"While(!(succeed=try()));"
29/11/2022
Venue: Auditorium 2
Rules:
• Two people per team.
• Any coding language of your preference.
• Bring your own laptops.
• Judges decision is final.
Scan to Register
For Any Queries Contact:
1]Gouthami Purohit (7353986212)
2]Vikas Jain (7022222449)
Registration Link:
https://forms.gle/5SPMmqkfz1NBCQ8t6

Activity – 13

Title : **Invited talk on Skill Awareness in IT Field**

Resource Person : **Mr. Pramod, Software Engineer, Torry Harris, Bengaluru (Alumani Batch: 2017)**

Date :**10/12/2022**

Time : **11:00AM**

Profile of the Resource Person: Mr. Pramod is an alumnus of batch 2013-17. He is currently working as a Software Engineer at Torry Harris, Bengaluru.

Keynote Address: The speaker started his session by giving an insight to the full stack development. The language used for full stack development is HTML (Hyper Text Markup Language). The main point he had highlighted was frontend and backend technologies. The speaker briefly explained the frontend and backend process. Everything that is seen on a website i.e. layout, the positioning of text and images, colors, fonts, buttons, and so on are all factors that the frontend developer must consider. He mentioned UI/UX are the additional skillsets of a frontend developer, which help a team evaluate the best methods of displaying and collecting information. A frontend developer who possesses these skills is potentially more valuable as they can identify the look and feel of a site while assessing the technical capabilities of such a design at same time.

He informed that although this additional skillset might be useful to a developer, they are certainly not a requirement for the job. The speaker also briefly explained about the back end process. Creation, edit/update, and collection of data are some of the processes that are most often associated with backend development. Some examples of common scripting languages used are PHP, Ruby and Python. With these languages, a backend developer can create algorithms and business logic to manipulate the data that was received in frontend development.

He mentioned some of the back end technology like springboot, firebase, express.js, Django, Laravel and many more. He also mentioned a frontend technology like bootstrap, HTML, CSS, jQuery, angular,

Redux, React, Flutter and many more. Difference between website and web application was also discussed. The speaker discussed the responsibilities of a full stack developer. The speaker had given an idea on how a person can become a full stack developer. He told that full stack developers are T-shaped developers. The T-shaped model is a concept that has been around for a while that describes the abilities or characteristics of an individual. A T-shaped person has many generalized skills, with a specialization in one or a few specific fields. He shared the available resources to learn about full stack web development like Udemy, online tutors and informed to join the developer community online. He mentioned that HTML, CSS, JavaScript-DOM, JavaScript frame works could be learned to begin as a front end developer. To begin journey as backend developer one need to learn core JAVA and then Spring and then Microservices. The speaker ended the session by practically showing the difference between websites and web app. Around 160 participants attended the session and benefited from it.

Speaker Mr. Pramod, Software Engineer, Torry Harris, Bengaluru delivering a session on Skill Awareness in IT Field

Activity – 14

Title : **Technical Talk on Embedded Systems in Automotive and Employment Opportunities**

Resource person : **Mr. Vinay Kumar Dongre, Software Developer, LTI Mindtree, Bengaluru (Alumni Batch-2017)**

Date :**10/12/2022**

Time : **12:00PM**

Profile of the Resource Person: Mr. Vinay Kumar Dongre has worked as a software developer at KPIT for 3.5 years. Currently he is working as a Module Lead at LTI Mindtree, Bengaluru.

Keynote Address: The speaker started his session by giving an insight to the Embedded Systems. He explained the key characteristics and working of Embedded System. The role of Embedded Systems in Automobiles was explained with the block diagram of an Event Data Recorder. The concept of Controller Area Network (CAN) protocol and its benefits was briefed to the students. He also mentioned about the applications of embedded systems in automobiles. The few applications he listed includes Airbags, Black box (Event Data Recorder), Anti-lock braking system, Traction control, Cruise control, Adaptive cruise control Adaptive cruise control, Vehicle to Vehicle communication, Drive by Wire Technology.

An airbag is an inflatable safety device designed to protect the occupants in case of a collision. An event data recorder is a device installed in automobiles to record information related to vehicle crashes or accidents. Anti-lock braking system prevents wheels from locking when you apply the brakes. The main components and advantages of anti-lock braking system were also briefed. Traction control system detects, if a loss of traction occurs among the car's wheels. Adaptive cruise control allows cars to keep safe distances from other vehicles on busy highways. The driver of the car can set the speed of the vehicle and the distance between his car and other vehicles. When traffic slows down, adaptive cruise control changes vehicle speed using moderate braking.

Drive by wire system replaces mechanical connections like push rods, rack and pinion, steering columns, overhead cams and cables by mechatronic connections like sensors, actuators, embedded microprocessors and control software. He discussed some of the latest trends in automobiles like electric vehicles, hydrogen car, LiDAR, MEMS Technology, electromagnetic compatibility, gesture recognition. He also listed few points which are driving India's automotive sector. The current market situation, job opportunities and skill that might help in automobile industry were also discussed. He ended his talk by informing how one can build career in automotive field. Around 160 participants attended the session and benefited from it.

Speaker Mr. Vinay Kumar Dongre, Software Developer, LTI Mindtree, Bengaluru delivering a session on Embedded Systems in Automotive and Employment Opportunities

Activity – 15

Title : **Industrial Visit to Hydro Power Plant, Soham Energy, Iruvail.**

Date : **13th-14th December 2022**

Timings : **2:00PM**

About the Industry:

Soham is a power generating company purely focusing on renewable energy. It aims to be among India's top three companies in this space. With a firm belief in the future of renewable energy, Soham has been directing its efforts in this regard for the past fifteen years. Soham prides itself on working with the best professionals in the industry & its team of hydro professionals collectively add over 150 years of experience.

Today's burning issues such as global warming, energy shortage and rising oil prices, has only validated its belief in renewable energy. Soham has built and continues to operate India's largest hydro power plant in the small hydro private sector. This plant is located near one of Southeast Asia's largest waterfall, Jog Falls. Its second plant has been operational from November 2008. Third plant in Mahadevpura was commissioned on March 2014 . The fourth plant at Mulibettu was commissioned on June 2014. This is followed by set of new projects , which are currently in various stages of implementation. With its track record of hands on leadership, project execution excellence, world class processes, and dedicated green initiatives, Soham is confidently striding forward towards a multi-fold growth with full commitment to its future generations.

In its quest to achieve a pan India presence and to de-risk itself from various rainfall patterns, Soham's Business Development team is in the process of acquiring projects across the country. Also, with the intention of de-risking itself from a single fuel source, the company is actively scouting for viable Solar, Wind and Biomass projects.

Industrial Visit Details:

Mr. Ananth, Sr. Manager, Power Plant Explained about the power plant. He explained about the electricity generation transmission and methodologies used and working of turbines. Soham Energy is a private organization, which produces hydro power of 10.5MW. The power generated from this plant is distributed to Moodabidri city. The manager of that hydro plant gave useful information about the working of turbine, generation of electricity and transmission of electricity to the rural and urban areas. Total 110 students were participated in this vist.

Mr. Ananth Explaining Students about the Working of the power plant

Student Participation in the Industrial Visit

Activity -16

Title : **"EUREKA 2.0 – A Fusion of Puzzles & Quiz Competition"**

Date : **20/12/2022 & 21/12/2022**

Participants : **2nd & 3rd year Students of E&CE**

About the Competition: Two rounds of puzzle solving competition were conducted by ECSA for the 2nd, 3rd and 4th year students of E&CE, in the Auditorium-2. It was initiated with an objective of helping the students to enhance their conceptual understanding, critical thinking skills, problem-solving strategies and lateral thinking. The first round was conducted through online on 20/12/2022 between 6 PM and 7 PM, which consists of 3 sections and 15 questions for each section. Total 25 teams were participated in the first round. The second round was conducted on 21/12/2022 between 11 AM and 1.00 PM. Total 10 teams were participated in the second round. This round consists of 3 sections and 10 questions for each section. All the sections had questions on directions, seating arrangement, identifying the logos, riddles, geometrical puzzles and few simple general knowledge questions.

About the Quiz:

First round:

Total number of sections will be three

Total number of questions will be 15 for each section

Section 1: Number puzzles

Section 2: Reebus puzzles

Section 3: Logical puzzles

Second round:

Total number of sections will be three

Section 1: Total questions - 10

Time per question - 1 min

Section 2: Total questions - 10

Time allotted - 1:30 min per question

Section 3: Total questions - 10

Time allotted - 2 min per question

At the end of the second round, the result was announced. The winners of this competition are as follows,

First Place : Ms. Chaitra Ramdas[4MT20EC026], Ms. Dhrithi Rao[4MT20EC029]

Second Place : Mr. Jonathan Joel Saldanha [4MT20EC034], Mr. Ashwith A Shetty [4MT20EC017]

Registration Link: https://forms.gle/oXghxCY3UcmJYGAM7

Snapshots of EUREKA 2.0-A Fusion of Puzzles & Quiz Competition

Poster of A Puzzle Solving Competition-EUREKA

Activity 17

Topic : **ZUMBA Workshop**

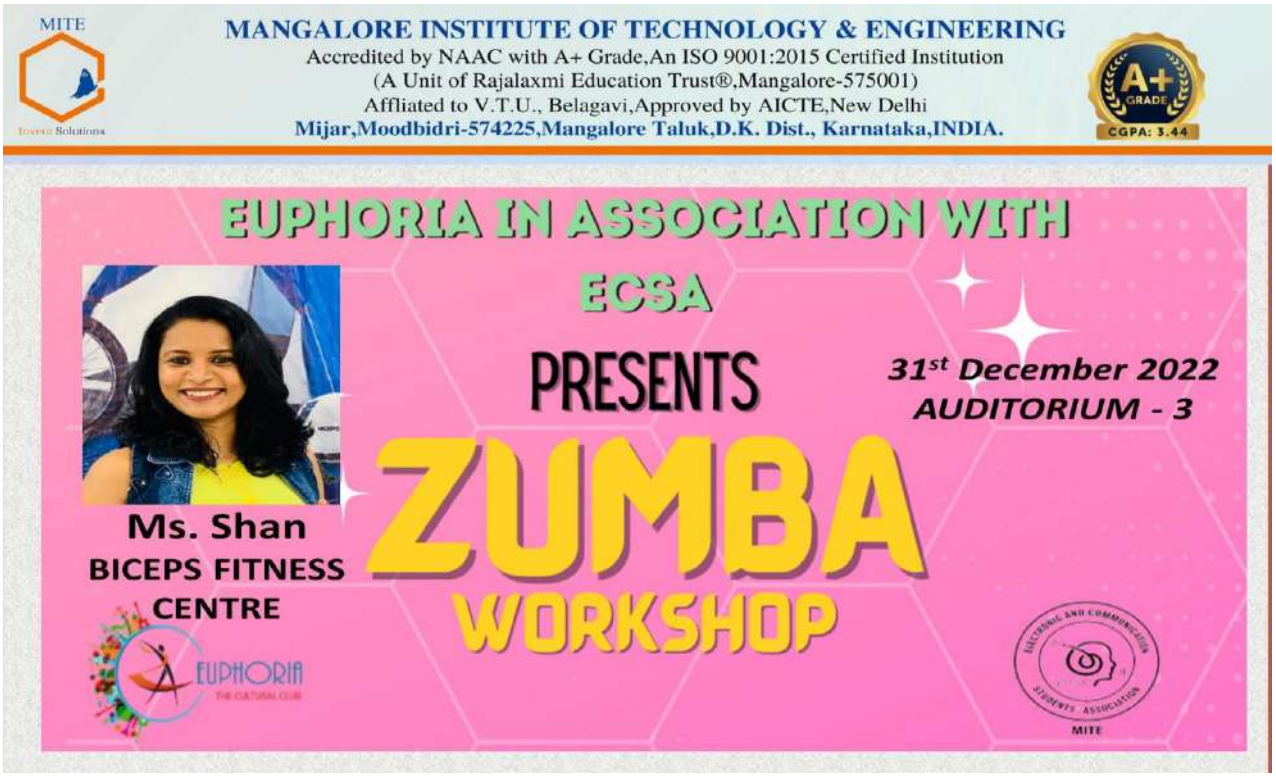
Resource Person : **Ms.Shan, Fitness Trainer, Biceps Fitness Centre, Mangalore**

Date : **31/12/2022**

Timings : **2:00 PM**

About the Resource Person: Ms.Shan, Fitness Trainer, Biceps Fitness Centre, Mangalore was the resource person for the event. The Inaugural program was held at 2pm in Auditorium 3

About the workshop: A Zumba workshop was organized by Euphoria in association with Electronics & Communication Student Association (ECSA) on 31/12/2022 in front of the PG Block.



Ms.Shan, Fitness Trainer, Biceps Fitness Centre, Mangalore was the resource person for the event. The Inaugural program was held at 2pm in Auditorium 3.

The Resource person interacted with the student participants. She briefed about the importance of fitness and how students can plan their fitness activities in order to maintain a healthy lifestyle. She also discussed about Zumba and how it is different than the normal fitness exercises. She highlighted that Zumba is an aerobic fitness concept featuring movements inspired by various styles dance. It increases flexibility. Improves neuromuscular co-ordination. Boosts self-confidence and self-esteem. It is also a perfect stress reliever. She added that than normal cardio workouts, youngsters enjoy doing Zumba as it fun doing workouts with dance.

The principal Dr. Ganesha Prasad M S addressed the gathering and wished for organizing the event. Dr.Vinayambika S Bhat, Dean Quality Assurance, Head of the Department, Electronics & Communication Engineering, Ms. Rashmi Praveen, Cultural Coordinator, Euphoria and Ms. Deepthi Shetty, Faculty Coordinator ECSA were present on the dais.

After the inaugural and the interaction session the workshop was held in front of the PG Block, near bus parking area. The event saw more than 250 students performing various Zumba moves. In addition to its fitness goals, the event was also exclusive fun and enthusiastic workshop.

Resource Person addressing the participants

Students Participation in the workshop

Activity -18

Topic : **A Peer Learning talk on "Cybersecurity: An era in which Data is more valuable than Money"**

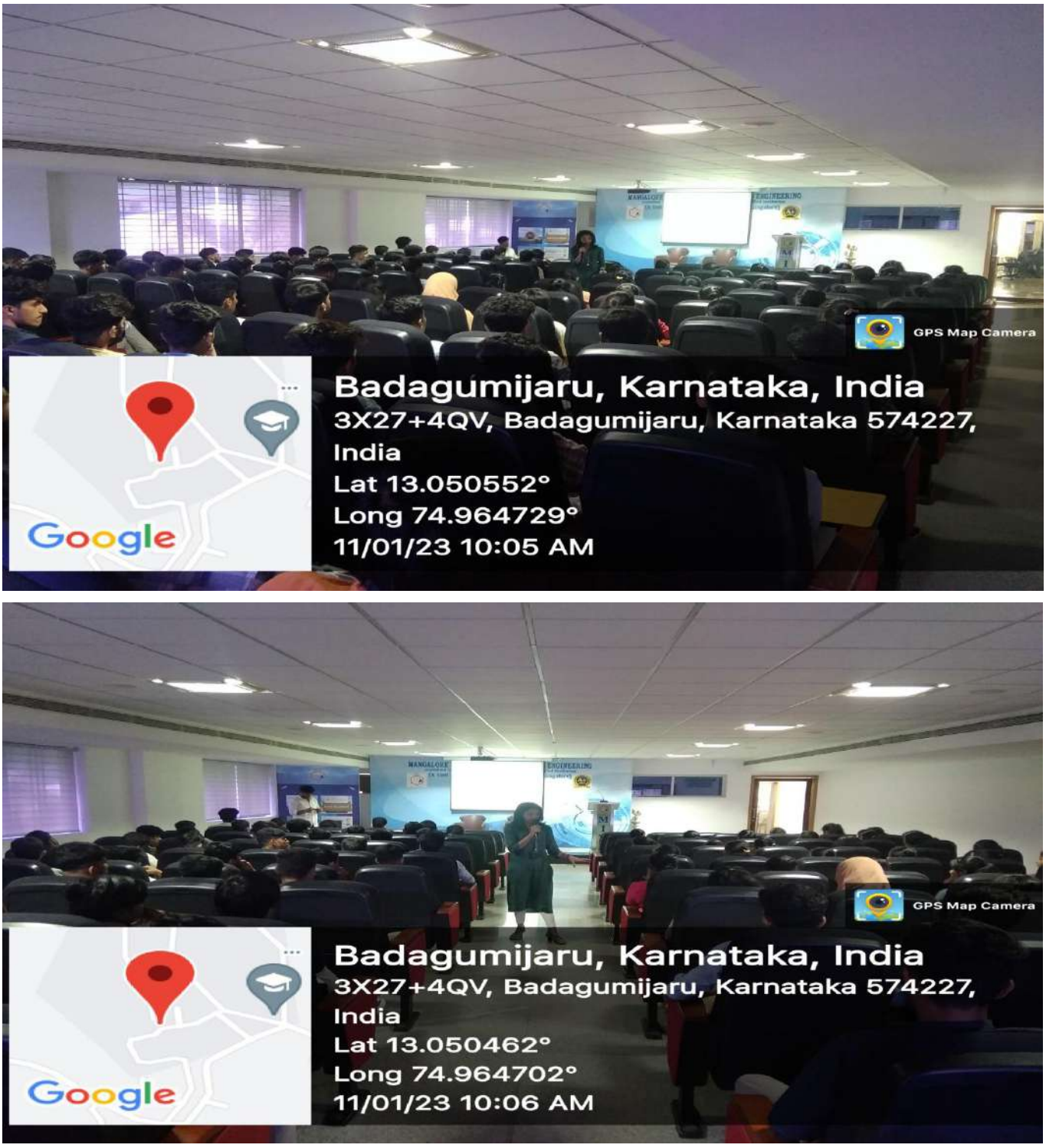
Resource Person : **Gouthami Purohit , 4th year student, Dept. of E&C Engineering, MITE**

Date : **11/01/2023**

Timings : **10:00AM**

About the Resource Person: Ms. Gouthami Purohit is a student from ECE Department at Mangalore Institute of Technology. She has been pursuing Cyber-security as a her career from the past 2 years and has been a regular participant of various Bug Bounty Programs across the Cyber-Realm.With Knowledge of various Fundamental IT skills and Computer network and Information Security she is currently working as an Intern at CyberSapiens, Mangalore as a Red Team member.

About the talk: The speaker spoke about the journey of shifts in industrialization. She also briefed about the role of Cyber-Security Specialist, who an expert in the field of information technology security. Their job entails providing protection during software development. They work to make sure that networks are safe from external threats like hackers or crackers who want access for malicious purposes. She also explained about the skills make a good Cyber-Security analyst. The skills includes Basic knowledge of Computer Network, IT Fundamentals Linux Operating System, practical knowledge of Various networking tools and popular suites.The speaker also briefed about some of the popular cyber attacks observed in the recent history, and the impact of the attacks. The speaker also explained about the different ways to protect your data from different attacks that can happen to the individual and benefits of following the rules and regulations of uploading Data to the internet in a safe manner. The speaker also explained about the ways that the private data can be used and sold for money hence making is more valuable than money. Total 108 students were participated in this event.



Snapshot of the Technical talk on "Cybersecurity: An era in which Data is more valuable than Money

Poster of the Technical talk on "Cybersecurity: An era in which Data is more valuable than Money

Activity -19

Title : **Three Days Workshop on Analog Circuits Design & PCB Design: An Industry Perspective**

Sponsored by : **ISTE-MITE**

Date : **25th, 27th & 28th February 2023**

About the Workshop:

Department of Electronics & Communication Engineering organized Three Days Workshop on Analog Circuits Design & PCB Design: An Industry Perspective, sponsored by ISTE-MITE Chapter on 25th, 27th & 28th February 2023. This workshop is arranged for second year students of Electronics & Communication Engineering and interested students of various departments.

Analog circuit and system design today is more essential than ever before. With the growth of digital systems, wireless communications, complex industrial and automotive systems, designers are challenged to develop sophisticated analog solutions.

LTspice is a SPICE-based analog electronic circuit simulator computer software. It is the most widely distributed and used SPICE software in the industry. LTspice provides schematic capture to enter an electronic schematic for an electronic circuit, an enhanced SPICE type analog electronic circuit simulator, and a waveform viewer to show the results of the simulation. KiCad is an open-source software suite for Electronic Design Automation (EDA). The programs handle Schematic Capture, and PCB Layout with Gerber output also 3D visualization.

The focus in this workshop was purely on Amplifiers. Single Stage, Multistage (Cascode and Cascade) and some practical aspects were discussed which will be beneficial for students in analog circuit design. This workshop provided students with elegant and effective practical design strategies that focus on common circuit design challenges, also two-layer PCB design.

Workshop Outcome:

Participants will be familiar about the tools of Analog circuit design & PCB design, which includes KiCad, LTspice etc. The workshop will help to improve the knowledge in Analog Circuit Design and one step move towards in the area of VLSI.

Resource persons for Three Days workshop on "Analog Circuits Design & PCB Design: An Industry Perspective" **:**

1. Mr. Manjunath Shet:

Mr. Manjunath Shet is currently working as analog & mixed signal circuit design engineer at synopsis, Bangalore and has 12 years of experience in VLSI industry. He is the CEO of Octawave Technology, Mangalore , which deals with Basic VLSI analog circuit design & simulation on LTspice and . He graduated in Electronics and Communication Engineering from Canara Engineering College, Bantwal in 2008 and obtained his M.Tech in Microelectronics at MIT, Manipal in the year 2011. He holds the patent for lock time measurement of clock and data recovery circuit.

2. Mr. Uday J:

Mr. Uday J is currently working as Senior Assistant Professor in the department of E&CE, MITE, Moodabidri. He has 8 years of teaching experience and also worked as a QA Engineer in Indus Scientific Pvt. Ltd., Bengaluru, for a period of one year. He completed his bachelor's degree in Electronics & Communication Engineering and a master degree in Digital Electronics & Communication System. His fields of interest are Image Processing, Digital System Design and VLSI. During his teaching career, he has published more than four international journals and conference papers.

The schedule for the workshop was as below:

Day 1: 25/02/2023

Inauguration: 9:00 AM to 9:30 AM

Session 1: 9.30 AM to 10.30AM

- Introduction PCB Design

Session 2: 10.45 AM to 11.45 AM

- KiCAD basics
- Design Specification

Session 3: 12.00 PM to 01:00 PM

- Schematics Design
- Export Schematic design to layout Design

Session 4: 2.00 PM to 4.30 PM

- Routing, DRC Check
- Final PCB finish guidelines, PCB plots and Gerber files verification

Day 2: 27/02/2023

Session 1: 9.00 AM to 10.00 AM

- VLSI Domain Overview
- RLC Basics

Session 2: 10.00 AM to 11.00 AM

- MOSFET Basics
- MOSFET Fabrication

Session 3: 11.30 AM to 01:00 PM

- LT Spice Installation
- LT Spices Basics

Session 4: 2.00 PM to 3.00 PM

- LAB: RLC Circuits, MOSFET NMOS Amplifier
- LAB: NMOS CS Amplifier

Session 5: 3.10 PM to 4.30 PM

- MOSFET NMOS CG, CS
- LAB: NMOS CG CS Amplifier

Day 3: 28/02/2023

Session 1: 9.00 AM to 10.30 AM

- PMOS CS Amplifier
- LAB: PMOS CS Amplifier

Session 2: 10.45 AM to 11:40 AM

- PMOS CG CD Amplifier
- LAB: PMOS CG CD Amplifier

Session 3: 11.40 AM to 1.00 PM

- Cascode Amplifier
- Folded Cascode Amplifier

Session 4: 2.00 PM to 4.30 PM

- Op-amp Basics, LAB: Op-amp Lab

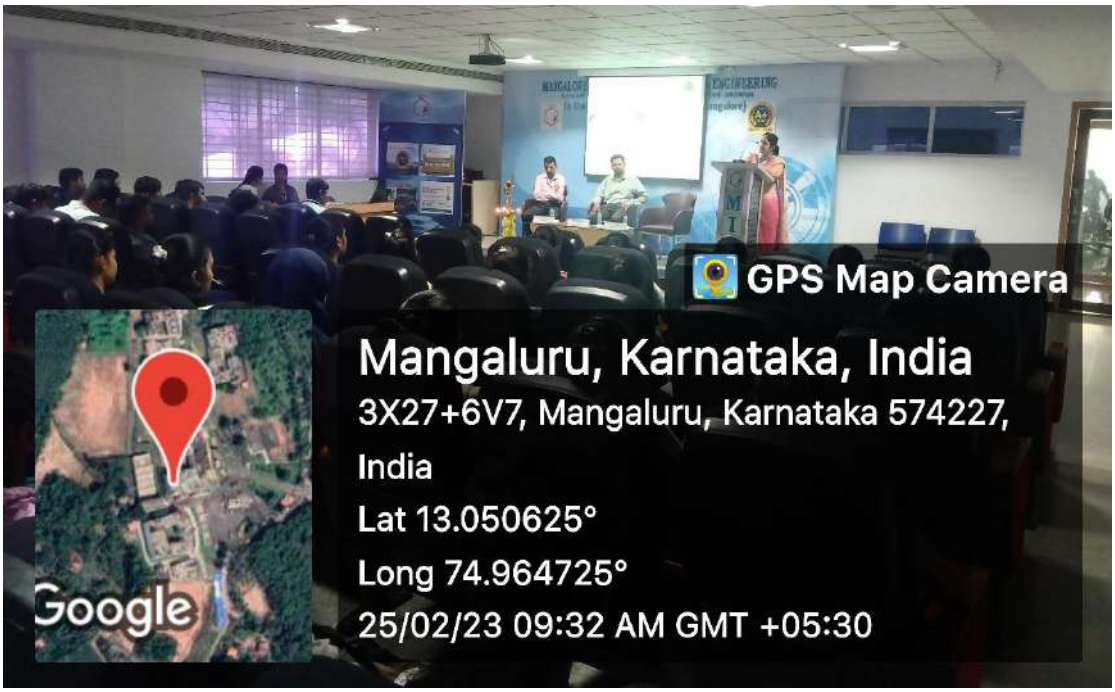
Day 1, 25th February 2023

INAUGURAL FUNCTION

The inaugural session of three Days workshop on Analog Circuits Design & PCB Design: An Industry Perspective was held on 25th February 2023 at 9:15am in the Auditorium – 2 at MITE, Moodabidri. The workshop was sponsored by ISTE-MITE Chapter in association with Electronics & Communication Students Association (ECSA) and organized by Department of Electronics & Communication Engineering. Mr. Manjunath Shet, CEO, Octawave Technology, Mangalore was guest of honour and inaugurated the workshop. The inaugural session was presided over by Dr. Vinayambika S Bhat, Dean Quality Assurance, Head of the Department, Electronics & Communication Engineering. Co-coordinator Dr. Srikrishna Shastri, Asso.Prof., Department of E&CE, was present on the dais. The three days' workshop was coordinated by Dr. Ganesh V N, Asso.Prof., Department of E&CE.

Dr. Vinayambika S Bhat, gave a glimpse of how importance it is for the students to take part in these kinds of workshops for their knowledge & Skill enhancement. Mr. Manjunath, in his guest speech briefed about the analog circuit design challenges and recent trends in VLSI domain. He also enlightened the students about the design and layout of CMOS integrated analog circuits. A total of 64 students participated in this workshop. Final year students Ms. Blesinta did the master of ceremony and Ms. Spoorthi rendered vote of thanks.

Inaugural function ceremony



Inaugural Session - Presidential Speech by Dr. Vinayambika S Bhat

Inaugural Session - Guest Speech by Mr. Manjunath Shet

Mr. Uday J, delivered a session on **"PCB Design using KiCad"**.

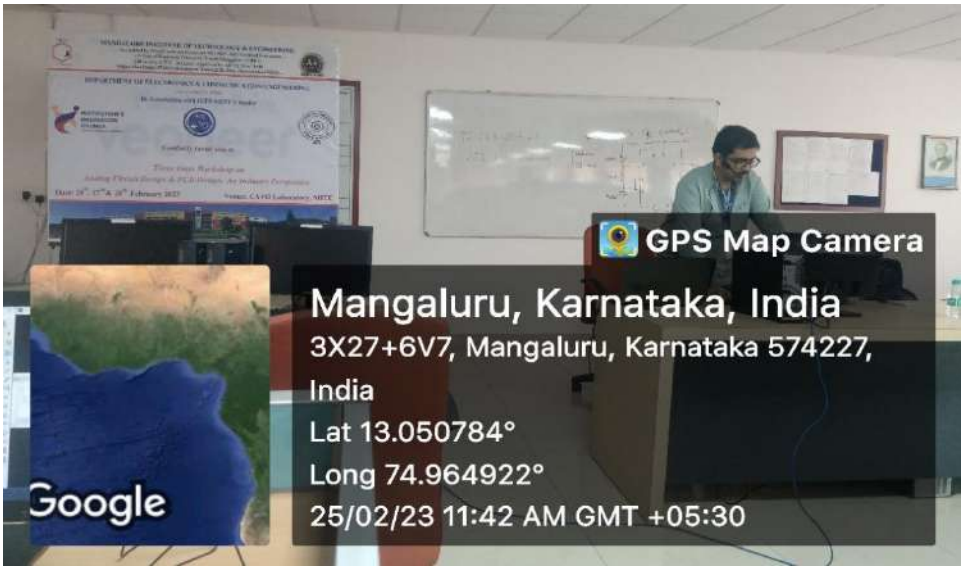
Mr. Uday J started his presentation with a brief introduction to the Printed Circuit Board (PCB). During his presentation, he gave insights to the students regarding the materials used in PCB fabrication and types of PCB such as Single Layer, Double Layer, Multi-Layer, Flex-PCB and Rigid-Flex PCB. Further, the speaker elaborated on parts of the PCB such as Pads, Traces, Vias, Top & Bottom layer and Soldering mask. After completing the basics of Printed Circuit Broad, he discussed the PCB design procedure which includes,

1. Design specification
2. Circuit Diagram
3. Schematic Design: includes components selection, build footprint, PCB library
4. Export Schematic design to Layout Design
5. Route connection
6. Design rule Check
7. Gerber and Drill file Generation

Further, he elaborated on the dimensions required for PCB designing and different IC packages of components are available for designing. He explained the steps involved in the fabrication of PCB - generation of film, cut the raw material, drilling and copper plating, applying image, etching, solder mask and silk screen. He informed which are all the tools available for PCB design- OrCAD, Fritzing, Express PCB, KiCad and he briefed about KiCad tool and its uses.

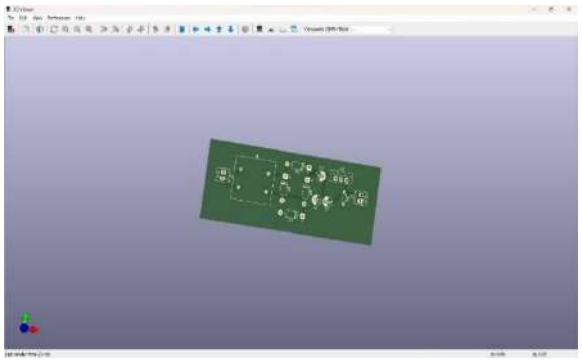
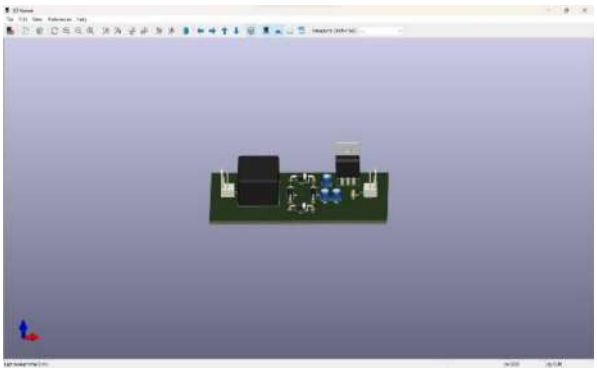
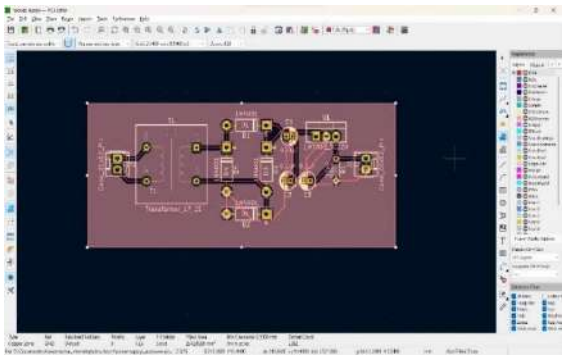
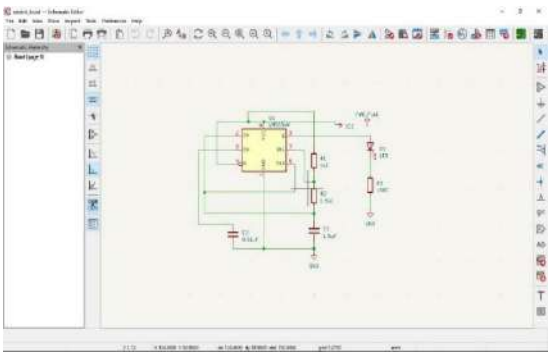
After explaining all the concepts required for PCB Design, he demonstrated the two-layer PCB design of an LED blinker circuit using the 555 timer IC. Initially, he took the circuit of the LED blinker using the 555 timer IC, then briefly explain the steps involved in designing- Schematic Diagram, Annotation, Netlist generation, Footprint mapping, Placing the component, Routing, Design Rule Check, Masking and finally Gerber file generation. During footprint mapping, he explained how to see a 3D-view of the selected component. After completing the routing and masking, he displays the 3D view of the designed

PCB. Finally, he explains how to generate PCB films – top & bottom layer copper film, drill film, top & bottom mask film, silkscreen film which will be sent for fabrication of PCB.



Hands-on session about PCB Design by Mr. Uday J

Hands-on session about PCB Design by Mr. Uday J

Day 2, 27th February 2023

Mr. Manjunath Shet, delivered a session on **"VLSI Domain Overview, LTspice basics with few examples"**.

Mr. Manjunath, gave the introduction about VLSI domain, Very-large-scale integration (VLSI) is the process of creating an integrated circuit (IC) by combining thousands of transistors into a single chip. VLSI began in the 1970s when complex semiconductor and communication technologies were being developed. Before the introduction of VLSI technology, most ICs had a limited set of functions they could perform. VLSI lets IC designers add all electronic circuits into one chip.

He also mentioned that, the electronics industry has achieved a phenomenal growth over the last few decades, mainly due to the rapid advances in large scale integration technologies and system design applications. With the advent of very large-scale integration (VLSI) designs, the number of applications

of integrated circuits (ICs) in high-performance computing, controls, telecommunications, image and video processing, and consumer electronics has been rising at a very fast pace.

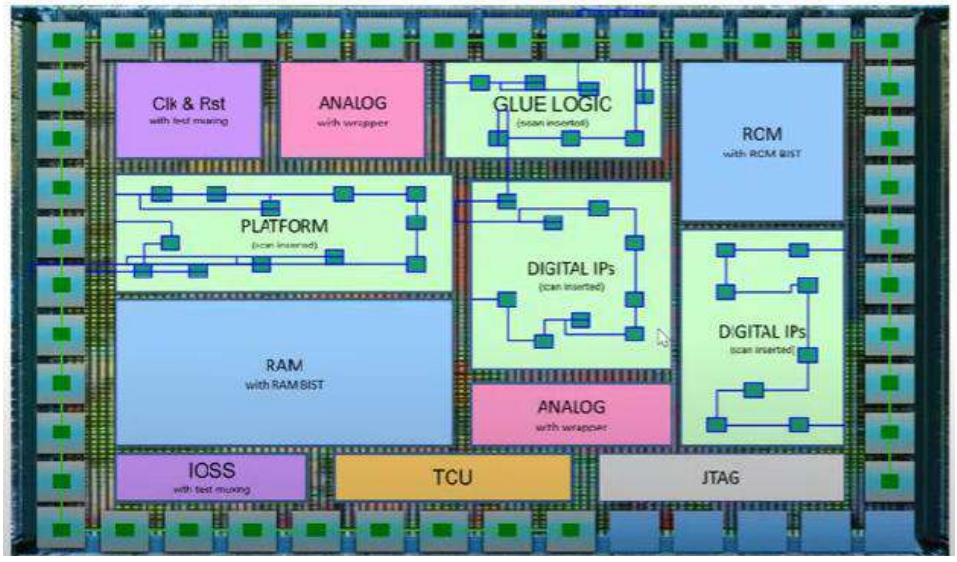
Mr. Manjunath emphasised on the context of integrated circuit (IC) design is a discipline that focuses on the creation of circuits that operate in and are optimized for continuous time-domain behaviour. He also mentioned many design challenges in making modern ICs also importance of analog design.

He also briefed about Analog IC design, which typically involves a top-down design and implementation process followed by a bottom-up verification process. There are many variations on this overall approach. Here are the basic steps:

- Develop a high-level specification for the design. What functions will it perform? What is the performance, power, and area (i.e., cost) targets for the design?
- Develop a top-level design to achieve the required results using macro-functions such as filters, comparators, and amplifiers
- Create the device-level circuit descriptions to support the top-level design using components such as transistors, resistors, and capacitors. This step often draws from a library of pre-defined functions which will need to be customized for the specific requirements of each unique design.
- Verify that the design delivers on all its specifications using simulation. The software used here will typically model the circuit using linear and non-linear elements that have been tuned for the target fabrication process. It is during this step that manufacturing process and operational variability will be modelled to ensure the device design remains robust in the face of these uncertainties.
- Implement a physical layout of the design by assembling the pre-defined layouts of all components. During this step, the density of the layout is optimized to minimize cost. There are many placement rules that must be followed to ensure that the design is optimized for manufacturability and signal integrity. Validation that these rules are followed occurs during this step, which is called physical verification.
- The equivalent circuit is then extracted from the layout. Parasitic effects such as crosstalk and wiring resistance are now present in the design description, and the design is re-simulated to

ensure it still operates as intended with these new effects added. The extracted design is also compared to the original design to ensure the correct devices were used and connected correctly. This process is called logic versus schematic, or LVS checking.

- Any structures required for testing the circuit are added during this phase as well. Once complete, the design is ready for either manufacturing or integration into a larger digital design. Integrating analog designs into a larger digital design is referred to as AMS, or analog/mixed signal design.



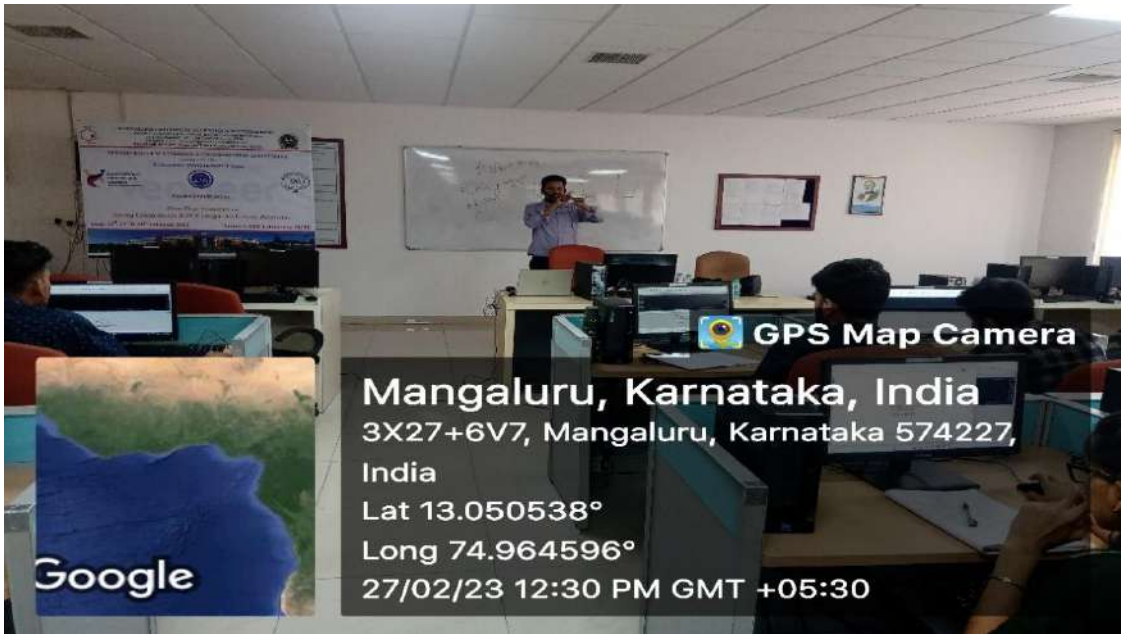
SoC with design for testability

He also mentioned that, an N-channel metal-oxide semiconductor (NMOS) is a microelectronic circuit used for logic and memory chips and in complementary metal-oxide semiconductor (CMOS) design. NMOS transistors are faster than the P-channel metal-oxide semiconductor (PMOS) counterpart, and more of them can be put on a single chip.

BJTs have switching frequencies of up to hundreds of kHz, while MOSFETs can easily switch devices in the MHz range. So, for high-frequency applications where switching losses have a major role in the total power loss, MOSFET is preferred.

A common source amplifier using an n-channel depletion-mode MOSFET. Here we have an n-channel depletion mode MOSFET with an input signal the current through the MOSFET will vary causing the

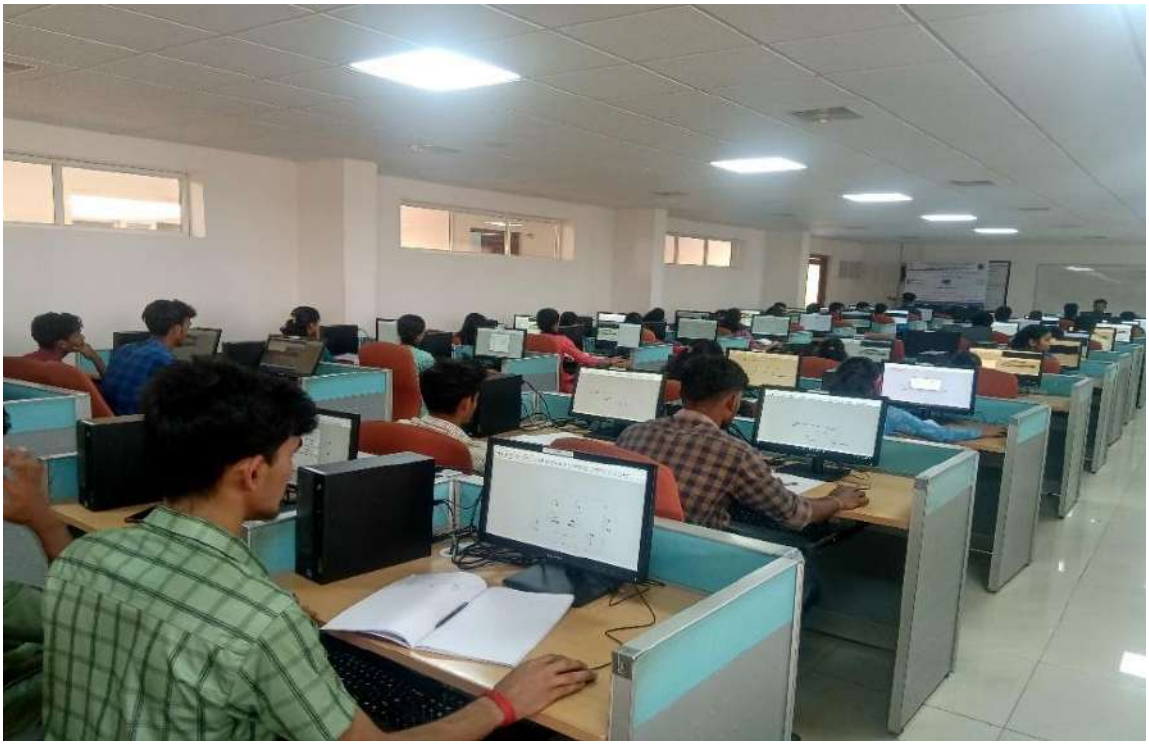
voltage across RD to vary, thus amplifying the input. He demonstrated the CS amplifier with examples and students designed the circuit using LTspice simulator.



Analog circuit design session by Mr. Manjunath Shet

Hands-on session on analog circuit design

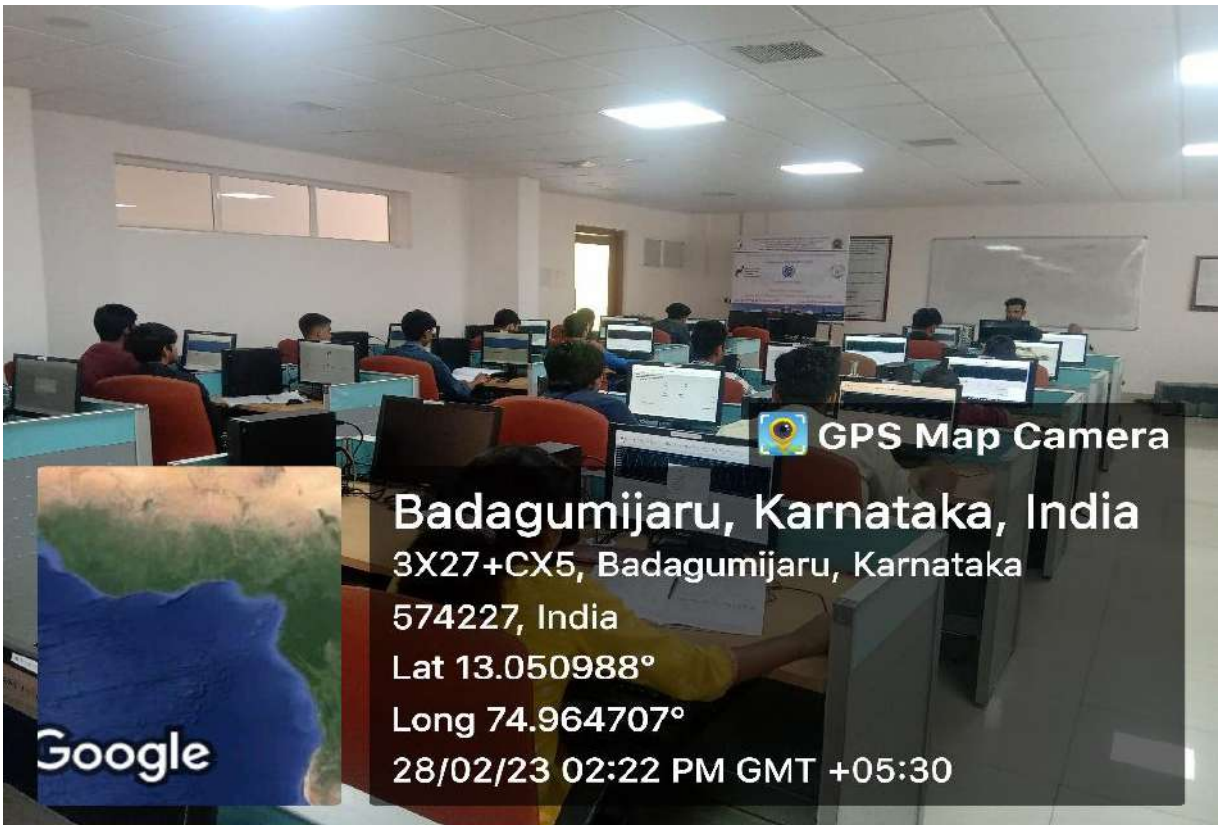
The second day of the workshop included topics: Basics of VLSI, Difference between Analog and Digital VLSI, analog circuit design, RLC basics, MOSFET basics & fabrication and MOSFET NMOS CS amplifiers. After learning the theoretical concept of each design, the students implemented the same on the software 'LTspice'. The students got themselves familiarized with LTspice software and were also able to the plot characteristics of circuits of various inputs given to the design circuits.



Hands-on session on analog circuit design

Day 3, 28th February 2023

Mr. Manjunath discussed CMOS based amplifiers and its design. He elaborated on difference between NMOS and PMOS devices. NMOS are considered to be faster than PMOS, since the carriers in NMOS, which are electrons, travel twice as fast as holes, which are the carriers in PMOS. But PMOS devices are more immune to noise than NMOS devices.



Hands-on session about PMOS amplifiers

Manjunath described and demonstrated on cascode amplifiers and folded cascode amplifiers. The cascode amplifier is used to enhance the performance of an analog circuit. With the cascode transistors, the circuits' output resistance value can be increased that enhances the amplifier signal gain. This will be the added advantage of the folded cascode amplifier.

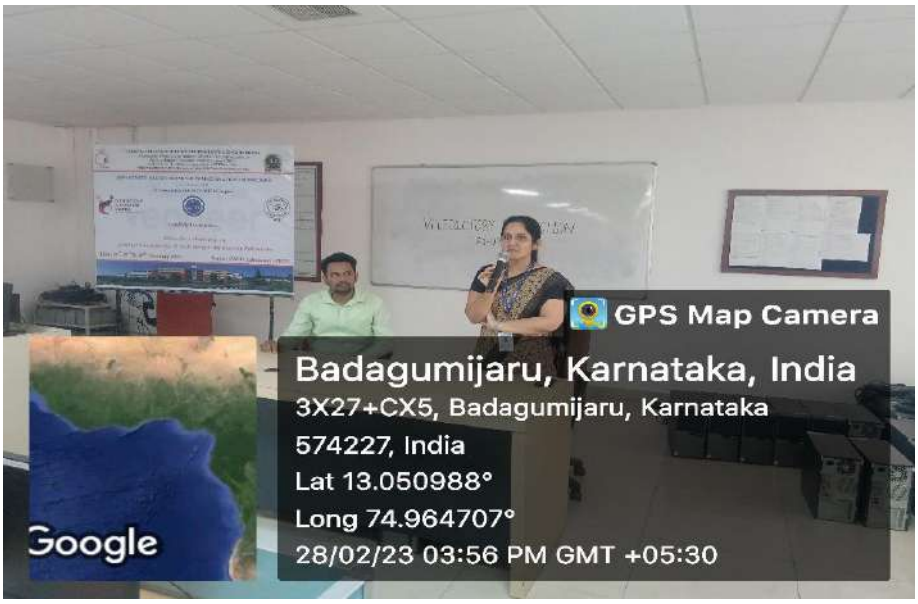
Folded cascode amplifier is a single-pole operational amplifier with large output swing and has higher gain compared to the ordinary op-amp. It is very suitable for deep negative feedback because of its small signal gain that can be very large.

Hands-on session about cascode and folded cascode amplifiers

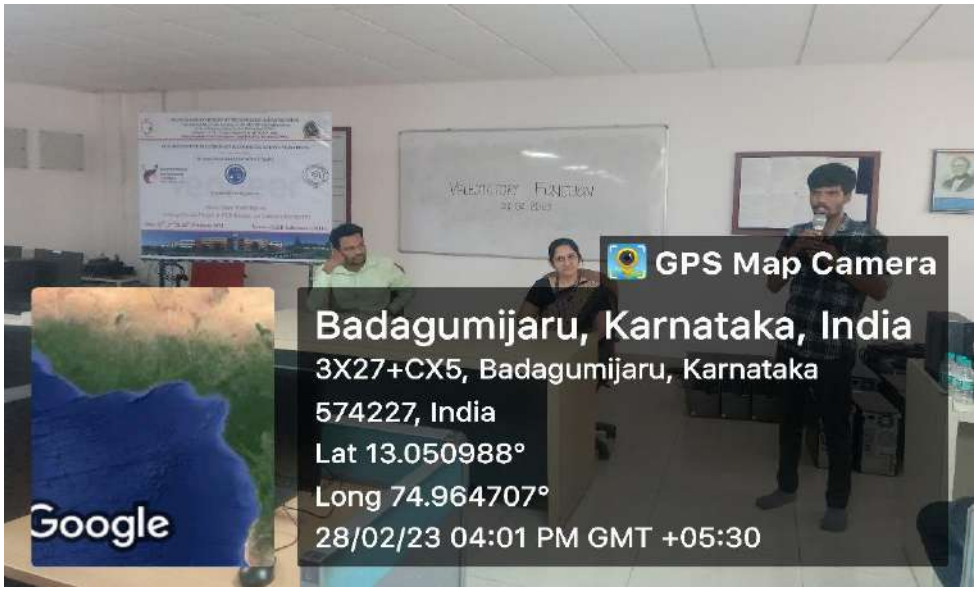
On the third day of workshop topics covered were: CD (Common Drain) and CG (Common Gate) amplifier, cascode and folded cascode amplifiers, Differential amplifier and Operational amplifier. During the workshop the expert cleared various doubts related to the topic. The expert encouraged students to keep exploring more in the domain and the projects that can be done in this domain.

VALEDICTORY PROGRAM

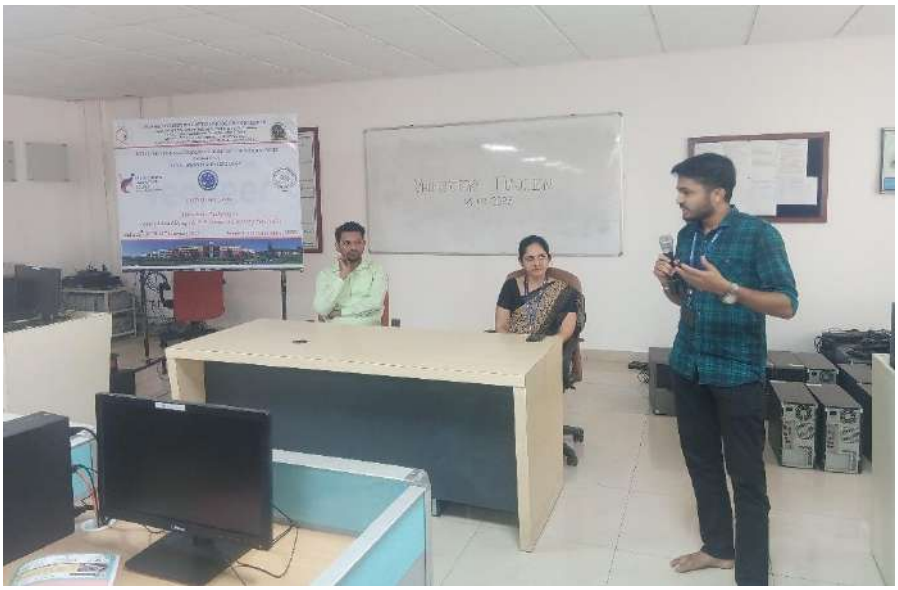
The valedictory program of three Days workshop on Analog Circuits Design & PCB Design: An Industry Perspective was held on 28th February 2023. Participants shared their experience about the workshop. Mr. Manjunath presided over the function and Dr. Vinayambika S Bhat, Dean Quality Assurance, Head of the Department, was present on the dais. Final year student Ms. Nisarga rendered the vote of thanks. During the workshop the expert cleared various doubts related to the topic. The expert encouraged students to keep exploring more in the domain and the projects that can be done in this domain.



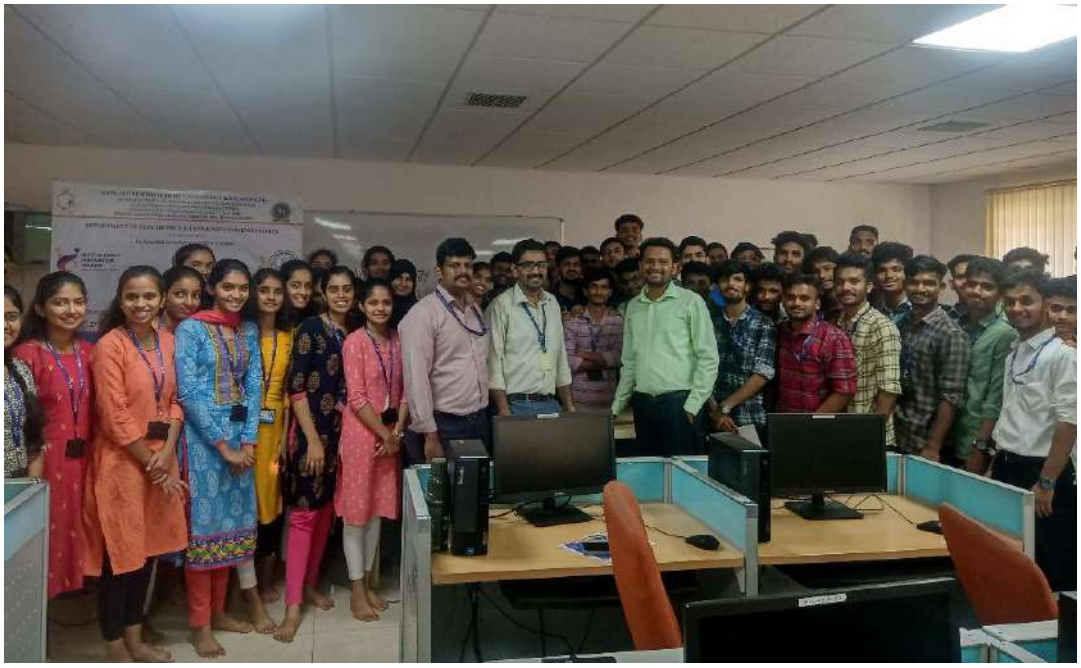
Valedictory session address by Dr. Vinayambika S Bhat



Participants Feedback About the Workshop



Participants Feedback About the Workshop



Group Photo

Activity-20

Title : **Webinar on "Opportunities and Challenges in Semiconductor Industry : An Overview"**

Resource Person : **Mr. Pramod Baliga, MTS Silicon Design Engineer, AMD Bengaluru**

Date : **04-03-2023**

Timings : **09:15 AM**

About the Resource Person: Mr. Pramod completed his bachelor of Engineering in Electronics & Communication from Vivekananda College of engineering & Technology Puttur in the year 2013.After his graduation, he got placed in Tessolve Semiconductors and worked there for two years. Then he joined Sankalp Semiconductor and worked there till 2018. Since August 2018, he is working at Advanced Micro Devices (AMD), Bengaluru as senior silicon Design Engineer. Mr. Pramod has vast experience in semiconductor field and his major work is focused on designing low power and efficient devices high speed circuits. His areas of interest includes painting, trekking, playing badminton and Table Tennis.

About the Talk:

Mr. Pramod Baliga initiated the session by highlighting the pivotal role of integrated circuits (ICs) as the cornerstone of modern electronics. He emphasized that ICs serve as critical components powering a wide range of electronic devices, underscoring their indispensability in our technology-driven world. The discussion then expanded to elucidate the varied and extensive applications of ICs that go beyond traditional computing.

The conversation emphasized that ICs now play essential roles in sectors such as automotive (including infotainment, safety, and driverless cars), biomedical, Internet of Things (IoT), artificial intelligence

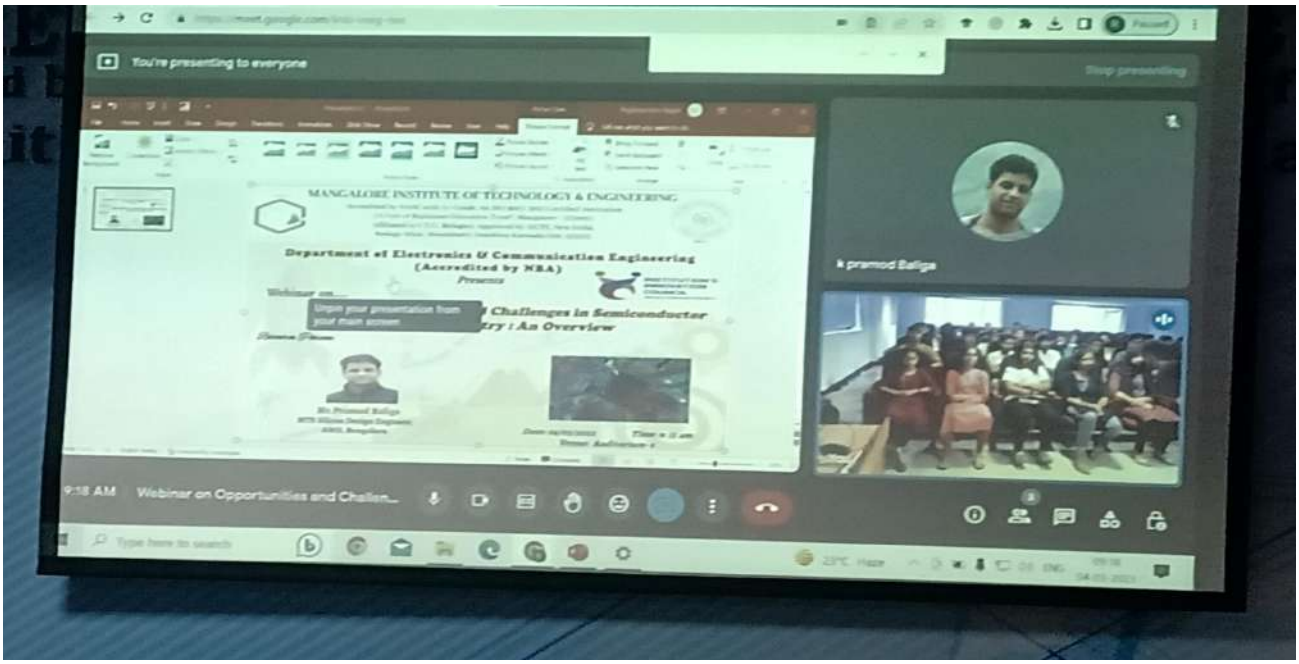
(AI), and high-speed networking. Furthermore, the discussion underscored the significance of the semiconductor industry itself as a catalyst for technological advancements across various domains. The ongoing growth and evolution of this industry were highlighted as major drivers of innovation.

The resource person underscored the crucial role of ICs in shaping modern life, particularly in the context of handheld devices that have become integral to daily living, thanks to the efficiency and power of ICs. He also provided insights into the fundamental categories of semiconductor companies, including Fab makers, Fabless makers, and service provider companies. The webinar delved into how specifications are determined, with industry standards like IEEE and JEDEC playing pivotal roles. Additionally, the importance of the Power, Performance, Area (PPA) matrix in system design was emphasized.

The session included an exploration of the growth and significance of the global semiconductor market, with sales reaching approximately $450 billion in 2018 and an expected future growth rate of 16%. Notably, industry giants like Google and Amazon have ventured into this space. India's role as a hub for semiconductor design centers was acknowledged, with a market value of $110 billion. The growth in the fabless design industry and its role in fostering innovation and startups were also highlighted.

Later, the speaker provided insights into prominent companies in the semiconductor industry, categorizing them into product companies, Electronic Design Automation (EDA) companies, and services companies, and discussed examples such as Samsung, Cadence, Qualcomm, and Wipro. Moreover, he touched upon the diverse career opportunities within the semiconductor industry, emphasizing the importance of prior knowledge and adaptability in areas such as IC categories, digital and analog design flows, Analog Mixed-Signal (AMS) verification, EDA development, and chip development. Finally, he offered suggestions to students regarding preparation for interviews in VLSI-based industries. Total 105 students were participated in this webinar.

Sanpshot of webinar on "Opportunities and Challenges in Semiconductor Industry : An Overview



Sanpshot of webinar on "Opportunities and Challenges in Semiconductor Industry : An Overview

Poster of webinar on "Opportunities and Challenges in Semiconductor Industry : An Overview

Activity -21

Title : **Professional development Program on Role of Artificial Intelligence, Machine Learning, Data Sciences & IoT in Engineering Disciplines**

Resource Person : **Dr. Ashok Rao, Former Head, Network Project, CEDT, IISc, Bengaluru.**

Date : **06-03-2023**

Profile of the Speaker: Dr.Rao holds a BE, ME &PhD all in EE from Mysore University (1982), Indian Institute of Science, Bangalore (1985) and Indian Institute of Technology, Bombay (1991) respectively. He has over 30 years of Teaching & Research Experience which Includes:

- 6 years in IIT Bombay, 7 years in IISc Bangalore,
- 4 years in NITK Surathkal, the rest in various places in India.
- He has successfully guided PhD's both in E & C and Computer Science areas and has over 100 publications.
- He is also a Solar Photo Voltaic (SPV) specialist having been trained by Siemens Solar California during 1996-1997.
- From 1995 he has been an active researcher in Area of Soft Computing, Machine Learning and Applied Linear Algebra and one of the Pioneers of AI-ML- in India.

Earlier he was Head, Network Project at CEDT, IISc Bangalore from 1999-2005. It was a project funded by SDC (Swiss Agency for Development & Co-operation)

Awards:

- He is a Gold Medalist from IISc, Bangalore during 1983-85.
- He has been awarded Texas Instruments (TI) International DSP Design & Education Award for promoting Excellence in Under Graduate DSP education during 1996-98.
- He has received Citation from Philips Company for regularly crafting excellent UG students in E & C, in area of Signal processing & Digital Communication during 96-98.

- He is among the very few across the world to be invited to make a presentation in PAN-IIT-2006 global meet.

He is also a Entrepreneur having successfully started and managed several IT & Renewable Energy companies during 1998 to 2011. From 1999, he has been a Consultant on Design of DSP & Multimedia systems to Philips, NXP (Star TV), Tektronix, Honeywell, Toshiba, SONY, Infineon, Texas Instruments, Analog Devices, LG, L & T , etc.

From 2007 to 2013, He was a Guest / Visiting Professor at IIM Bangalore, teaching PGPP and PGSEM programs and executive MBA programs there. He taught Entrepreneurship and Public Policy courses there. He was Senior Advisor for Research, Govt.of Kerala (Dept of Technical Education) from Sept 2013 to March 2017.

He has also participated and mentored, incubated numerous Start Up's in Bangalore, over the years since 1999 till date, some of which have matured into good companies. The latest being Vidyakosha Pvt Ltd at Bangalore in June 2022.

Minutes of the Program: Dr. Sri Krishna Shastri, Event Coordinator, and Dr. Sukhwinder Sharma, MITE-ISTE Chapter Coordinator welcomed the resource person to the campus. In a pre-event interaction session, Dr. Ashok Rao interacted with Principal Dr. M S Ganesha Prasad and Head of ECE department Dr. Vinayambika S Bhat about the session and plan of action to implement AI/ML concept in different programs.

As per program schedule, the resource person reached the venue to deliver his session to the faculty members of different engineering, management and basic science department. Ms. Deepthi Shetty introduced the resource person to the present audience.

Dr. Ashok Rao started the session by giving brief history of Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL) and Data Science (DS). He also briefed the relation between these technologies. He explained how AI tool was used in classical gaming such as checker player, Chess, Alpha Go etc.

Dr. Ashok Rao addressing the gathering

Later, he emphasized on ML and DL algorithms, the ML, DL design flow and basic difference between these two methods. He explained how these tools can be used in healthcare sector and by remotely monitoring the patients health condition, how doctor's can help to recover a person's health condition in critical situation such as cardiac arrest. Dr. Rao later focused his talk on Pattern recognition and different types of classifiers in Pattern Recognition. Dr. Ashok Rao said that with the aid of AI/ML and DL tool, most of the developed countries including India could able to develop Coid-19 vaccine within a span of two years.

To conclude the session, Dr. Rao explained the role of AI, ML, DL and DS in various engineering, management and other basic science courses. He urged that, to understand the concepts of AI and ML, one should have strong knowledge on basic mathematics, statistical process and ANN. Also one should

have good domain knowledge to become master in any new technology. Ms. Deepthi Shetty delivered the concluding remarks and vote of thanks.

Dr. Vinayambika S Bhat presenting a memento to Dr. Ashok Rao

Participants: The program was conducted in physical mode for faculty members of all Engineering, Management and Basic Science departments. Few interested students were also attended the session. A total of 60 members participated in the session and understood the importance of AI-ML-DS and IoT in their curriculum. The learning outcomes of the technical talk are analyzed through feedback forms.

Activity -22

Industry : **Varahi Hydro Electric Project, Hosangadi, Udupi.**

Date : **24th March 2023**

Timings : **9:00AM to 5PM**

About the Industry:

Varahi is a 460MW hydro power project. It is located on Varahi river/basin in Karnataka, India. Post completion of construction, the project got commissioned in 1989. In the first stage, 2 x 115 MW Generating units with Vertical Pelton type turbines manufactured by M/s.BHEL were installed and commissioned in the Varahi Underground Power House during 1989-90. In stage II, 2 x 115 MW Generating units with Vertical Pelton type turbines were installed and commissioned by Consortium led by M/s. Andritz Hydro GmbH, Austria in the Varahi Underground Power House during 2009.The units have been designed for a head of 460m. Project headquarters of Varahi hydroelectric project is Hosangadi, in Udupi District. Hosangadi is situated at a distance of about 70 Kms form Udupi. [4Units x 115 MW=460 MW].

Industrial Visit Details:

Industrial visits enhance the practical knowledge of students to empower them with the recent technologies in the field of Engineering and also to provide with idea of the work environment at the power station. In this concern 35 students of 3rd year & 2 faculty of Electronics & Communication Engineering, visited Varahi Hydro Electric Power Plant. Power plant consists of 4 x 115 MW Generating Units at Varahi underground Power house. Students learnt about different aspect of power generation in detail.

During the visit, the students learnt about the plant's facilities, observed various stages of power generation and distribution, and interacted with the plant's technical staff to understand the plant's operations better. The students observed the various components of the power plant, including turbines, generators, transformers, and other control systems. Total 35 students were participated in this visit.

Student Participation in the Industrial Visit

A glimpses of Varahi Power Plant Industrial Visit

Activity-23

Title : Three Days Workshop on "Application-Specific IC Design using Cadence Incisive and Virtuoso"

Sponsored by: ISTE-MITE

Date : 27th April 2023 – 29th April 2023

Time : 09:30 AM - 04:30 PM

Venue : VLSI Laboratory, MITE

About the Workshop:

The workshop aims to provide the participants with an overview of the Cadence EDA tool for VLSI design. The workshop will comprise of live demonstration of tools and lectures delivered by design engineers to give awareness of recent technologies and software tools like Virtuoso, Incisive, and Genus and develop the utilization skills of Students/ Research scholars. The workshop intends to provide opportunities for participants to enrich their intellectual strength and professional growth. The major focus of the workshop is the upgradation of outcome-based teaching & learning skills and research for the participants in the field of VLSI design in nanoscale using the Cadence tool. Each session is enhanced by a well-experienced resource person with extensive knowledge of the VLSI Design domain.

Workshop Outcome:

The program allows participants to expand their knowledge of Cadence tools and how VLSI technology impacts the electronic revolution. It is helpful for a participant to get a Hands-on-experience with tools and technologies commonly used in the IC industry, such as Simulation, Verification, Implementation, Timing Signoff, and layout design using Cadence.

The resource persons for the Three days workshop on "Application-Specific IC Design using Cadence Incisive and Virtuoso were"

	**Dr. Madhushankara M Bhat** **Associate Professor** **Manipal School of Information Sciences** **Manipal** He obtained Ph.D. from MAHE in the year 2020. His work focussed on teaching and research in VLSI - ASICs with RTL coding, synthesis, physical verification, and GDS II generation. An avid researcher, he has published more than 10 Scopus-indexed articles in various international journals.
	**Dr. Rashmi Samanth** **Assistant Professor** **Mangalore Institute of Technology & Engineering** She obtained Ph.D. from MAHE in the year 2022. Her work focused on teaching and research in VLSI Domain. She has 10 Scopus-indexed/ Web of Science journals in various International journals.

	**Mr. Jayasheel Shetty** **Senior Member Technical Staff** **Karnataka Microelectronic Design Centre** **(KarMic Design)** Has more than 5 years of industry experience in analog and digital IC front-end and back-end design, and worked with Bharat Electronics Limited, Bangalore, India, and Semi-Conductor Laboratory, Chandigarh, India, in various phases of metal programmable analog array (MPAA) chip development.
	**Mr. Ravichandra R G** **Junior Engineer** **Karmic Design Private Limited, Manipal.** Received B.E degree in Electrical and Electronics from Srinivas Institute of Technology Mangalore, India. Has 2 years of industry experience in Serdes and IO as Characterization Engineer, major projects are from 3nm and 5nm technology, for 12GHZ and 16GHZ freq.

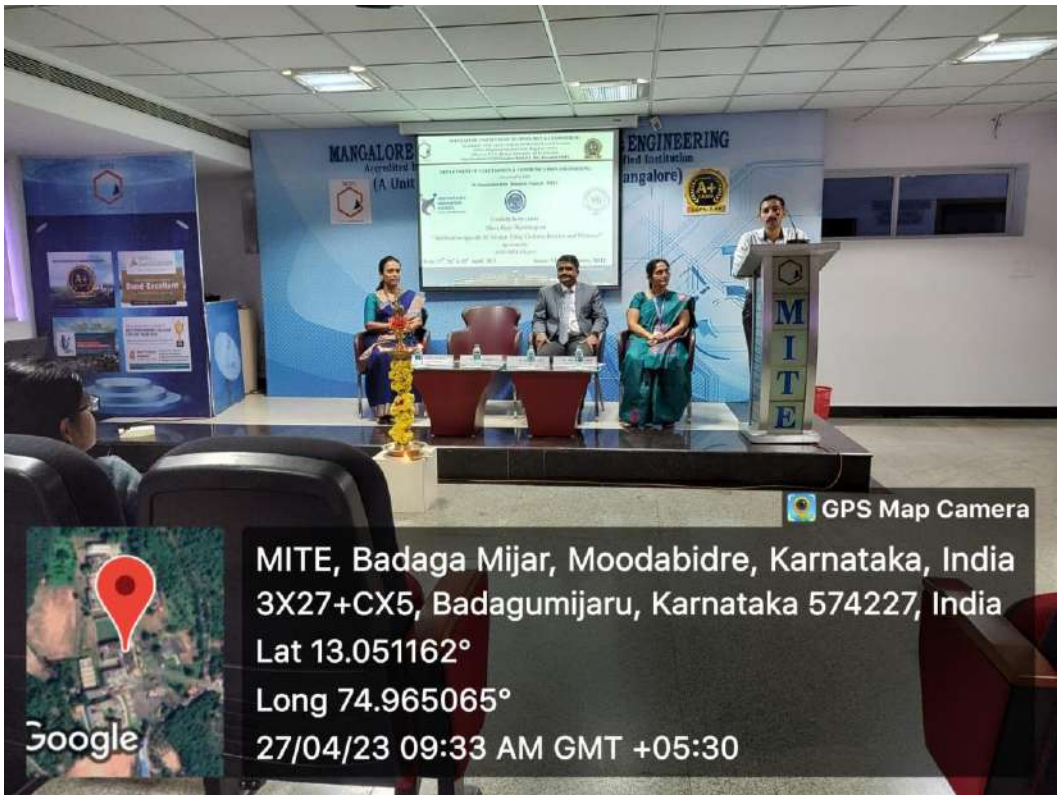
Day 1: 27th April 2023

INAUGURAL FUNCTION:

The inaugural session of three days workshop on "Application-Specific IC Design using Cadence Incisive and Virtuoso" were held on 27th April 2023 at 9.30 am in Auditorium-2. The workshop was in association with Research Council MITE sponsored by ISTE-MITE Chapter MITE, Moodabidri. The inaugural function started with a prayer by Ms. Annapoorna, Ms. Krishma and Ms. Deepthi. Dr. Vinayambika S Bhat gave brief details about the Resource person Dr. Madhushankara M. And the session was inaugurated by the resource person Dr. Madhushankar M Bhat. The inaugural session was presided over by the Principal Dr. Prashanth C. M, Dr. Vinayambika S Bhat, Professor & HoD- E&CE, Dean Quality Assurance, Mrs. Deepthi Shetty, Senior Assistant Professor, Dept. of E&CE and workshop participants. The Master of Ceremony was done by Ms. Gauri Hanumant Nayak, 6th semester E&CE student.

Inauguration of Workshop by Resource Person Dr. Madhushankara M Bhat, Dr. Prashanth C. M, Principal, MITE, Dr. Vinayambika S Bhat, Professor & HoD- E&CE, MITE.

The guest Dr. Madhushankara M Bhat in his guest speech gave an insight about the importance of VLSI ASIC design using the Cadence EDA tool. Principal Dr. Prashanth C. M, in his presidential address, gave a glimpse of how important it is for the students to take part in such workshop for enhancing their knowledge and develop their skills. . All the Deans/ Directions and HoDs of various departments were present for the inaugural session. Dr. Rashmi Samanth, Assistant Professor from E&CE rendered a vote of thanks.



Dr. Madhushankara M Bhat giving an Overview on VLSI technologies

Day 1: Session 1

The speaker started the session by giving an introduction to MOSFET basics, VLSI Design, and ASIC Design flow. He elaborated on the theoretical concepts of VLSI Design, simulation, layout,

physical verification and RC extraction to GDSII. Detailed session and exposure were given on the Cadence solutions for Custom IC Design, and ASIC Design using Cadence, an optimized solution for design migration and automation of TSMC FinFET technologies. This methodology directly addresses the primary challenge of predictability in creating these IC designs, by maximizing speed and silicon accuracy throughout the design process. The methodology also covers analog, custom digital, and RF design domains, and supports their integration with digital standard cell blocks. The resource person further gave a hands-on session by considering NMOS as a design example and demonstrated the steps to do schematic capture using Virtuoso Schematic Editor. Further participants went on to create a symbol for the design example NMOS Inverter. Finally, the first session was about analog flow using Cadence virtuoso tool.

Dr. Madhushankara M Bhat explaining the usage of the EDA tool

A hands-on session was scheduled for every session which enabled the participants to learn the usage and application of the Cadence tool suite in detail.

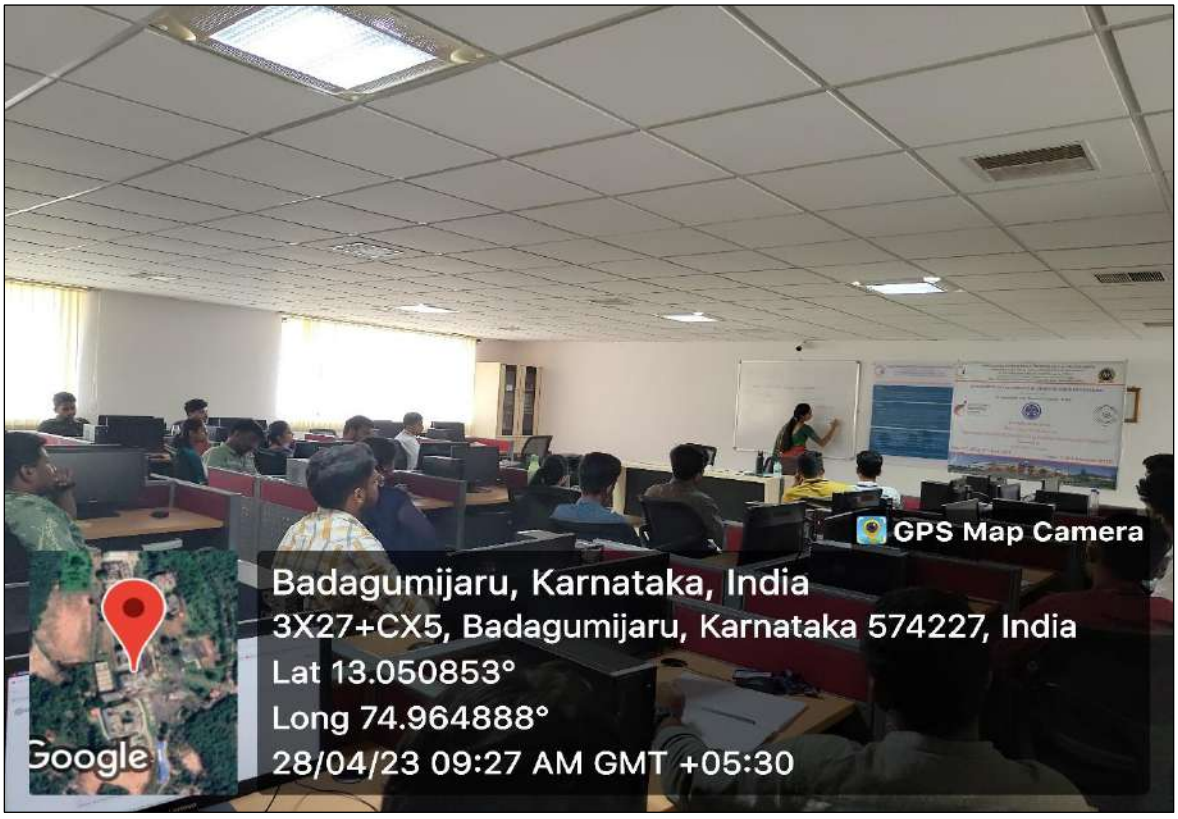
Day 1: Session 2

In the afternoon session, Circuit Simulation using Cadence Tools, Introduction to synthesizable Verilog HDL, Test bench Creation Incisive tool, and functional simulation of the design. Functional simulation is the process of verifying the functional behavior of a design by simulating it in software. The purpose of the simulation is to verify the individual IPs or the individual blocks of the IC. Spectre Classic Simulator to run fast and accurate analog simulations from the command line was explained and participants explored the ADE Explorer environment. Dr. Madhushankara demonstrated how to set the Spectre Simulator settings and identify its language syntax and plot waveforms and analyze the simulation results using the Cadence and a waveform display tool in the standalone environment. Using netlist control statements, participants then learned how to control the flow of the Spectre command-line simulation. Finally, the session ended with participants writing Verilog code and testing the functionality using expected waveforms. Mr. Ajay and Mr. T Kaushik Yadiyal, 8th semester students of E&CE and Mr. Rakesh, Lab Instructor of E&CE, helped the participants to remove the simulation glitches.

Hands-on session on "Cadence Virtuoso and Incisive"

Day 2: Session 1

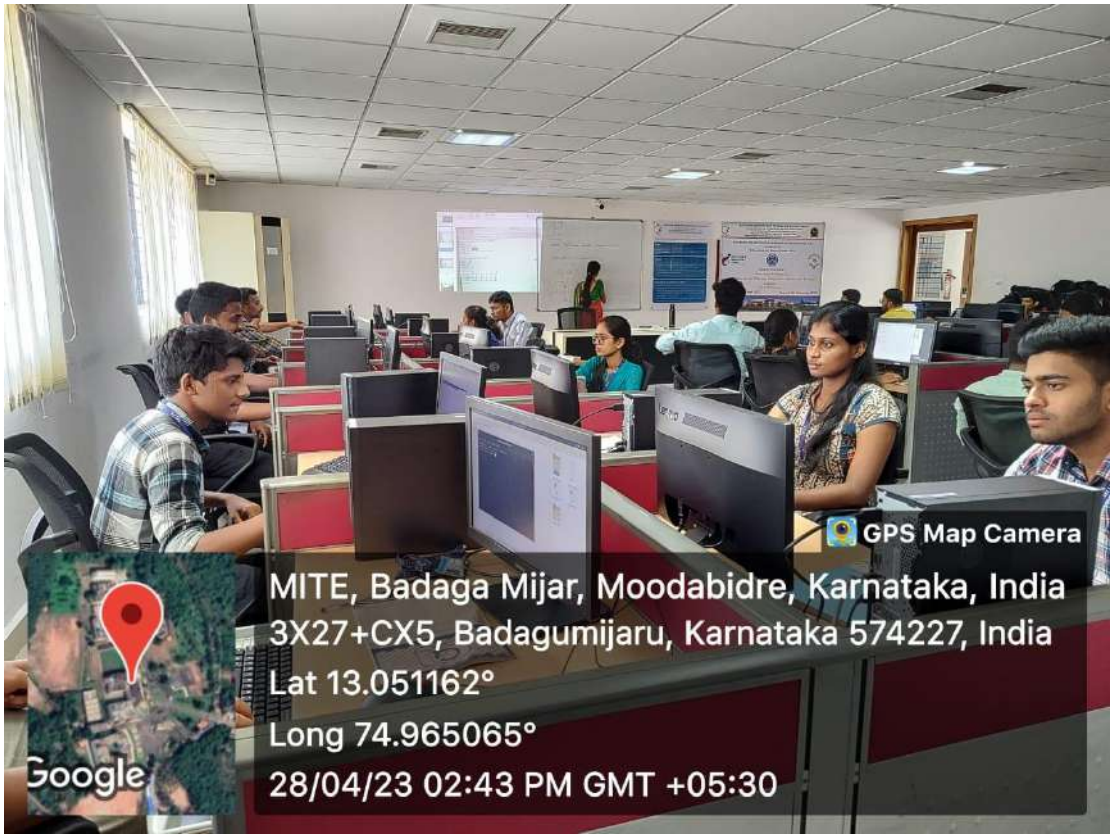
On day 2 during the forenoon session the fundamentals which describes the VLSI analog and Digital design flow, types and the programming technologies of an ASIC and its construction and what is physical verification, design rule check and Layout VS Schematic was explained by Dr Rashmi Samanth. She further demonstrated design of electronic design automation tools the process and steps involved in extraction with simple CMOS Inverter basics, Schmeatic, symbol, test circuit. She also talked about the Cadence® Quantus™ Extraction Solution which is the industry's most trusted signoff parasitic extraction tool, and is a leader in 3nm design adoptions and tape-outs. Session was ended by developing an understanding of participants on CMOS Inverter schematic to transfer, DC characteristics and how to do two input NAND gate simulation and Testing using Cadence Virtuoso.



Dr. Rashmi Samanth explaining about the steps involved in Virtuoso Schematic entry

Day 2: Session 2

In afternoon session speaker introduced participants to the Semi-Custom IC Design flow. He explained how Cadence provides solutions for Semi-Custom IC Design. He elaborated on the tools used for functional verification and RTL Synthesis. Hands-on sessions were conducted to understand the design procedure and tools used for ASIC Digital flow. Participants actively involved themselves and learnt how to perform functional simulation using Incisive tool. Speaker demonstrated the process and steps involved in the synthesis and how timing report and power (pre-layout timing analysis can be done using GENUS. Sessions were conducted on Semi-Custom IC Design flow using Full adder, ALU, D flip-flops as design examples.



Hands-on session on "Cadence Incisive and Genus"

Day 3: Session 1

In the forenoon session, the speaker Mr. Jayasheel Shetty, Senior Member Technical Staff and Mr. Ravichandra R G, Junior Engineer from Karnataka Microelectronic Design Centre briefed the participants on theoretical concepts of floor planning, power planning, placement, clock tree synthesis, and Routing. The Practical session on Inverter Input-Output Characteristics and Region of Operations of NMOS and PMOS for different inputs was explained to the participants with VTC voltage transfer curve example.

He further demonstrated Physical Implementation using the Innovus tool that includes Floor Planning, Power Planning, Placement, CTS, and Routing. He explained how Innovus Implementation system is optimized for the most challenging designs. He further added the architecture minimizes design iterations and provides the runtime boost to get to market faster. Participants were demonstrated with the steps and they worked to use the Innovus tool to perform various physical design processes.

Mr. Jaysheel explained the concept of practical evaluation of an CMOS Inverter

Day 3: Session 2

The afternoon session of day three concluded with by learning how to generate various reports and design optimization. He explained how optimization can be done for both setup & hold and how to generate timing reports for setup & hold individually. Participants were taught to generate area and power reports using commands as well as the graphical user interface. The resource person concluded the session by demonstrating parasitic extraction and generation of GDSII. The entire flow was elaborated by considering 8-bit counter as an example.

The Hands-on session included preparation of the Source netlist, Extraction of the Layout netlist, Checking for shorts, and opens, and verify bulk connections (ERC), and Comparison of Source vs. Layout. Innovus with a Gatelevel Verilog netlist, LVS, netlists details were explained by Mr. Ravichandra R G with hands-on illustration.

Hands-on session on "Generation of GDSII using Virtuoso 180nm technology"

The three days training was attended by 6th Semester students and from 7th semester Electronics & Communication Engineering branch participated in the program. A total of 30 participants benefitted from the training sessions. The Program Coordinators Mrs. Deepthi Shetty and Dr. Rashmi Samanth of the E&CE department were present during the Workshop.

Outcome:

- Program allows participants to expand their knowledge of Cadence tools and how VLSI technology impacts the electronic revolution.
- It was helpful for a participant to get a Hands-on-experience with tools and technologies commonly used in the IC industry, such as Simulation, Verification, Implementation, Timing Signoff, and layout design using Cadence.
- Students were exposed to the Cadence tool suite , which will enable them to perform efficiently in laboratory courses. They also got experience working with modern tools that would enable them to implement real-time Analog and Digital VLSI projects and pursue research using Cadence Incisive and Virtuoso.

VALEDICTORY PROGRAM

The valedictory program of the Three Days Workshop on “Application-Specific IC Design using Cadence Incisive and Virtuoso” was held on 29th April 2023. Participants shared their experiences about the workshop. Mr. Sathisha and Dr. Shrikrishna Shastri presided over the function. Participation Certificates were distributed by the resource persons.

Participants Giving the Feedback about the Workshop

Participants Receiving Certificates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3X27+CX5, Badagumijaru, Karnataka 574227, India
Lat 13.050991°
Long 74.96516°
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Group Photo

Activity-24

Title : **An Invited talk on "Semiconductor Industry and Careers"**

Resource Person :**Mr. Jayasheel Shetty, Sr. Member Technical Staff, and Mr. Ravichandra R G, Jr. Engineer, Karnataka Microelectronic Design Center (KarMic Design), Manipal**

Date : **29th April 2023**

About the Resource Person:

Mr. Jayashell Shetty has more than 5 years of industry experience in analog and digital IC front-end and back-end design, and worked with Bharat Electronics Limited, Bangalore, India, and Semi-Conductor Laboratory, Chandigarh, India, in various phases of metal programmable analog array (MPAA) chip development.

Mr. Ravichandra R G received B.E degree in Electrical and Electronics from Srinivas Institute of Technology Mangalore, India. Has 2 years of industry experience in Serdes and IO as Characterization Engineer, major projects are from 3nm and 5nm technology, for 12GHZ and 16GHZ freq.

About the session:

Mr. Jayasheel Shetty initiated the session, delving into VLSI career prospects. He also introduced students to diverse industries, including Telecommunication, Software Development, Embedded Systems, Consumer Electronics, Semiconductors, and more. Function and services of these industries were discussed, with the speaker providing examples and insights.

VLSI (Very Large Scale Integration) was elucidated as a technology with numerous devices on a single chip. Its applications, which differ between analog and digital realms, trace back to the 1970s when MOS integrated circuits gained prominence, revolutionizing semiconductor and telecommunication technologies. VLSI expanded the capabilities of ICs, accommodating RAM, ROM, CPUs, and other functions on a single chip.

Various VLSI sectors like EDA (Electronic Design Automation) companies, ASIC (Application Specific Integrated Circuit) designers, and FPGA (Field Programmable Gate Array) design firms were detailed. The discussion encompassed design, materials, specifications, RTL descriptions, and functional aspects of VLSI industries. Career opportunities and requisite skills, such as EDA/CAD engineering, debugging, data structures, and HDL knowledge, were highlighted.

Mr. Ravichandra R G provided insights into ASICs (Application Specific Integrated Circuits), customized for specific uses. FPGA technology was introduced as a versatile choice for prototyping and low-production-volume projects, contrasting with the high NRE costs associated with ASICs. FPGAs play a significant role in embedded system development, enabling early software and hardware development, performance simulations, and system architecture trials.

Applications of ASICs and FPGAs were elucidated, including soft microprocessors and hardware acceleration. The speakers also emphasized the career opportunities and skills required in the embedded industry, mapping out career progression from entry-level roles to managerial positions. Total 76 students were participated in this event.

Snapshot of the talk on "Semiconductor Industry and Careers"

Snapshot of the talk on "Semiconductor Industry and Careers"

Poster of the talk on "Semiconductor Industry and Careers"

Activity-25

Title : **An Invited talk on "All about being Professional"**

Resource Person : **Ms. Verina D'Souza, Assistant Professor, Department Management Studies, MITE, Moodabidri**

Date : **04-05-2023**

Timings : **03:00 PM**

About the Resource Person: Ms. Verina D'souza is currently working as a Assistant Professor in the Department of Management Studies at Mangalore Institute of Technology and Engineering, Moodabidir. She is having eleven years of experience in teaching field and her area of interest are Tourism, Talent acquisition, Retailing, Training and Development.

About the Talk: In an enlightening invited talk on Workplace Ethics, attendees gained a profound understanding of the fundamental principles and practices that govern ethical behavior in professional settings. The session, led by an expert speaker, covered an array of critical aspects, highlighting the paramount importance of ethics, values, and morals in the workplace.

The discussion commenced by defining ethics as a set of widely accepted social norms, codes, or beliefs that delineate right from wrong, especially in professional contexts. It was established that workplace ethics comprise a collection of values and behaviors tailored to professional environments. Values were spotlighted as the bedrock of ethical decision-making, serving as deeply ingrained belief systems guiding individuals through moral quandaries. Core values like compassion, kindness, loyalty, teamwork, and honesty were emphasized as the cornerstones of ethical conduct.

The talk then delved into the concept of morals, characterizing them as specific, context-dependent rules governing the aspiration to do good. While shared morals exist, individual moral codes are shaped by personal values, a crucial point to acknowledge.

The heart of the discussion revolved around Work Ethics, defined as a collection of standards dictating acceptable behavioral norms in the professional sphere. A strong work ethic, it was stressed, signifies an employee's fervent dedication to their work, a key driver of personal and organizational success. Exploring work ethics further, the talk unveiled ten crucial work ethic traits: appearance, attendance, attitude, character, communication, cooperation, organizational skills, productivity, respect, and teamwork. These traits form the foundation of a thriving professional ethos. Key Areas of Work Ethics were delineated, including the significance of a Code of Conduct, addressing Illegal/Immoral Matters, combating Discrimination, and preventing Harassment in the workplace.

The Code of Conduct section stressed the importance of reciprocity, respecting and being respected beyond monetary gains. It emphasized discipline, punctuality, and the separation of personal and professional life. Attendees were urged to cultivate professionalism with smiles, mandatory dress codes, and strict adherence to data protection and confidentiality. Cell phone etiquette and maintaining orderly workspaces were also highlighted.

The talk championed a workplace free from politics and blame games, encouraging face-to-face discussions and the acceptance of mistakes. It stressed the importance of email etiquette, respect for colleagues, and cautioned against overindulgence in workplace friendships or the misuse of power. The discussion took a solemn turn as it addressed Illegal/Immoral Acts, vehemently condemning bribery, fraud, coercion, dishonesty, theft, insider trading, and conflicts of interest. It left no room for doubt: integrity and honesty are non-negotiable in the professional arena.

The scourge of Discrimination in the workplace was unveiled, resulting in unjust treatment based on factors like nationality, gender, age, religion, color, disability, or sexual orientation, leading to inequity in opportunities and treatment. Nepotism, language barriers, gender, caste, and race-based disparities, unequal wages, and age or race-based retrenchment were cited as examples.

Sexual harassment was addressed comprehensively, encompassing inappropriate gestures, leering, pinching, grabbing, hugging, patting, and touching. Attendees were made aware of the insidious nature of quid pro quo arrangements and the use of undue influence in compromising situations, while workplace violence was vehemently discouraged.

The discussion transitioned to practical aspects, offering guidance on Ways to Display Professionalism. Attendees were reminded of the importance of punctuality, adherence to dress codes, respectful communication, honesty, a positive attitude, accountability, judicious use of social media, a willingness to assist colleagues, ethical conduct, and unwavering reliability as markers of professionalism.

In closing, the talk touched upon the need to Devise Strategies to combat specific ethical challenges, such as sexual harassment, bribery, and discriminatory practices. These strategies were deemed indispensable for nurturing a workplace firmly grounded in ethics and integrity. Total 78 students were participated in this event.

Sanpshot of An Invited talk on "All about being Professional"

Sanpshot of An Invited talk on "All about being Professional

Poster of An Invited talk on "All about being Professional

Activity-26

Event Title : "**PLACEMENT DAY"**

Resource person : **"Mr. Guruprasad S A", Senior Project Manager, Semnox Solutions Private Limited.**

Date : **13/05/23**

Timings : **10:00 AM -1:00 PM**

Placement Day was celebrated on 13th May 2023 to commemorate the successful placement of the students from the Electronics & Communication Engineering department. An audio video was presented of talented individuals who have successfully secured coveted positions in renowned companies to acknowledge their hard work, dedication, and achievements.

The Placement day celebrations began by invoking blessings and offering gratitude to the almighty by final year students Mr.Chinthan Krishna Bhat and Ms.Rakshitha. Welcome address and introduction of the chief guest were done by Dr. Vinayambika S Bhat, Professor & HoD – E&CE, Dean Quality Assurance. Mr. Narendra U P, Director (Placements, Training, and Industry Relations) addressed the gathering by presenting the Placement process. He further briefed us about the training process at our college and elaborated on the preparations and achievements.

Ranjith H D, placement coordinator presented a Training & Placement report for the Academic year 2022-23. He started his presentation by briefly explaining the training session designed for 2nd year where students undergo peer learning programs, and technical training sessions to have strong basics of technical knowledge. During 3rd year the students are given regular training on Quantitative ability and logical reasoning by in-house trainers, this program mainly gives emphasis on Logical reasoning ability, Critical thinking, Problem-Solving ability, numerical reasoning ability, and computational ability. He said students are assessed on a weekly basis and their performance is monitored regularly. The students also regularly receive domain-specific technical training to master their programming skills. He spoke about how student teams are formed to develop team building and

are motivated to develop prototypes to solve real-time problem statements. He further added that in Final Year Company-specific training is provided to students and they are encouraged to register to various placement portals and are motivated to undergo assessments by different agencies like co-cubes, and AMCAT to know their employment capabilities.

He also highlighted the various pieces of training provided at the Department level to students like communication skill sessions weekly for second and third-year students. Weekly Aptitude assessment to improve their aptitude questions solving ability and weekly Gate training sessions. He thanked the Placement department for the extended support given due to which the students have grabbed offers from their dream companies by presenting the department statistics of placed students. From the Dept. 97 students have opted for placement in which 71 students are placed with a total of 90+ offers to date. He highlighted highest package grabbed by the students is 7LPA. The overall placement status of the department to date comes to around 73.2%.

Ms. Gouthami Purohit(Cognizant), Mr.Sourav Shetty(MResult), Mr. Chinthan Krishna Bhat(TCS), and Ms. Aditi Shetty(Tricon Infotech Pvt Ltd) shared their experience of the placement journey. They shared and gave a brief insight into preparations for placement and talked about the various process involved in the placement. The students highlighted the challenges, setbacks, and successes they encountered during their journey. They provided insights to develop essential skills and advised the juniors to maintain a positive mindset throughout their academic and placement.

The chief guest of the day Mr. Guruprasad S A gave an inspirational speech about the training and company process and also how to train ourselves for the betterment of the future. He also shared his experience of the corporate world. He told the students it's essential to constantly upskill and adapt to the changing minds of the industry. He asked the students to nurture their soft skills besides technical skills and cultivate empathy, effective communication, teamwork, and ethical values.

Principal, Dr. Prashanth C M in his presidential address congratulated the students and advised them to strive for excellence, make a positive impact, and contribute to the betterment of society. Finally, Ms. Swapna Srinivasan, Placement coordinator, gave a vote of thanks and ended the formal session.

Informal sessions had activities like Quizzipedia, Pick and Speak, and Nerdy Me. Students actively engaged themselves in the various activities conducted by the department faculty and judged by the other department faculties. The dance program was arranged by pre-final year students to thank the seniors. At the end of the day refreshment was distributed, and the selfie time was later organized for the students along with the faculty members.

Placement Coordinator Mr. Ranjith H D florally welcoming Chief Guest Mr.Guruprasad S A

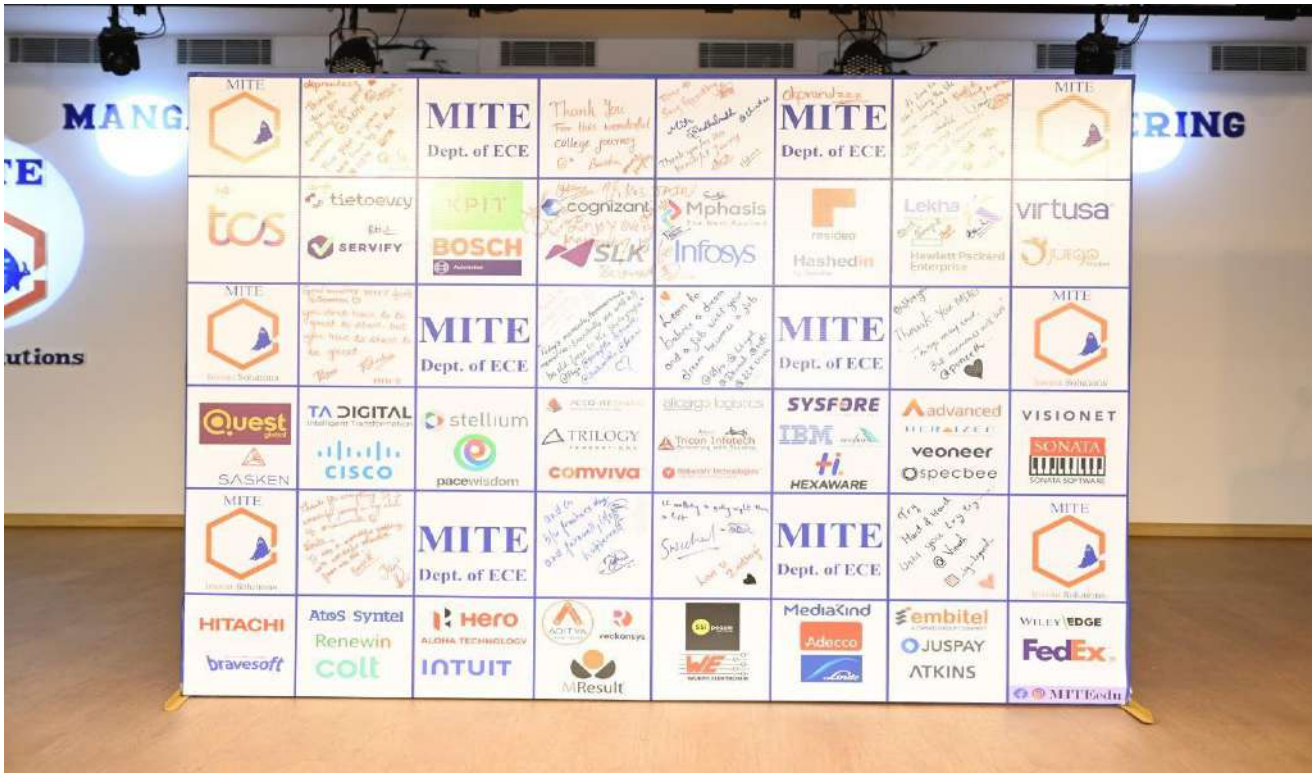
Dr. Vinayambika S Bhat, Professor & HoD – E&CE, Dean Quality Assurance welcoming the gathering

Mr. Narendra U P, Director (Placements, Training, and Industry Relations) addressing the audience.

Ms. Adithi V Shetty talked about her placement journey and shared her thoughts.

Chief Guest Mr. Guruprasad S A delivering his speech to the audience

Group photo with final year students of 2019-2023



Message wall with the company names

Activity: Nerdy me student pitching his innovative idea.

Picture capturing and celebrating the success of the students placed at MITE

Activity-27

Title of the session : **"Mission LiFE Towards Protection of Environment"**

Resource Person : **Dr Ravi D R, Environmental Officer, KSPCB, Mangaluru**

Date : **16.05.2023**

Time : 12:15 PM

ABOUT THE SESSION:

Department of Management Studies and Department of Electronics & Communication Engineering in association with ECO CLUB organised an awareness session on "Mission LiFE Towards Protection of Environment". The speaker to the event was Dr. Ravi D R, Environmental Officer, Karnataka State Pollution Control Board (KSPCB), Mangaluru.

Total number of participants were 366 from various streams ie E&CE, CSE, ISE,CIV, MBA and MCA.

SPEAKERS PROFILE:

Dr. Ravi D.R. with Ph.D in Environmental Economics from University of Mysore through Institute for Social & Economic Change (ISEC), Bangalore & M. Tech in Environmental Engineering from Sri Jayachamarajendra College of Engineering, Mysore (under VTU, Belgaum) is a seasoned professional with over 28 years' of rich experience involving Monitoring, Liaison, Treatment Plant Operations, Environmental Management, Maintenance Management, Urban Governance, Statutory Applications with extensive and diverse experience in Private and Government agencies.

- Presently working as Environmental Officer at Karnataka State Pollution Control Board (KSPCB), Mangalore

- Co-authored and published a Text Book for Engineering Students Entitled "Environmental Issues, Law and Technology- An Indian Perspective" Published by Research India Publications, New Delhi.2010.
- Completed 2 Text Books (One of this is the PhD thesis which is in the process of peer review by the publisher) and the other is on "Introduction to Environmental Economics". Is under review by the Publisher.
- Wrote 4 chapters (Impact of Climate Change on Water Resources, Sanitation, Urbanization and Land Use Change) as a part of study conducted by the Board for the preparation of action plan for mitigation of Climate Change. The project includes public consultation of different stake holders throughout the State.
- Participated in the Television Show on different issues of Impact of Solid Waste on Bio Diversity, Celebration of Eco Friendly Ganesha Festival and Health Impact of Air Pollution in Doordarshan, Chandana Channel (Kannada).
- Presented research papers in International Conferences and in National Conferences in different areas of Environmental engineering.
- Published papers in International Journals on different concepts.
- Conducted number of awareness programme as Resource Person on different areas like Bio-medical waste management, Water & Air Pollution, Water & Sanitation, Environmental Auditing, Environmental Accounting and etc
- Guiding Ph.D, PG & U.G Students on different areas of Pollution Control & Environmental Engineering.
- Completed a Project on "Water Resource Accounting" as a part of study on "Green GSDP Accounting for Agricultural, Water & Forestry: Methodological Issues" for Environmental Management & Policy Research Institute (EMPRI- Department of Forest, Ecology & Environment, GOK) with financial Assistant from Department of Planning, Programme Monitoring and Statistics, Government of Karnataka.
- Worked as Core member for a project on "Climate Change"- Preparation of Action Plan for Karnataka, initiated by Karnataka State Pollution Control Board.

- Written a Chapter on “urban governance, air pollution, And health implications” in the edited Text book “Urban Governance in Karnataka and Bengaluru: Global Changes and Local Impacts” published by Cambridge Scholars Publishing, UK, 2016.
- Completed Writing a Chapter on Status of Water, Air & Noise Pollution and Industries as a part of “State of Environment Report- 2017, Karnataka”, a Project of Ministry of Environment, Forest & Climate Change, through Government of Karnataka, executed by Environmental Management & Policy Research Institute (EMPRI- Department of Forest, Ecology & Environment, GOK) Bangalore.
- Writing a Book Titled “Handbook of Waste Management in Food and Allied Industries” along with Dr. Sandeep Mudliyar, Scientist CFTRI. It is under progress.
- More than 150 Technical Talk were delivered in different Workshop/training Programme /Conferences, as Resources person, on different issues of Pollution control & Resource Conservation, Since 2016.
- Visited Sweden to understand “Best Practices in Environmental Governance in Hazardous Waste and e- waste Management @ Sweden” during September 2019. Visited Umea, Stockholm and Lund. The visit was sponsored by Swedish EPA through Centre for Science & Environment.

BRIEF ABOUT THE TOPIC DISCUSSED:

Speaker spoke about Mission LiFE – LiFEstyle for Environment ie, Mission LiFE is an India-led global mass movement to nudge individual and community action to protect and preserve the environment. He also said Honourable Prime Minister Shri Narendra Modi Launched Mission LiFE. , “The mantra of Mission LiFE is 'LiFEstyle for Environment’. Which connects the powers of the people for the protection of this earth and teaches them to utilise it in a better way.” He further elaborated and said, “Mission LiFE makes the fight against climate change, in which everyone can contribute within their capacity. Mission LiFE follows the P3 model, which stands for Pro Planet People, focusing on a LiFEstyle of the planet, for the planet, and by the planet. It advocates for a circular economy, where the concept of reduce, reuse and recycle is crucial to balance development, economic growth, and sustainability.

Initially he spoke about present issues of ground water level, soil purity and Air quality. Physical and economical scarcity. Gave example of Bangalore Air pollution level which is more than 2-3% higher than WHO standard range. The Natural resources like Air, water, Soil, Minerals are considered as public good and has been misused in bad way.

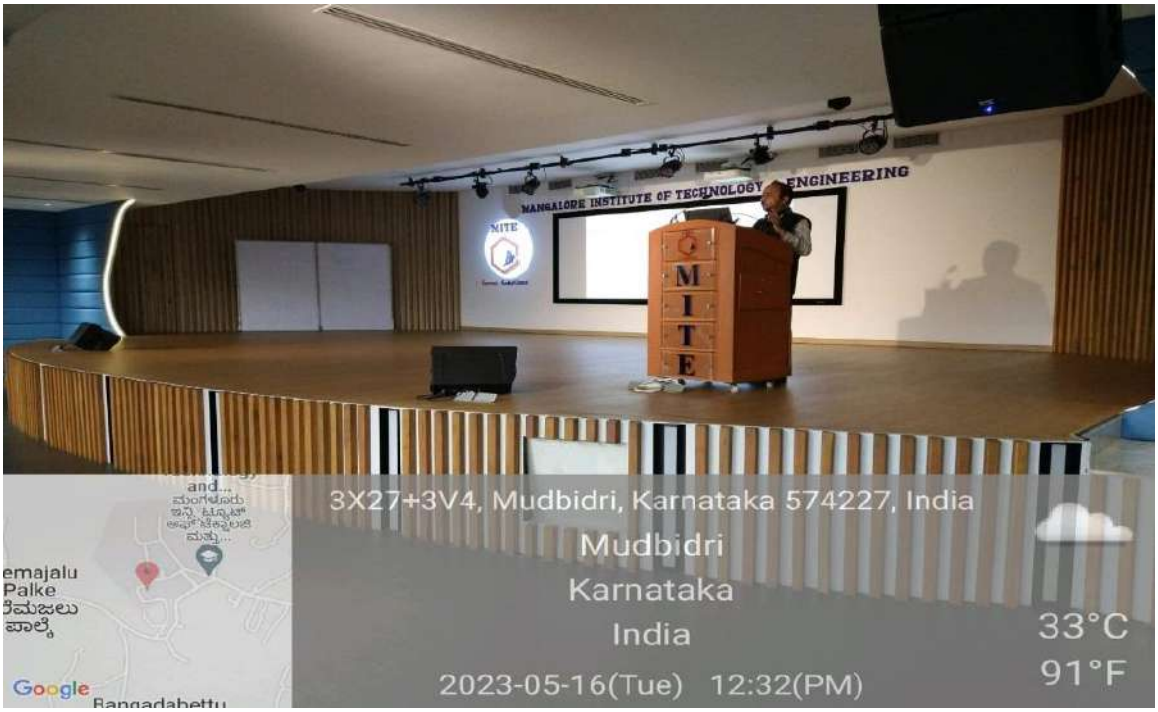
Discussed on LiFE Actions ie Energy Saved, Energy Reduced, Healthy LiFEstyles Adopted, Sustainable Food Systems Adopted, Waste Reduced, Water Saved, Single Use Plastic Reduced. LiFE builds upon India's environment-friendly culture and traditional practices like several unique water harvesting techniques, contextual to local conditions, are practised across India, Clayware, are commonly used for cooking and serving purposes, minimise electricity consumption, preference for plant-based foods and millets.

He discussed about what are the technological changes required for the solution for environmental problems. Objectives, Implementation Mechanism, Impact, Key ideas, Themes, listed efforts of Mission LiFE has been discussed briefly.

He concluded mentioning Environment protection is linked to the efforts of every individual. Ancient Indian literature is replete with reference to the management conservation and protection of the environment. Texts like the Arthashastra, Upanishads and Vedas, will highlight the values of environmental protection. This ancient wisdom will guide our everyday action. So let us choose LiFE.

Later everyone should up and recited the LiFE Pledge,

"I pledge to make all possible changes in my daily LiFE to protect the environment. I also commit to continuously motivate my family, friends, and others about the importance of environmentally friendly habits".



Dr. Ravi D R, Environmental Officer, Karnataka State Pollution Control Board (KSPCB), Mangaluru delivered a awareness session on "Mission LiFE Towards Protection of Environment"

Dr. Ravi D R, Environmental Officer, Karnataka State Pollution Control Board (KSPCB), Mangaluru delivered a awareness session on "Mission LiFE Towards Protection of Environment"

Activity-28

Title : **Three Days workshop on Research Dissemination Through Publications andPatents.**

Sponsored by :IEEE-MITE

Date : **18/05/2023 to 20/05/2023**

About the Workshop:

Three Days Workshop on Research Dissemination through Publications and Patents is well structured and focused on building a strong community of researchers with ethics. The workshop intends to give an insight into the importance of publications by highlighting the need for ethics, plagiarism checks, and understanding required to edit the paper template. The workshop aims at giving participants an overview of the process of identifying the quality journal for publication, conference selection, the publication process, and the importance of data sharing. Overall, the workshop is essential for disseminating research findings and advancing scientific knowledge. By publishing their work in academic journals, conferences, and technical reports, researchers can share their findings with others in their field and build their reputation as experts in their area of research. By filing patents, researchers can protect their intellectual property and promote innovation and entrepreneurship. The workshop focuses on the Overview of Intellectual Property Rights (IPR) and their importance, submitting patent applications, and Grant Writing. The three-day session aims to make the participants understand the process of Filing and getting a patent. This workshop will enable researchers to understand the critical component of the scientific research process and will play an essential role in advancing their knowledge and providing solutions to real-world problems.

Workshop Outcome:

- Participants will gain a comprehensive understanding of the publication and patenting processes, including the requirements, timelines, and strategies for the successful dissemination of research.

- Participants will develop an insight into intellectual property rights and learn how to protect their research through patents and other forms of IP protection.
- Participants can develop action plans outlining specific steps they will take to disseminate their research through publications and patents.

The resource persons for Three Days workshop on Research Dissemination Through Publications and Patents

	**Dr. Manjunath K N** **Associate Professor** **Department of Computer Science & Engineering** **Manipal Institute of Technology (MIT)** **Manipal**
	**Dr. Siddhalinga Swamy P C** **Professor** **Department of Computer Science & Engineering** **Manipal Institute of Technology (MIT)** **Manipal**

Day 1, 18th May 2023

INAUGURAL FUNCTION:

The inaugural session of the three-day workshop on "Research Dissemination Through Publications and Patents was held on 18th May 2023 at 9:15 AM in Auditorium - 2. The workshop was sponsored by MITE-KSCST-IPR Cell, IEEE Mangalore Sub-section, and conducted in association with Electronics & Communication Engineering Department. Dr. Manjunath K N Associate Professor, Department of Computer Science and Engineering, Manipal Institute of Technology (MIT) Manipal, was the guest of honor and inaugurated the workshop. The inaugural session was presided over by the Principal Dr. Prashanth C M. Dr. Vinayambika S Bhat, Professor & Head of the Department of Electronics &

Communication Engineering and Dr Ramalingam H M Convener, MITE-KSCST-IPR Cell were other distinguished dignitaries present on the dais.

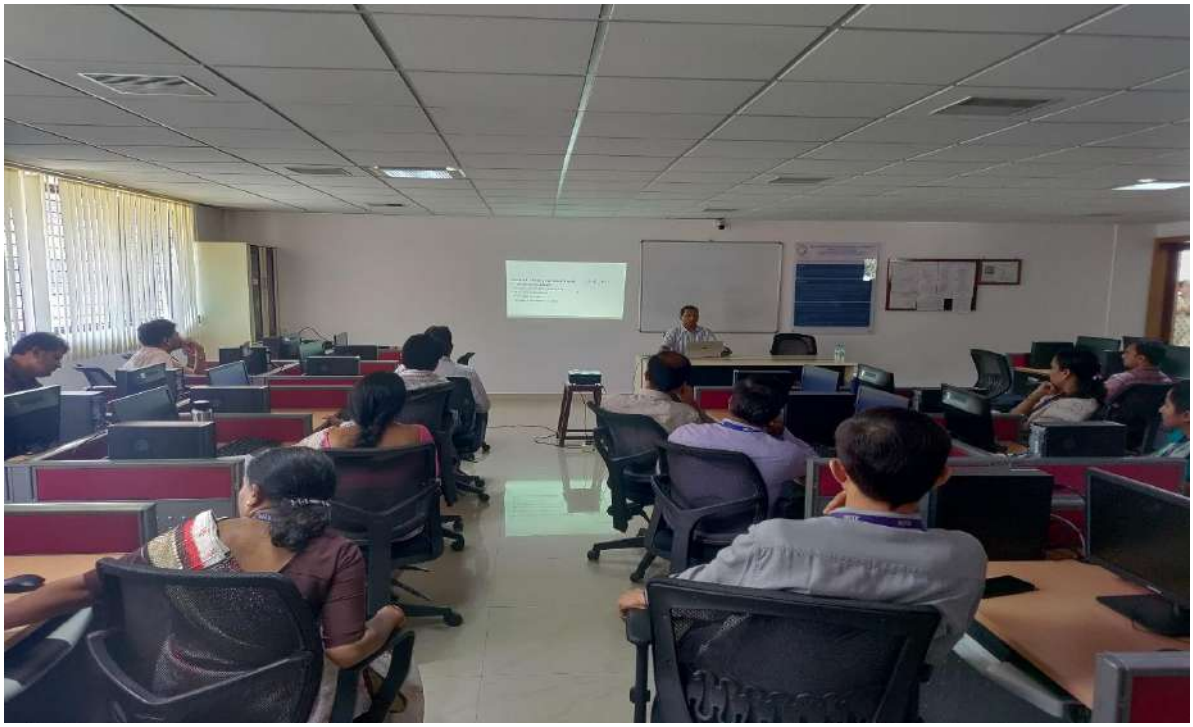
Dr. Vinayambika S Bhat welcomed the gathering, and Dr. Manjunath K N in his guest speech gave an insight into the importance of Research in the academic field at present. Principal Dr. Prashanth C M in his Presidential Address gave a glimpse of how important it is for the participants to take part in such workshops for enhancing their knowledge & develop their skills. A total of 32 participants from various departments in the institution participated in the workshop. Dr. Ramalingam H M rendered a vote of thanks.

Inauguration of the workshop by Dr. Manjunath K N

Inaugural Session - Guest Speech by Dr. Manjunath K N

SESSION 1: Planning the Research Work

Session 1 focussed on efficient planning of the research work wherein the speaker addressed the importance of publication. Planning the research work is a critical phase that lays the groundwork for a successful study. By clearly defining objectives, conducting a thorough literature review, selecting an appropriate methodology, allocating resources effectively,setting a timeline, managing data, and accounting for potential contingencies, researchers can enhance the quality and reliability of their research outcomes. The speaker emphasized that a well-structured and organized research plan contributes to efficient execution and contributes to the advancement of knowledge in the respective field. He further emphasized that planning is an essential aspect of research that helps one to stay organized, focused, and efficient. A demo of Gantt chart creation was shown to the participants. He elaborated on how the usage ofthe Gantt chart can help individuals visualize, organize and manage tasks, resources, and timelines effectively. It enhances communication, coordination, and decision-making, ultimately improving the chances of successful project completion within the desiredtimeframe.



The speaker gives a brief note on the day's agendaSESSION 2: Ethical Issues

Session 2 addressed the ethical issues where participants were briefed about topics Research Misconduct, Falsification of results, Plagiarism Research, Author affiliation, Harassment, and Reusing the published materials. Research Misconduct refers to behaviors that violate ethical standards, such as fabricating or falsifying data, plagiarizing the work of others, or omitting important findings. It undermines the integrity of research and can have serious consequences for the scientific community. Falsifying results involves manipulating oraltering data to support a desired outcome. This unethical practice distorts the truth, misleads the scientific community, and can have far-reaching negative impacts on subsequent research and decision-making. Plagiarism involves using someone else's ideas, words, or work withoutproper acknowledgment or citation. It is a serious ethical offense that undermines the original author's intellectual property rights and academic integrity. Proper attribution and citation are essential to avoid plagiarism. He explained the need for proper authorship attribution which iscrucial in research publications. Ethical issues arise when individuals are included as author who have not substantially contributed to the research or when deserving contributors are omitted. Transparent and fair practices in assigning authorship help maintain accountability and recognition within the scientific community. Harassment in research settings involves anyform of unwelcome or offensive behaviour that creates a hostile or intimidating environment. This includes but is not limited to sexual harassment, discrimination, or bullying. Promoting respectful and inclusive research environments is essential for the well-being of researchers and the integrity of the research process. Reusing published material without proper acknowledgment or permission is considered unethical. Researchers should adhere to copyright laws and obtain appropriate permissions when using previously published work. Proper citation and referencing should be employed to give credit to the original authors and avoid plagiarism.

SESSION 3: Hands-on Session

Dr. Manjunath K N started the afternoon session with the participants where he guided the participants in editing the IEEE template for publishing a paper. Participants learned and worked on writing equations using Create Equations in Word. The speaker guided through an online citation generator called “Cite This For Me” which helps in generating, managing

citations, and Learning proper citation formats. He elaborated on the usage of the Snip tool and FS viewer which can be useful for managing and viewing image files, including figures or visual content used in research or presentations. He further demonstrated on Turnitin tool which is a plagiarism detection service commonly used by educational institutions to assess the originality of written work. He talked about the Copyright Clearance Centre organization which provides copyright clearance solutions for content reuse. The speaker ended the session by discussing some sample review papers.

Hands-on session by the speaker

Day 2, 19th May 2023

SESSION 1: Publication Process

The session started was by Dr. Manjunath K N explaining the first topic i.e. Type of Research Papers which include Original research contributions, Methodological reviews/ surveys, Position papers, Editorials, Letters to the editor, Book reviews, Erratum, Historical Perspective, In Memoriam, Ph.D. projects. He highlighted that focus is given only to original research contributions, Methodological reviews/ surveys, Book reviews, and Erratum in academics.

Further Publication process is explained ie registration on the website, Preliminary reviews ie whether the paper is out of scope, cross-checking is done whether a paper is published elsewhere and grammar and spell check w.r.t language is done by editorial staff. Later once it passes this stage it moves to the review phase where the reviewer reviews the paper and suggests the changes/corrections. The steps continue till the acceptance of the paper. He further explained various Publication types ie Journals, conferences (Oral presentation and Poster Presentation), Preprints, and Registered reports, and explained the difference between them. The speaker briefed about the research-sharing platform which is open to anyone iearXiv for technical papers and medRxiv for medicine-related papers. He provided insight on how to submit the extended version of the conference paper to the Journal. He briefed about the Reviewer's Expectations with a focus on topics related to the Contribution of the paper, Main strengths, Main weakness of the paper, Rate the clarity and organization of the paper, Reproducibility of the paper, Detailed construction of the paper, State overall opinion, Justification for acceptance or Rejection. He added that the review process is iterative and continuous. The unethical practices involved in the publication process which need to be avoided were further explained which includes referring to our journal, our reviewers, our papers, our own assertion to receive the registration fee, our own publisher.

The speaker further discussed on following key points to be kept in mind when we are ready to submit the work done:1) You need to get permission to reuse the material.2) Usage of proper journals relevant to our area. Either select Open Access or Subscription in the journal. 3) Do Grammarly check, do a plagiarism check, and Prepare the manuscript as per the template. The best approach for writing a paper was explained which includes understanding our field of interest. He suggested following best practices like extensive reading of abstracts and conclusions in the field of interest. Do a literature survey, revisit, revise, and rephrase. Understanding Journal requirements is the next topic discussed where the selection of Quality Journals for publication was elaborated. The quality of the journal is measured by the cite score, provided by Scopus index SJR, IF, and FWCI. We need to check the journal quartile which ranges from Q1, Q2, Q3 to Q4. The best one is Q1 and the least one is. Q4. So beyond Q1, there are 10 more classifications ranging from Top 1 to Top 10. The score for the top 10 is 91%

and the Top one is 99%. The difference between open access and subscription was clearly explained by highlighting the various Indexing agencies, the Importance of code sharing, and What leads to acceptance? Each word of ACCEPTANCE has a particular meaning. This means, Attention to detail, Check and double check your work, Considering the reviewer's comments, English must be good as possible, Presentation is important, Taking your time for revision, Acknowledge the people who helped you, New/ original and previous unpublished papers, Critically evaluate your own manuscript, Ethical rules must be followed.

The Desk rejection reason is outlined which includes Inadequate paper formatting, out-of-scope submission, Poor quality of writing, Plagiarism, Missing methodological details, Lackof clarity about Aims and Objectives, and Resubmission of previously rejected submissions without revision. Auto transfer options are explained where we have the option to auto-transferthe paper within the Elsevier and within Springer publications. But the transfer is not possible between Elsevier and Springer. Even reviewers' comments can also be transferred.

Dr. Manjunath K N presented the session on Publication Process

SESSION 2: DOS AND DON'TS

DOS AND DON'TS for Best Approach for writing papers were discussed in the session which includes, Do not copy, write in your own words, When in doubt, site immediately, Do not recycle images, figures, tables or text from one of your own previously published paper without citing, Ask permission, if you get an email from an anonymous source, do not submit, do not believe if the journal homepage just mentions IF. Look into JCRIF (SCIE or Web of Science) and Cite score (Scopus), Avoid predatory journals, avoid multidisciplinary journals, Do not submit to more than one place at the same time, Do not bypass the research methodologies, Always look into aims and scopes and not the journal title, Avoid the words Novel, First time, First time ever in the title, Do not mix introduction, result, discussion, and conclusion, all should be written in a different section. Avoid self-plagiarism, In the case of English grammar. Always use active voice, not passive voice, Advice to Ph.D. candidates were given and technique to Market ourselves were discussed.

SESSION 3: Hands-on Session

Afternoon we had a hands-on session on how to edit the IEEE conference template and locate suitable journals using Journal Finder in Elsevier and Springer. Author guidelines will provide detailed instructions on manuscript preparation, formatting, citation style, submission process, and other relevant information specific to the journal. The speaker explained the Author guidelines of Springer publication, How to Check indexing in LetPub, SCIE, SCOPUS, Editorial Manager/Manuscript Central system, and Reviewer guidelines from MSS. He further suggested a few Retractions databases and concluded his session by briefly explaining the usage of ORCID, SCOPUS, and WOS.

Day 3, 20th May 2023

SESSION on Patents

The speaker for the third day was Dr. Siddalinga Swamy Associate Professor, Manipal Institute of Technology, Manipal. He shared his experience with research grants and IPR. The importance of research grants, writing a research proposal, idea selection, grant funding agencies, IPR, and the necessity of patents were some of the topics discussed.

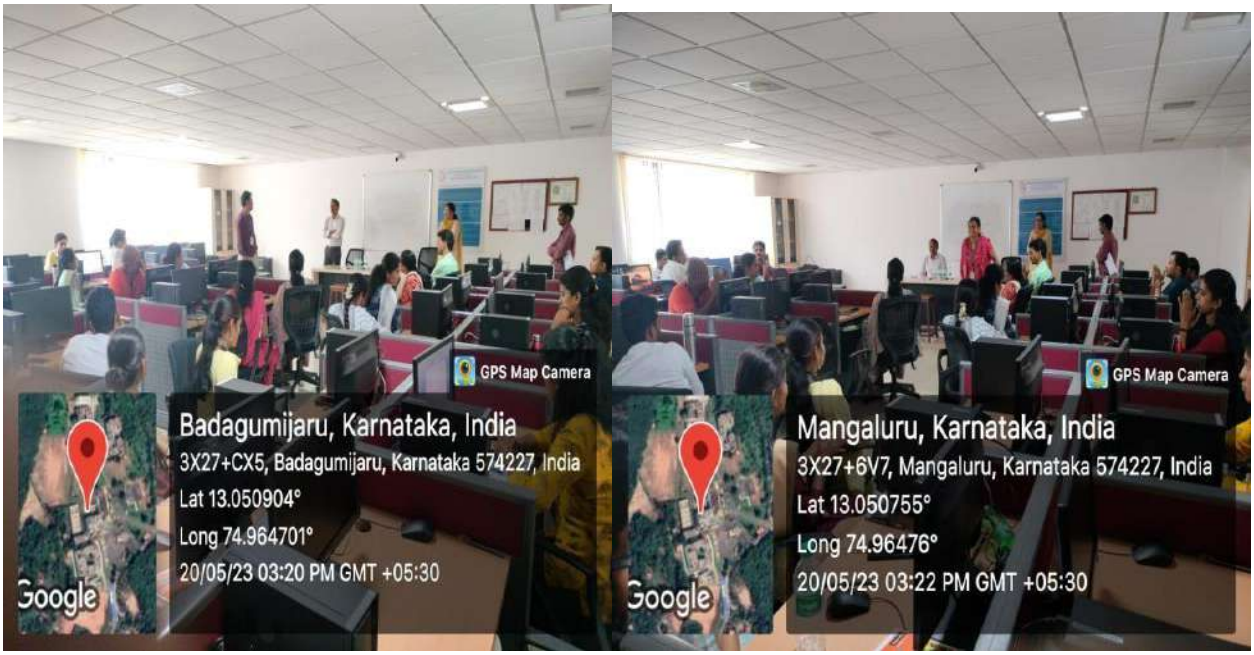
Dr. Siddalinga Swamy started the session with some of the best approaches for writing a research paper. He suggested providing an explicit title to the proposed work and matching the proposed theme of funding agencies. Some of the key points for successful research are not

to rush to write a proposal, a budget should be well planned, be honest with the technical expert committee. In the next session IPR, types of IPR, necessity, and importance of IPR were discussed. The resource person deliberated that any article, machinery, or component that is novel and inventive can be patented. In addition to this, he also mentioned how to prevent an unauthorized third party from stealing the idea or manufacturing. Further, he also stated that certain documents like application forms, specifications, declaration of inventorship power of authority, terms & cost are necessary to file the patent application. In the afternoon session, a hands-on activity was carried out by sharing an application template to apply for a research grant and patent.

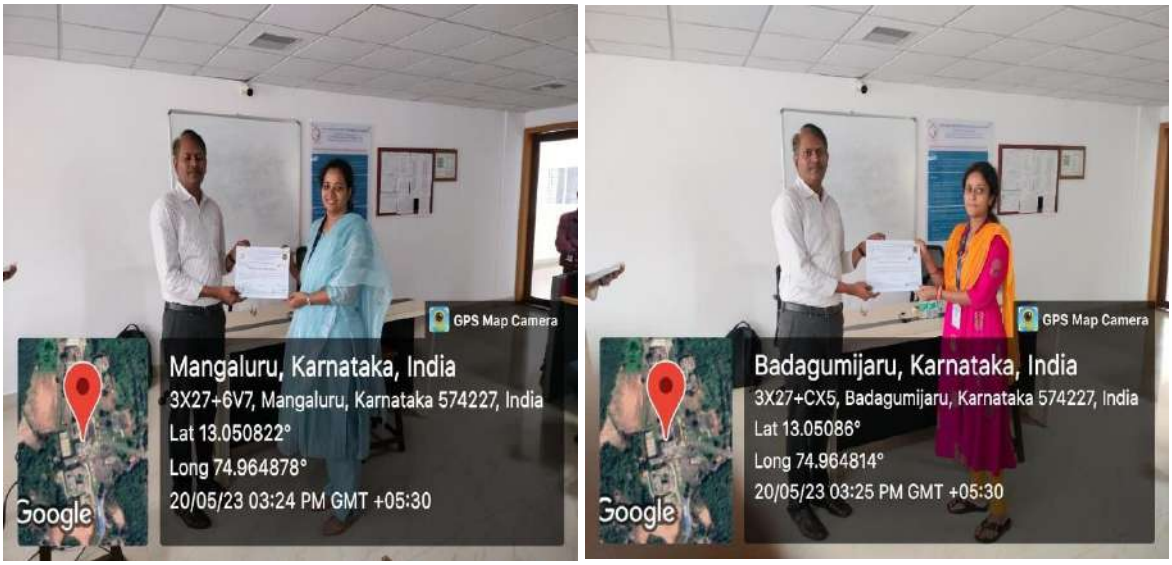
Professor Siddalinga Swamy briefing about the various funding agencies

VALEDICTORY PROGRAM

The valedictory program of the three-day workshop was held on 20th May 2023. Participants from various departments shared their experiences with the workshop. Mr. Sathisha, Dean of Examinations presided over the function. Participation Certificates were distributed by the resource person Dr. Siddalinga Swamy P C.



Participants Giving Feedback About the Workshop



Participants Receiving Certificates

Group Photo on day2 19-05-2023 with Resource Person Dr. Manjunath K N

Group Photo on day3 20-05-2023 with Resource Person Dr. Siddhalinga Swamy P C

Activity-29

Title : **Electronics Core Industry and Scope of VLSI in it**

Resource Person : **Ms. Fazila Naz, Design Verification Engineer, MaxLinear Technology, Bengaluru (Alumna Batch-2018)**

Date : **20/05/2023**

Time : **10:00AM**

Profile of the Resource Person: Ms. Fazila Naz is an alumna of batch 2014-18. She worked as Junior Software Engineer at Mindtree from 2018 June to 2020 June. From 2020 to 2021 she was employed at Symphony Summit as a Product Engineer. In 2021, she switched her profession from Software to the core of Electronics Industry. Currently she works in MaxLinear Technology, Bengaluru as a Design Verification Engineer. She worked for clients at well-known firms/renowned firms which includes NXP semiconductors and Analog devices from Frenustech Company. Additionally, she also worked for the Samsung Galaxy S23'S Ultra wide band project at NXP Semiconductor. Her next project involved on automobile chip for display port feature, for analog devices. Currently, she is working on a project based on 5G technology.

Keynote Address: The speaker started her session by giving an insight to the jobs in Electronics core industry. She mentioned various electronics job roles in the industry which included Design Engineer, ASIC Engineer, Embedded Engineer, Network Support Engineer, Pre-Post Si Validation, Quality Analyst, Physical Designer, Architect, RTL Designer, DFT Engineer, FPGA Emulation Engineer etc. She explained each role briefly. The primary responsibility of a VLSI Design Engineer is to design and develop high-performance, low-power, and cost-effective integrated circuits. ASIC Design Engineers create Product Design Specification (PDS) statements for ASIC, optimize logic design, and create architectural design models. Pre-Silicon Validation allows for earlier identification of bugs further upstream, reduces development times and enables more developers to access the latest simulated silicon. A Quality Analyst Engineer creates tests that identify issues with software before a product launch. A Physical Design

Engineer is responsible for working with computer chips, circuits, and related components. They are in charge of analysing semiconductors, creating processor layout circuits, developing microchips and developing, maintaining, and executing other related activities. A VLSI System Architect is responsible for designing, developing, and implementing the overall system architecture of VLSI systems.

RTL Design Engineer provides guidance to the team performing development activities such as RTL coding, Synthesis, Formal Verification, and Static Timing Analysis. DFT in VLSI is a leading career choice these days as it involves architecture definition, logic design, verification, test pattern generation, and more. By specializing in VLSI DFT, an engineering graduate can increase their chances of landing a specialized and high-paying job in the semiconductor industry. FPGA Emulation Engineer performs requirements development and definition, design architecture and implementation, design simulation, and hardware test and validation. By displaying the flowchart, she imparted knowledge on VLSI Frontend and Backend process. The frontend flow is responsible to determine a solution for a given problem or opportunity and transform it into a RTL circuit description. The backend process is responsible for the physical implementation of a circuit.

She asked few brainstorming questions which included following.

- There are two bulbs, which gate you would use in such a way that only 1 bulb glows at a time?
- Consider a house with 2 power supplies- the major from power station. Secondary- from inverter. That is – Input 1 – power from major source Input 2 – power from inverter. Output – electrical appliances. Which gate is used?
- 5 major concepts of OOPs.

At the end of the session she highlighted the importance of job role preparation, good versus bad attitude in interviews and the workplace, low-key absorbency, eagerness to learn new things, and focus. Around 84 participants attended the session and benefited from it.

Speaker Ms. Fazila Naz, Design Verification Engineer, MaxLinear Technology, Bengaluru delivering a session on "Electronics Core Industry and Scope of VLSI in it"

Activity-30

Title : **Cyber Security**

Resource person : **Mr. Prasanna Poojari, Senior Security Analyst, London Stock Exchange Group, Bengaluru (Alumni Batch: 2017)**

Date : **20/05/2023**

Time : **11:00AM**

Profile of the Resource Person: Mr. Prasanna Poojari is an alumnus of batch 2013-2017. He worked in DXC Technology from 2017 to 2019 as Associate Professional in Information Security. From 2019 to 2021, he was employed at Accenture as Security Delivery Analyst. He also worked in EY Software as Security Consultant for 2 years. Currently, he is working as Senior Security Analyst at London Stock Exchange Group, Bengaluru.

Keynote Address: The speaker started his session by illustrating how firewalls are integrated into a network by displaying a simple firewall network design. Later, he explained briefly about Cyber Security and Cyber Attacks. Also the importance of Cyber Security was briefed to the audience. He stated that the primary victims of Cyber Attacks are Businesses, Government, Banking & Financial, Energy Companies, Educational Institutions, Media Outlets. He also informed about the most common cyber security threats and ways to prevent them which included Malware, Ransomware, Social Engineering/Phishing, Password Cracking Attacks and Man-in-the-Middle Attacks. Malware is also known as malicious code or malicious software. Malware is a program inserted into a system to compromise the confidentiality, integrity, or availability of data. It is done secretly and can affect your data, applications, or operating system. Ransomware attacks often occur after an employee falls for a phishing email or other social engineering method it only takes one that gives malicious actors access to a corporate network. Social engineering refers to malicious activities designed to trick victims into providing confidential information, such as passwords or other credentials, or taking an action that gives the attacker financial or personal information. In password-based attacks, hackers use password-

cracking software that can test thousands of potential passwords and brute force attacks to access secure accounts. These machines are successful as password rules, such as requiring capital letters, special characters, and numbers, have actually made passwords less secure. Man in the Middle (MitM) attacks occurs when attackers position themselves between a user and an application to eavesdrop or impersonate one of the parties, creating the illusion of a "business as usual" environment. The speaker gave some tips for protecting our computers. He discussed the cyber security career path and how to get into this field. He guided the students to do various cyber security certification courses like CEH (Certified Ethical Hacker), CISA (Certified Information Systems Auditor), CISSP (Certified Information Systems Security Professional), CISM (Certified Information Security Manager), OSCP (Offensive Security Certified Professional), ECSA (EC-Council Certified Security Analyst), CCSK (Certificate of Cloud Security Knowledge), CCSP (Certified Cloud Security Professional). The speaker ended his session by informing students about the preparations required for aptitude test and interview process. Around 83 participants attended the session and benefited from it.

Speaker Mr. Prasanna Poojari, Senior Security Analyst, London Stock Exchange Group, Bengaluru delivering a session on "Cyber Security"

Activity-31

Title : **Journey to Salesforce**
Resource Person : **Ms. Jasmin Caron Santhmayor, Senior Software Engineer, Apisero, Bengaluru (Alumna Batch-2020)**
Date : **05/06/2023**
Time : **10:00AM**

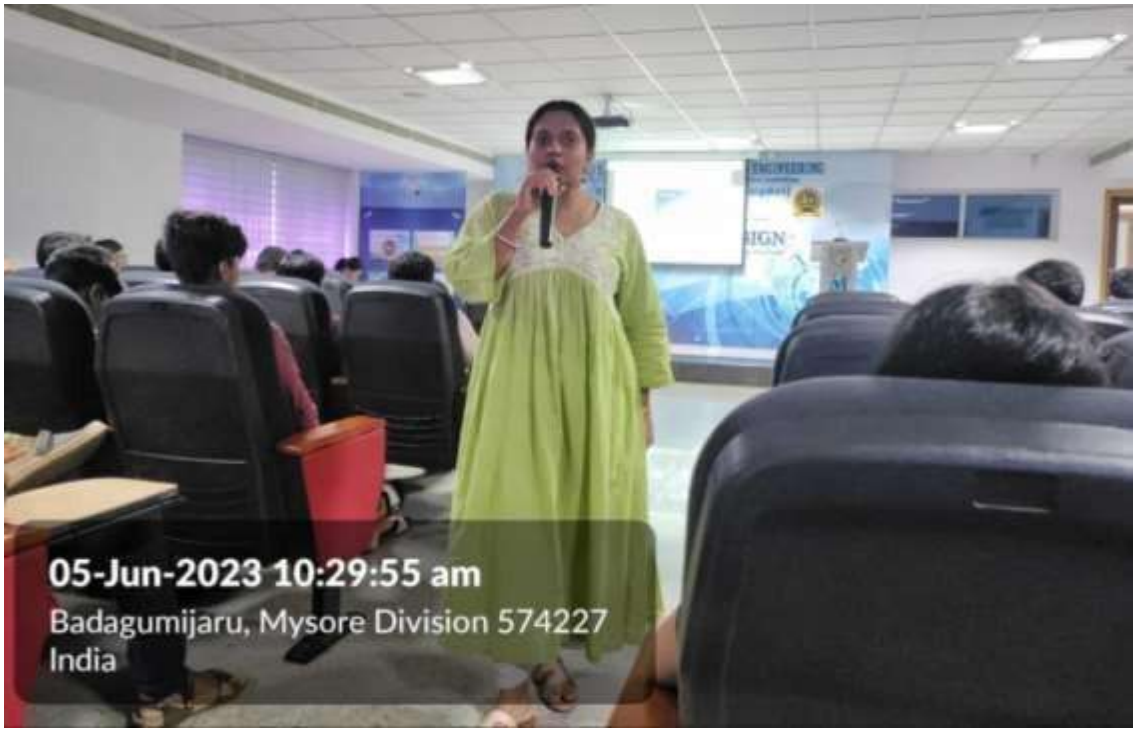
Profile of the Resource Person: Ms. Jasmin Caron Santhmayor is an alumnus of batch 2016-20. Currently she is working as Senior Software Engineer at Apisero, Bengaluru. She is passionate about dancing and compering, with strong communication and presentation skills. She is a Salesforce Certified Admin predominantly worked on Sales Cloud, Service Cloud, Financial Service Cloud and Experience Cloud. She has an experience in Designing and Developing Solutions in Salesforce. Experience with project management tools like JIRA, Azure Boards. Her top skills includes Solution engineering, Salesforce Service Cloud, Salesforce.com Administration, Salesforce Implementation, Salesforce.com Development.

Keynote Address: The speaker started her session by introducing herself and asking the students, "Where do you see yourself in four years?". By citing "Success is not about money. It's about the difference you make in people's lives," she began her presentation. She briefed the students on CRM. Customer Relationship Management (CRM) is a strategy that companies use to manage interactions with customers and potential customers. CRM helps organizations streamline processes, build customer relationships, increase sales, improve customer service, and increase profitability. She showed the 360-degree view of the customer through her salesforce account. Customer 360 refers to a 360 degree view of a customer's data including every interaction, from a website inquiry to a product purchase to a customer support ticket. And it means that every group in the company has access to the same version of the truth about the customer. She gave an overview of the salesforce. She discussed several salesforce clouds, including Sales Cloud, Service Cloud, Marketing Cloud, Commerce Cloud, and Community Cloud. She talked about the benefits of working with Salesforce. The students were also briefed on different roles within the Salesforce ecosystem. She outlined several technical and soft skills required for Salesforce professionals. Certification makes job candidates stand out in a crowded job market. Certification makes a better case for that big raise or promotion.

Additionally, Salesforce organizes webinars and events throughout the year that cover a range of topics, including new product releases, best practices, and industry trends and notified about the upcoming event “Bengaluru Mega Meetup”.

She informed that Salesforce offers a wide range of internship and job opportunities for individuals interested in working with their platform and services. She also provided the website links of summer intern programs. She guided the students about networking and building a professional profile. She concluded the presentation by displaying a few well-known persons who were engineering graduates but worked in various sectors. Overall, the speaker interacted with all the students in the best way possible. Students raised a few queries at the end of the session, which the speaker graciously answered. Totally 102 students attended the session and benefited from it.

Speaker Ms. Jasmin Caron Santhmayor, Senior Software Engineer, Apisero, delivering asession on “Journey to Salesforce”



Speaker Ms. Jasmin Caron Santhmayor, Senior Software Engineer, Apisero, delivering asession on "Journey to Salesforce"

Poster of the Talk on "Journey to Salesforce"

Activity -32

Title : **A Hands on Session on "GitHub : A step by step procedure to create a project repository"**

Resource Person :**Mr. Ranjith H D, Senior Assistant Professor Dept. ECE, MITE, Moodabidri**

Date : **12th & 13th June 2023**

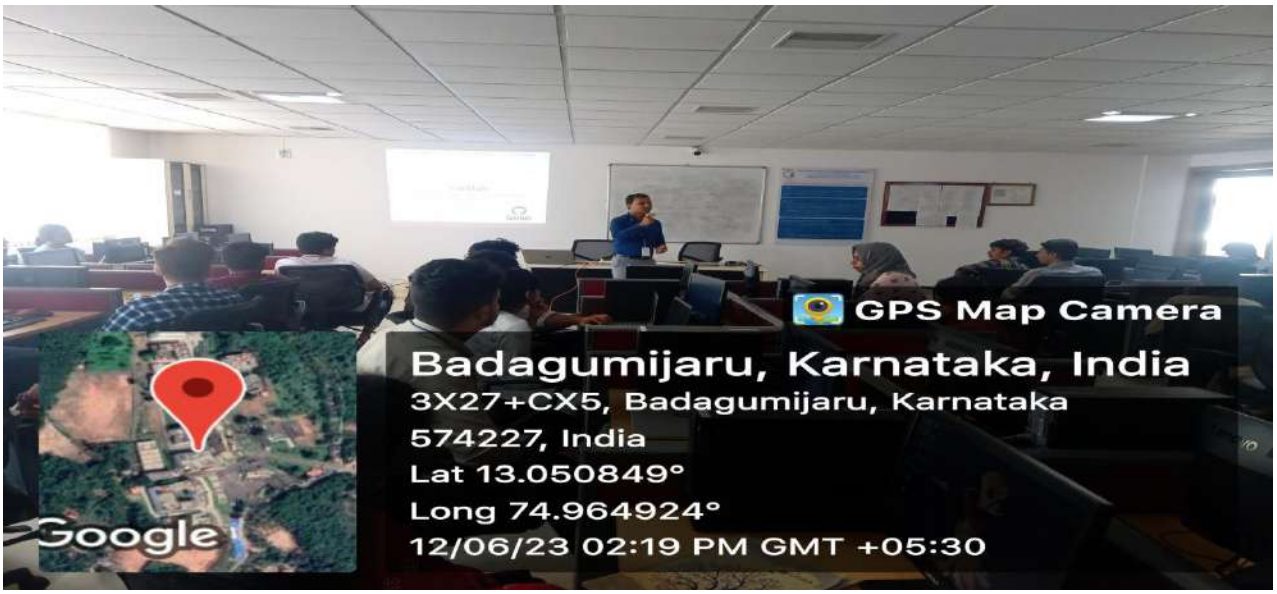
About the Resource Person:

Mr. Ranjith H D, working as a Senior Assistant professor in the department of ECE at MITE Moodabidri. His area of interest in the field of Wireless Communication, Image Processing and Computer Vision. He undergone the Industrial Training on Model based Design, Testing, Automotive System, UDS, Controller Area Network at L&T Technologies Services (LTTS) Mysore. Currently he is pursuing Ph.D in VTU, Belgavi

About the session:

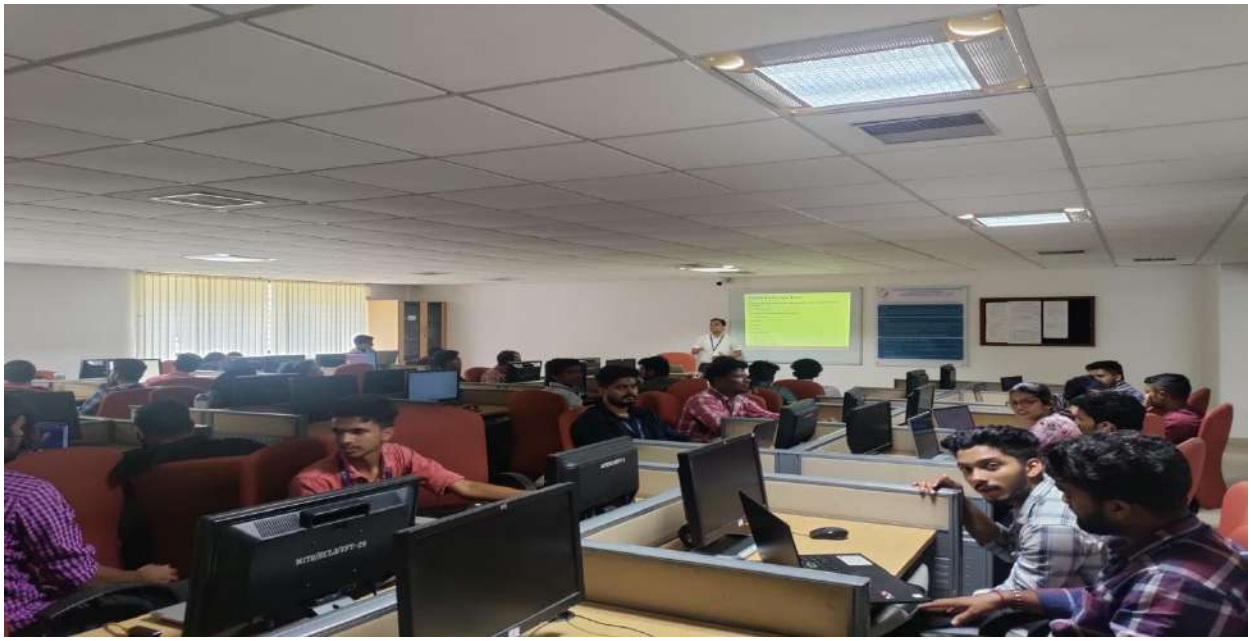
The two-day workshop on GitHub for project repository creation was held with the aim of familiarizing participants with the process of creating project repositories on GitHub and understanding the importance of version control and collaboration in software development. The workshop provided hands-on training and practical exercises to enhance participants' skills in using GitHub effectively. During the initial session of the workshop, participants were introduced to the fundamental aspects of GitHub and its significance in project management and collaboration. The topics covered on this day included an Introduction to Version Control, where concepts, benefits, and best practices of version control were explained. The participants also gained an understanding of Git and how it integrates with GitHub. Additionally, they learned the process of Setting Up GitHub Environment, which involved signing up for GitHub accounts and configuring user profiles. Creating a Project Repository was also covered in detail, providing a step-by-step procedure to create new repositories on GitHub while adhering to naming conventions and visibility settings (public or private). Furthermore, the participants were

familiarized with Collaboration and Branching concepts, enabling them to comprehend the significance of branches and how to create and manage them within a repository. The use of pull requests for collaborative workflows, facilitating code review and merging changes, was also part of the learning.



Snapshot of the first day session on GitHub: A step by step procedure to create a project repository

On the subsequent day of the workshop, the focus shifted to advanced GitHub features and the practical application of skills in creating a project report within a repository. The topics covered on this day included Managing issues and tracking project progress, where participants learned effective techniques to monitor and address project-related challenges. The creation of a Project Report became a hands-on exercise, where participants were introduced to Markdown syntax for creating formatted documents. They also received guidelines for structuring project reports in an organized and professional manner. Collaborative Workflows were further explored, allowing participants to understand how to work with multiple contributors in a repository effectively. They learned to resolve conflicts and merge changes gracefully to maintain the project's integrity. Additionally, participants were introduced to the importance of Code reviews and providing constructive feedback to improve the overall quality of the project.



Snapshot of the second day session on GitHub: A step by step procedure to create a project repository

By the end of the second day, participants gained comprehensive knowledge and practical experience in utilizing GitHub for effective project management, collaboration, and reporting. These valuable skills empowered them to work efficiently with version control, branches, pull

requests, and other advanced features offered by GitHub, making them better-equipped professionals in their respective fields.

The two-day workshop on GitHub for project repository creation provided participants with a comprehensive understanding of GitHub's functionalities and how to leverage them for effective project management and collaboration. Participants gained hands-on experience in creating repositories, managing branches and collaborating with others through pull requests. The workshop also emphasized the importance of proper documentation through the creation of a project report using Markdown syntax. Overall, the workshop equipped participants with the necessary skills to utilize GitHub effectively in their future software development projects. Total 84 students were participated in this event.

Poster of GitHub: A step by step procedure to create a project repository

Activity -33

Title : **MATLAB Tech Day**

Resource Person : **Ms. Niveditha Mohankumar, Mr. Rakshith B S, Mr. Anand Geethagovindan, CoreEL Technologies, Bengaluru**

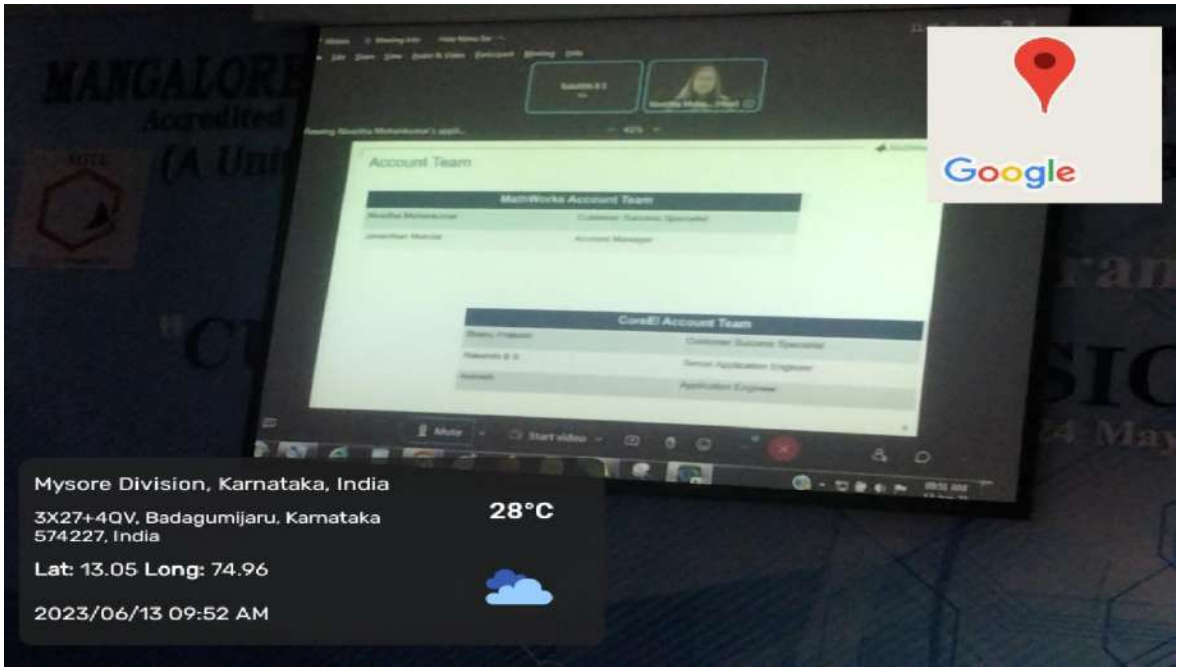
Date :**13th June 2023**

Timings : **09:30 AM to 04:30 PM**

About the workshop:

The workshop on MATLAB with signal processing provided participants with valuable insights into practical applications of MATLAB and overview of AI applications in communication and Signal processing.

Resource Person Ms Niveditha Mohankumar began the online session by tracing the history of MATLAB which originated in 1984. She discussed the emerging trends in industry such as Big Data, IoT, Computer Vision and Cloud platforms.



Address by Ms. Niveditha MohanKumar

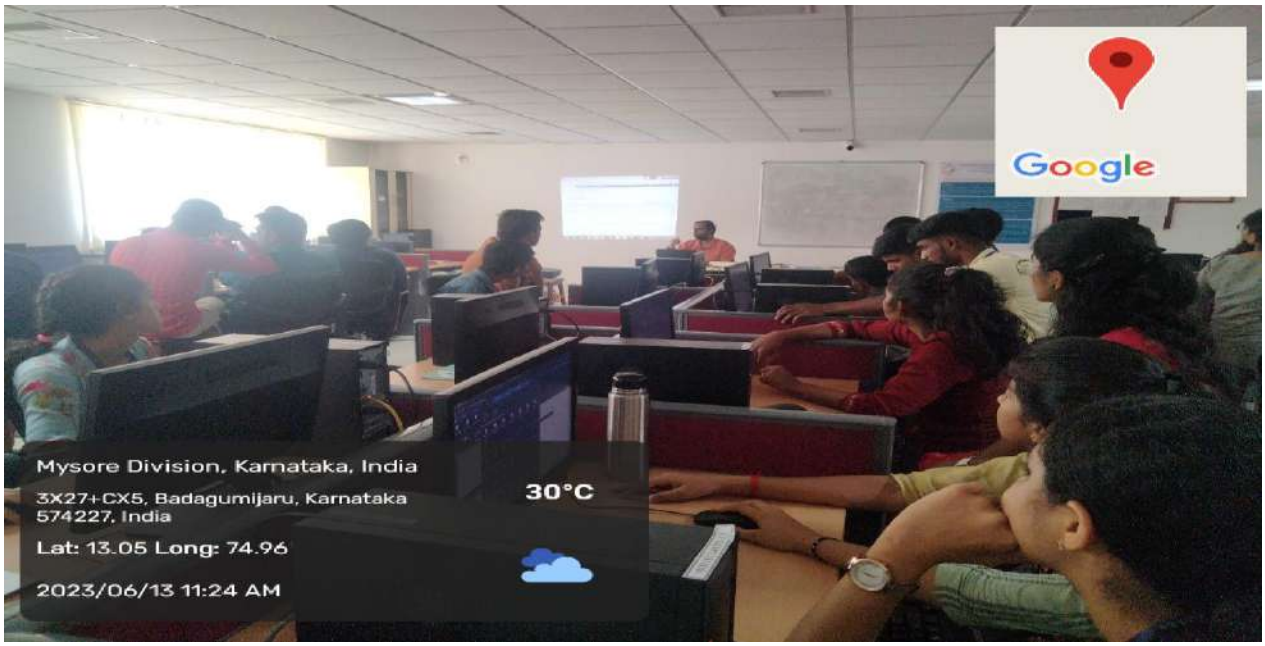
Participants during the session addressed by Ms. Niveditha Mohankumar

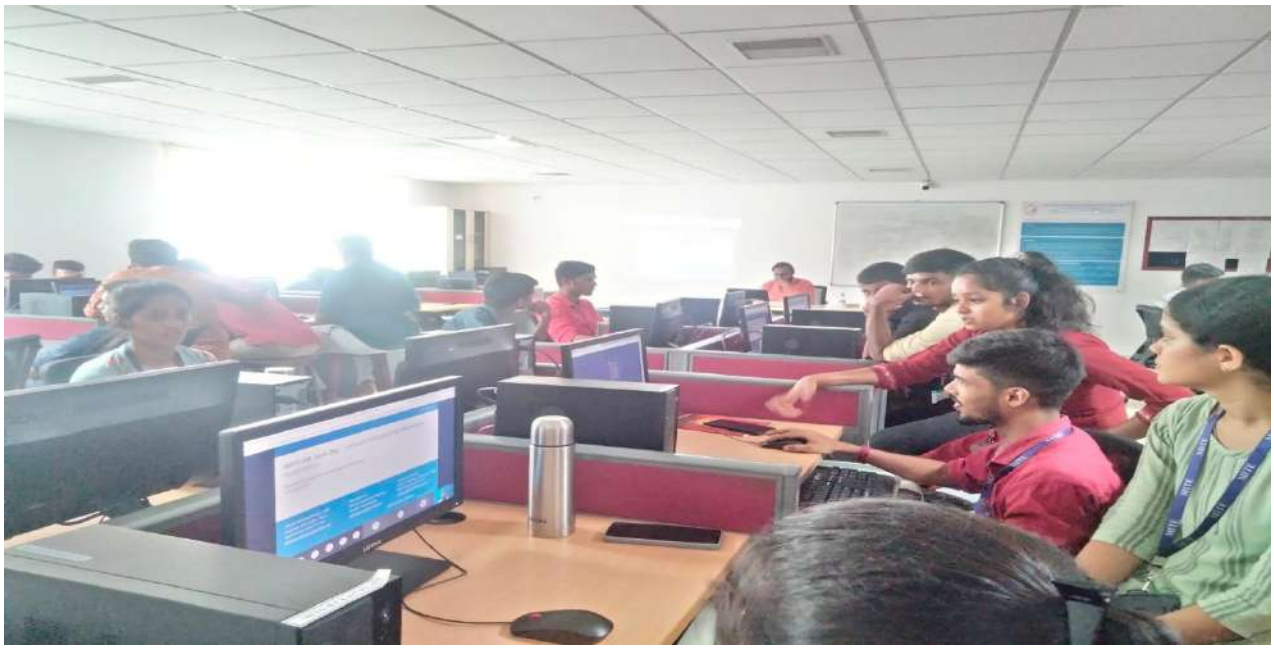
She emphasized the importance of adopting the right mindset for learning any software tool. She encouraged participants to explore MATLAB daily and become familiar with its features and capabilities. Additionally, she provided definitions of MATLAB as a programming environment for algorithm development, data analysis, visualization, and numeric computation and Simulink as a graphical environment for designing, simulating, and testing systems.

Further, she showcased the online courses available for MATLAB and highlighted the benefits of utilizing them to enhance participants' careers, especially in AI and IoT domains. She shared inspirational words to motivate the participants to make the most of the campus-wide license and leverage MATLAB's capabilities.

Mrs. Mohankumar demonstrated the MATLAB portal, showcasing various projects created using MATLAB, including examples like Harry Potter's invisible cloak. This interactive session gave participants a glimpse into the practical applications of MATLAB.

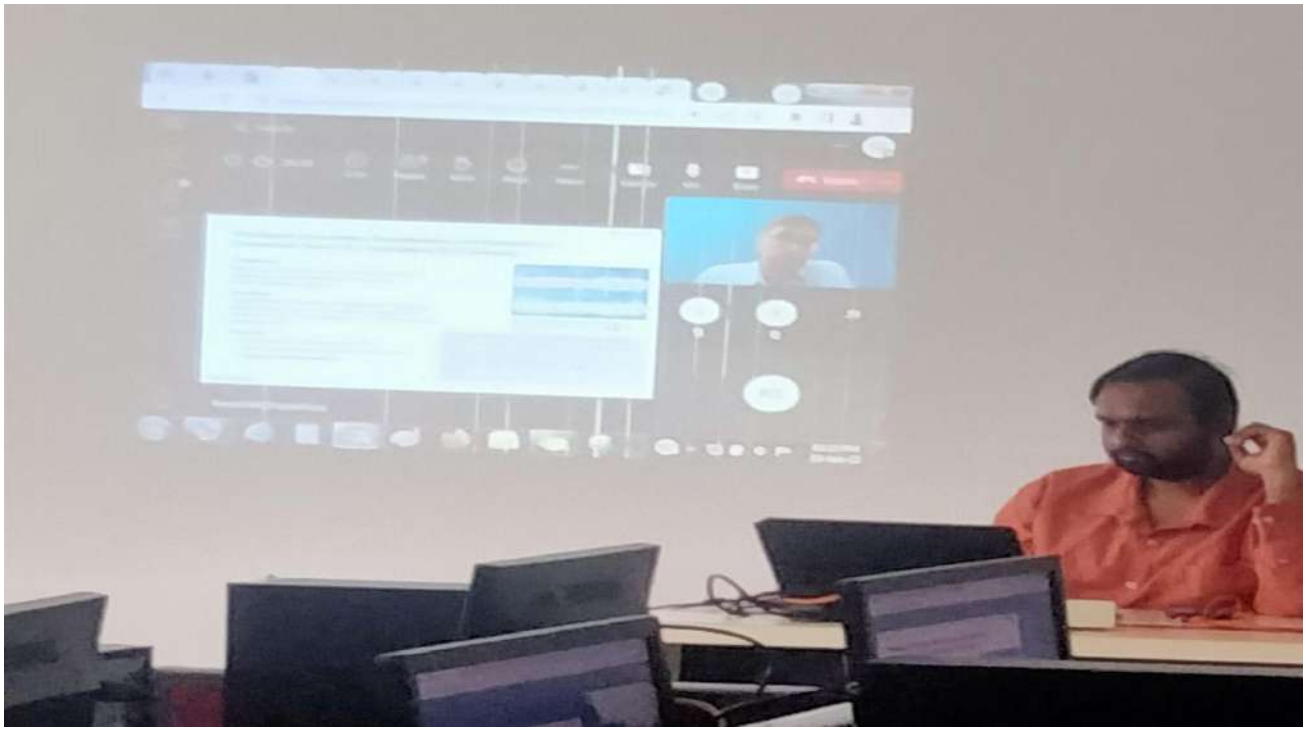
In the next session Mr. Rakshith B S demaonstrated the generation of sinusoidal, triangular and ramp signal for different time period and duty cycle.

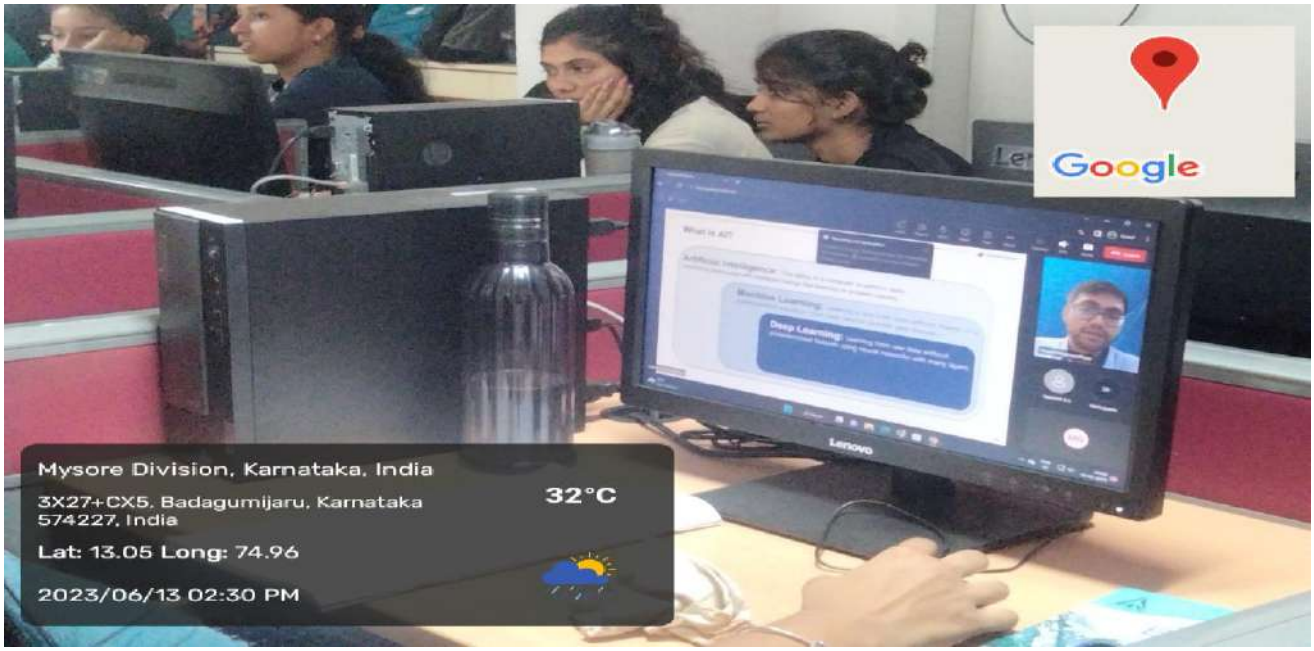




Students during the hands-on session

In the afternoon session Mr. Anand Geethagovindan joined the students in hybrid mode and demonstrated the generation and processing of ECG signal using MATLAB code.





Session addressed by Mr Anand

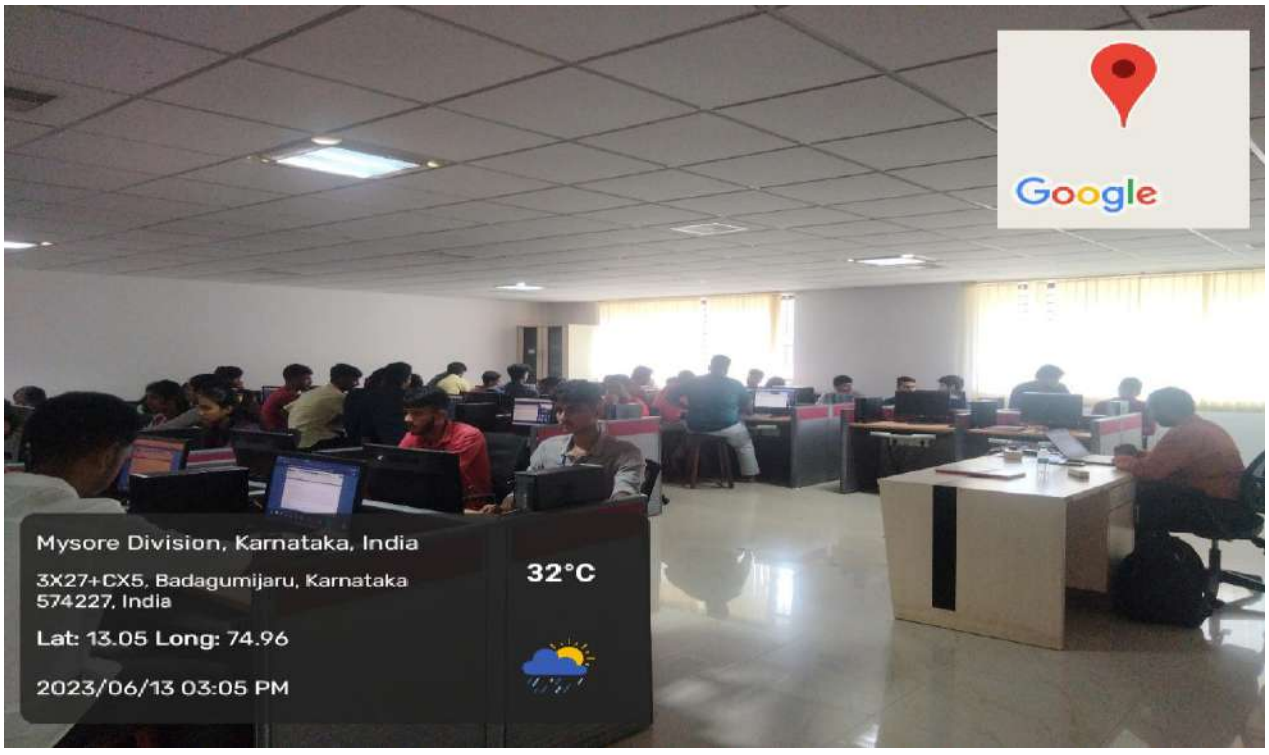
Later Mr. Rakshith continued the session on Arificial Intelligence (AI). He engaged the students in discussion with basic concepts by providing real time examples. He defined AI as the

capability of a machine to match and surpass intelligent human behaviour by training it to learn desired behaviors. He then explained the four stages of AI:

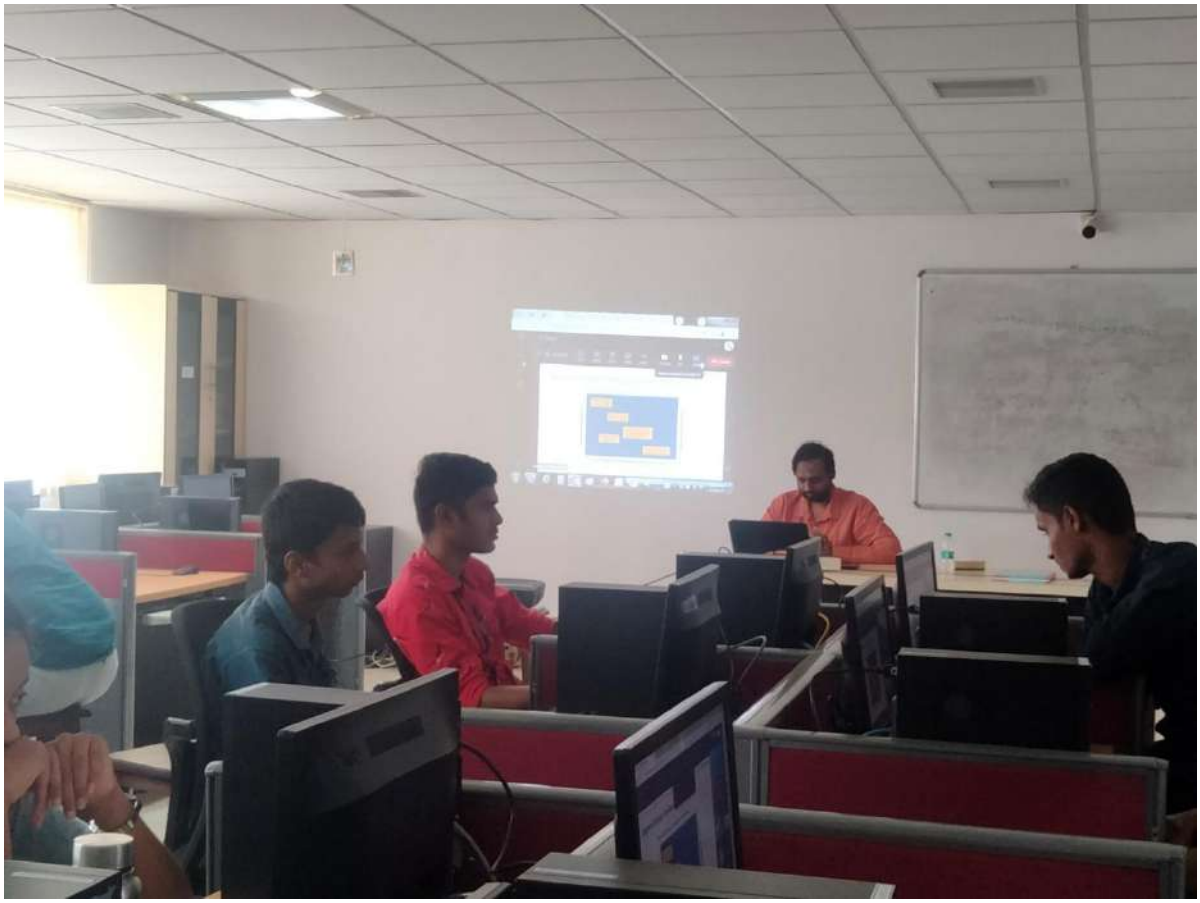
1. Access data: Gathering data from sensors, files, and databases.

2. Analyze data: Conducting data exploration, processing, and applying domain-specific algorithms.

3. Develop: Creating AI models, developing algorithms, and performing modeling and simulation. 4. Deploy: Implementing AI models in desktop applications, enterprise systems, or embedded devices.



Session on basic concepts of Artificial Intelligence and Machine Learning



Hands-on session on Machine Learning

The workshop on MATLAB and AI provided participants with a comprehensive overview of MATLAB's history, products, and practical applications. Participants were familiarised with MATLAB's capabilities, including its programming environment and Simulink graphical environment. Students were also introduced to the foundations of AI, including its stages and types of machine learning. Participants had the opportunity to engage impractical demonstrations and Q&A sessions, enhancing their understanding of both MATLAB and AI. Overall, the workshop offered valuable insights into MATLAB and AI, empowering participants to leverage these tools effectively for algorithm development, data analysis, visualization, and AI applications.

Activity -34

Title : **Invited Talk "Built to Last"**

Resource Person : **Dr. Malini Hebbar, Personality Development Trainer & Principal, Swastika National School, Mangalore.**

Date : **17/06/2023**

Timings : **12:00 PM**

Profile of the Speaker: Dr Malini N Hebbar, MA, M.Phil., Ph.D.A former Associate Professor of English, Dr Malini Hebbar, is currently the Principal of Swastika National School and Guest Faculty at St Agnes Centre for PG Studies and Research. She is a member of the Research Ethics Committee of Kasturba Medical College, Secretary of ISTD Mangalore Udupi Chapter, President of Roshini Nilaya Alumni Association and PDC of Inner Wheel. She has been a resource person in the Faculty Development Programme of educational institutions, Toastmasters' Educational Programmes, workshops in Public Speaking/ Personality Development/ Creativity/ Time Management/ Leadership/ English Grammar/ Spoken & Communicative English. She has received the awards of Teacher who has moved beyond academics ,Kala Ratna from Mangalore Musical & Cultural Association, Service to Mankind from Rotaract & UNESCO, Most Talented Teacher from Rotaract, Best Actor in Rotary Zonal Level Competition, Best MC in Lions Inter-club competitions. Rotary District 3181 has honoured her as Woman of Substance and JCI Zone XV has conferred on her Lifetime Achievement Award. Inner Wheel Clubs of Mangalore North and East, St Agnes College, Rotary Club of B C Road, KVG Group of Educational Institutions & Samatha have honoured her. Out of her publications, the significant one is a text book called Vista of which she is the co-author. She brought out four volumes of the research-based journal of St Agnes College as its Associate Editor.

Keynote Address:

The resource person interacted with the student participants. She briefed about the importance of self- confidence in the work environment and in an organization. She also mentioned about the importance of being receptive. Dr. Malini, addressed about the attitude of being in comfort zone and consequences of this as this one of the very important factors in personality development. She highlighted that one should be flexible enough to get adapted to the circumstances. "You cannot prepare the future for yourself in this era of Artificial Intelligence, you got have preparedness to be flexible. We need to upskill ourselves by binding to the universal human values existing" she mentioned. She also emphasized on Intelligent Quotient (IQ) and Emotional Quotient (EQ) which are very important in the life to be effective people, which also defines success. Total 320 students were present in the event.

Poster of Invited Talk "Built to Last"

Snapshot of Invited Talk "Built to Last" by Dr. Malini Hebbar, Personality Development Trainer & Principal, Swastika National School, Mangalore.

Activity -35

Events details : **"International Yoga Day "Flow To Glow- An Introduction Suryanamaskara Flow"**

Resource persons : **Ms. T S Nagashree (Alumni Batch: 2012-16) Certified Yoga Practitioner (YIC & MSc. In Yoga) & Software Engineer Lead, Cezentech, Bangalore**

Organizer : **Dept. of ECE, Dept. ISE in association with NSS-MITE**

Date : **21.06.2023**

Time : **10:00 AM**

BRIEF ABOUT THE EVENT:

Yoga is an ancient art for building healthy mind and healthy body. Role of yoga is in building flexibility, improving balance and building strength. It enhances the self-confidence and courage. So MITE NSS organised an international Yoga Day "Flow to Glow – An introduction to Suryanamaskara flow" on 21.06.2023 at MITE campus.

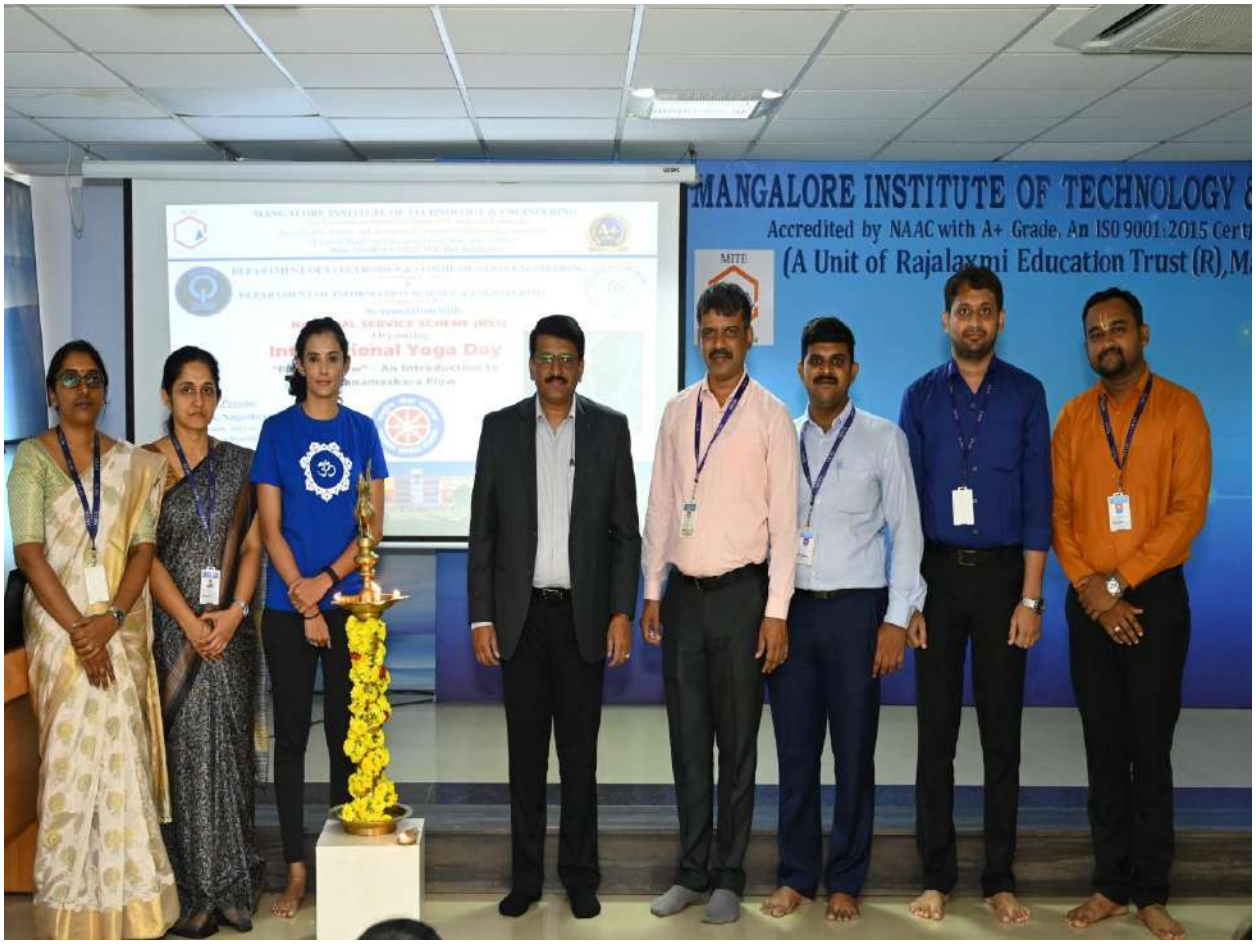
Yoga is as good as basic stretching for easing pain and improving mobility in people with lower back pain. Slow movements of yoga and deep breathing increase blood flow and warm up muscles, while holding a pose can build strength.

The program began with lighting the lamp By Dr. Prshanth C M, Principal, MITE He addressed the gathering about yoga and the benefits of practising Yoga to individuals in everyday life and highlighted the potential for customization to suit the individual. Ms. Nagashree T S, certified yoga practitioner and an alumnus from the 2016 batch introduced yoga and its benefits to oneself. In her address, she said by practising yoga regularly one can imbibe very good qualities like good physical and mental health which works as a permanent friend for life.

At the beginning Warm-up yoga poses like Balasana, Adho Mukha Svanasana, Bidalasana, Virasana and Utkata Konasana were taken up and all the students performed these asana. The importance of these asana were explained simultaneously. Later moved on to Suryanamaskara,

where each postures were explained with its benefits. Students performed Suryamaskara with instructions from Ms. Nagashree T S.

The celebrations ended with a huge success. Around 80 students participated in the program and got benefitted.



Guests inaugurating the yoga program

Students performing yogasanas

Students listening to instructions from the instructor

Activity -36

Title : **Mastering the Art of Business**

Resource Person : **Ms. Nidhi Shetty, Senior Associate Specialist, Factset Research Systems, Hyderabad (Alumna Batch 2020)**

Date : **13/07/2023**

Time : **10:00AM**

Profile of the Resource Person: Ms. Nidhi Shetty is an alumnus of batch 2016–20. She completed her MBA (PGDM) programme at Jagadish Sheth School of Management, Bengaluru, formerly known as IFIM Business School. She chose finance and Analytics as her areas of interest. She is currently employed by Factset Research Systems in Hyderabad as a Senior Associate Specialist.

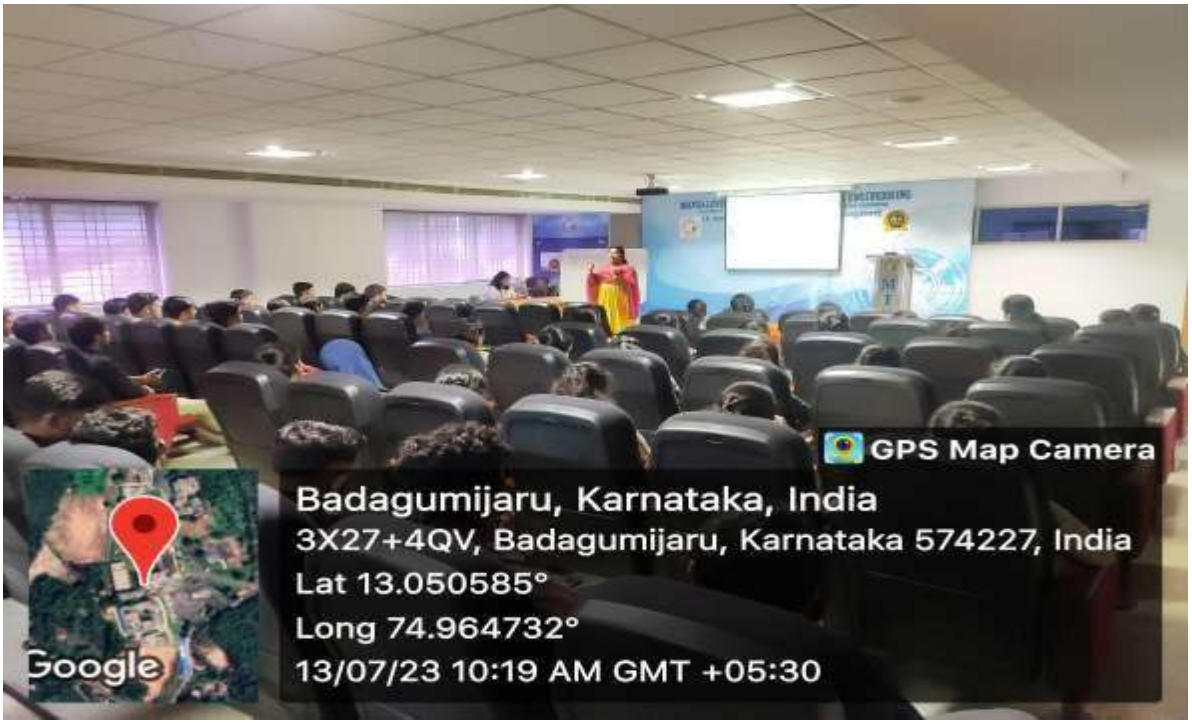
Keynote Address: The speaker began her session by posing three questions to the students: What are you good at? What do you love to do? How highly are you paid? She advised the students to ask themselves these three questions before choosing a career. You need to recognize yourself first. She motivated the students by sharing a few challenges she faced in her life and the steps she took to overcome them. She says, "There is a common notion that the career graph of individuals soars as soon as they possess an MBA degree. But sadly, this is not always the case. Not all candidates land their dream job and earn an impressive salary after getting their MBA degree. So, every individual must have well-defined goals, and only then can they have a successful career after an MBA".

She gave an overview of the MBA course. Candidates who want an MBA degree can consider pursuing any MBA course: MBA/PGDM, Executive MBA/PGDM, Distance MBA, Online MBA, Part-Time MBA, etc. She explained the difference between MBA and PGDM courses. She says, "MBA and PGDM are both business-oriented courses. The main aim of both courses is to equip a person who wants to move up in the hierarchy or enter the management field. For people who are interested in the corporate world or want to be entrepreneurs, PGDM would be

a more suitable choice. While both the courses have the same outcomes from an employment perspective, there are some subtle differences such as degree and fees". Apart from this, she also informed them that they can pursue a general MBAdegree or even complete an MBA course in a specific specialization. She mentioned a few of the MBA specializations: Sales and Marketing, Finance, Human Resources (HR), IT and systems, etc. She also mentioned some popular job profiles that aspirants can pursue after completing an MBA in Sales and Marketing: Brand Manager, Marketing Manager, Market Research Analyst, Sales Manager, and product manager.

Financial Manager/Analyst, Credit Analyst, Accounting Manager, Risk and Insurance Manager, Treasurer, and Finance Manager are a few job profiles in Finance field. She suggested a few of the best colleges to pursue an MBA or PGDM course. She motivated them to keep updated every single day, as life is difficult once you graduate. She advised the students to make use of the W3Schools website, where they can learn coding. Students raised a few queries at the end of the session, which the speaker graciously answered. 108 students attended the session and benefited from it.

Speaker Ms. Nidhi Shetty, Senior Associate Specialist, Factset Research Systems, deliveringa session on "Mastering the Art of Business"



Speaker Ms. Nidhi Shetty, Senior Associate Specialist, Factset Research Systems, deliveringa session on “Mastering the Art of Business”

Poster of the Talk on “Mastering the Art of Business”

Activity -37

Title : **Visit to Spoorthi Special School - Moodabidri**

Organizer : **The Department of Electronics & Communication Engineering in Association with NSS-MITE**

Date : **24-07-2023**

Timings : **10:00 AM**

About the Visit: The Department of Electronics & Communication Engineering in Association with NSS-MITE conducted an activity visit to Spoorthi special school, Moodabidri on 24th July 2023 at 10.00AM The participants included both 1st and 2nd-year ECE students, NSS students, as well as faculty members, namely Mr. Uday J and Ms. Deepthi Kotian.

During the visit, Mr. Prakash, the school's founder, provided a succinct introduction to Spoorthi Special School, shedding light on the available facilities and the unique teaching methods tailored for disabled students. He shared insights into the challenges they navigated amid the pandemic, while also acknowledging the previous visit by MITE to their premises and extending gratitude for MITE's contributions.

MITE students orchestrated a variety of engaging activities such as drawing, singing, dancing, and games, specifically designed to cater to the special students' interests and abilities. Notably, the exceptional talents of some students were readily apparent. Additionally, the MITE students distributed chocolates, fostering a sense of joy among the students of the special school.

A significant contribution of Fourteen thousand five hundred rupees was made to the special school by the Department of Electronics & Communication Engineering, reflecting their commitment to the well-being of the students and the school's mission.

Snapshot of Visit to Spoorthi Special School - Moodabidri

Snapshot of Visit to Spoorthi Special School - Moodabidri

Activity-38

Event details: **Substance Abuse Awareness Program at Swami Vivekananda PU College, Yedapadav**

Organizer: **Department of Electronics & Communication Engineering in association with NSS MITE under NCMC (21NS83)**

Date: 18.08.2023 **Time: 02:00 PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering is organizing NSS activity under Non-Credit Mandatory Course (21NS83) on "Substance Abuse Awareness Program" at Swami Vivekananda PU College, Yedapadav by the registered NSS students of 4EC1 and 4EC2.

The objective of this activity is to educate the students about the risks, consequences, and prevention of substance abuse.

A total of 34 registered NSS students of 4EC1 and 4EC2 of E&CE Department participated in the activity.

BRIEF ABOUT THE EVENT:

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs, which can have detrimental effects on physical, mental, and social well-being. The program aimed to provide accurate and up-to-date information about various substances, their effects on the body and mind, and the potential risks associated with their use and abuse. This education helps individuals make informed decisions about substance use. One of the main goals of this activity is to prevent substance abuse from occurring in the first place. By raising awareness about the negative consequences of substance abuse, the program aims to discourage experimentation and initiation of drug or alcohol use, especially among young people.

Substance Abuse Awareness Programs often emphasize the importance of adopting healthy coping mechanisms, stress management techniques, and other positive habits that can serve as alternatives to substance use. This activity also Provided information about available treatment and support services. This includes highlighting counseling, therapy, helplines, rehabilitation centers, and other resources that can assist individuals struggling with substance abuse.

Students presented the following topics with brief explanation, The use, abuse and consequences of Alcohol, Marijuana, Opiates/Heroin and Prescription Drugs, Why college Students Use Alcohol and Drugs, Impacts of Using Alcohol and Drugs, What Needs to be Known on

substance abuse, Handling emergency, Physical and mental effects of substance abuse, The Counseling Center.

In conclusion, the Substance Abuse Awareness Program stands as a beacon of hope and change in the battle against substance abuse. Through education, support, and community engagement, this program has raised awareness about the devastating impact of substance.

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Department of Electronics & Communication Engineering is organizing NSS activity under Non-Credit Mandatory Course (21NS83) on "Substance Abuse Awareness Program" at Swami Vivekananda PU College, Yedapadav by the registered NSS students of 4EC1 and 4EC2

Department of Electronics & Communication Engineering is organizing NSS activity under Non-Credit Mandatory Course (21NS83) on "Substance Abuse Awareness Program" at Swami Vivekananda PU College, Yedapadav by the registered NSS students of 4EC1 and 4EC2.

Activity-39

Title : **One day workshop on Ideation and Design Thinking**

Date : **02/09/2023**

Organizer : **Dept. of ECE, Dept. of CSE(IOT& AIML)**

About the Workshop:

A One-day Workshop on **Ideation and Design Thinking** for High school students under ATL scheme was organised by **Department of Information Science & Engineering, Electronics & Communication Engineering, CSE (IoT & Cyber Security with Blockchain Technology), Mechanical Engineering & New Age Innovation Network-MITE in association with District Institute of Education & Training (DIET) Mangalore.** The workshop aimed to empower students with essential skills in ideation and design thinking, fostering creativity, empathy, and innovative problem-solving ideas. Ideation and Design Thinking are two related concepts commonly used in the fields of innovation, product development, and problem-solving. They are methods and approaches that encourage creativity, empathy, and user-centric thinking to develop innovative solutions. The Key aspects of Ideation and Design thinkinginclude:

Divergent Thinking: Encouraging participants to think broadly and generate as many ideas as possible without judgment or criticism.

Convergent Thinking: After generating ideas, narrowing down the options to select the most promising ones based on criteria such as feasibility, impact, and alignment with goals.

Empathize: Understanding the needs and perspectives of the users or stakeholders. This often involves conducting interviews, surveys, and observations to gain deep insights into their experiences and pain points.

Define: Defining the problem statement based on the insights gathered during the empathize stage. This step ensures that the real problem is being addressed.

Ideate: Similar to the ideation process, this stage involves brainstorming and generating a wide range of creative solutions to the defined problem.

Prototype: Developing low-fidelity prototypes or mock-ups of potential solutions. These prototypes are used to test and refine ideas quickly.

Test: Gathering feedback from users or stakeholders by testing the prototypes. The feedback informs furtheriterations and improvements to the solution.

Implement: Once a refined solution is developed and tested successfully, it can be implemented and launched.

In Summary, Ideation is a specific phase within the broader framework of Design Thinking. Ideation focuses on the generation and selection of ideas, while Design Thinking encompasses a structured process for solving complex problems, emphasizing empathy, iteration, and user-centricity. Both concepts are invaluable tools for fostering innovation and addressing challenges across diverse domains

Workshop Outcome:

Students gained confidence in presenting their ideas and prototypes to an audience, improving their communication skills. Students saw the relevance of design thinking and ideation in solving everyday challenges and were inspired to apply these skills in various aspects of their lives.

. INAUGURAL FUNCTION

The inaugural session of Workshop on **Ideation and Design Thinking** for High school students under ATLscheme was held on 2nd September 2023 at 09:30 am in Auditorium - 2. Dr. Rajashree, BEO Moodbidri was the chief guest for the Workshop, Dr. Prashanth C M. Principal MITE and Mrs. Vedavathi were the guest of honour and inaugurated the FDP. The inaugural session was presided over by the Mrs. Rajalaxmi,Principal DIET Mangalore. Prof. Manjunath H Head, Department of Information Science & Engineering and Program coordinator of the Workshop was present on the dais.

Mr. Rajesh N. Kamath, Senior Assistant Professor, Dept. of Information Science & Engineering in his welcome address, welcome the gathering and gave an insight of the workshop. Dr. Prashanth C M in his inaugural address enlightened the participants on how to think innovatively and shared his views on Ideationand Design Thinking. Chief Guest Dr. Rajashree, BEO Moodbidri in her address motivated the participants to gain the best knowledge from the workshop. Mrs. Rajalaxmi, Principal DIET Mangalore in her Presidential Address gave an insight on the importance of Innovative Thinking. Around 100 Students accompanied by faculty mentors from 30 Schools of Dakshina Kannada participated in the Workshop. Prof.Manjunath H Head, Department of Information Science & Engineering, rendered vote of thanks. Mr. Vinaychandra, ATL In-charge JHS Moodbidri was host for the program.

Inauguration of the workshop by the guests

Inaugural Session - Guest Speech by Dr. Rajashree

SESSION-1

Topic: Introduction to Design Thinking:

Resource Person: Dr. Ramalingam H M, Sr. Assistant Professor & Head IPR Cell MITE

The Speaker introduced the students to the concept of how Design Thinking is a human-centered and problem-solving approach that has gained prominence in various industries for its effectiveness in tacklingcomplex challenges, fostering innovation, and creating user-centric solutions. He also explained how it encourages a mindset shift that values iteration and experimentation as critical components of problem- solving. Dr. Ramalingam presented an overview of design thinking, emphasizing empathy, user-centered design, and the importance of understanding the problem before proposing solutions. He also briefed them about the real-world problems and students learned how to define the problem statement effectively. The students also understood about the importance of prototyping and turning their ideas into tangible representations.

Dr. Ramalingam H M delivering session on Design Thinking

SESSION-2

Topic: Technology Enabled Solutions for Design Thinking

Resource Person: Mr. Sunil Kumar, Sr. Assistant Professor & Head Dept. of AIML

This session aimed to equip students with the knowledge and skills needed to harness technology to innovate and solve real-world problems. Mr. Sunil began by providing a brief overview of design thinking, emphasizing its human-centered approach and iterative nature. The talk delved into the ways technology has become a valuable enabler for design thinking. The speaker highlighted that technology tools and platforms which can enhance various stages of the design thinking process, from research and ideation to prototyping and testing.

Mr. Sunil gave an insight on the importance of sensors and actuators, their applications, introduced a rangeof technology tools and platforms that can be used in design thinking projects. These included digital collaboration tools, virtual reality for empathy-building, design software, and user testing platforms. He also addressed the increasing demand of these components in various industries, including electronics, automation, robotics, and IoT. Practical examples and case studies illustrated how these technologies have been successfully employed. The session explained how technology can assist in remote user testing, with the use of screen sharing, usability testing software, and analytics tools. This session provided attendees with valuable insights into the ways technology can enhance and streamline the design thinking process.

Mr. Sunil Kumar delivering session on Technology Enabled Solutions for Design Thinking

SESSION-3

Topic: Hands-on Session on Arduino

Resource Person: Mr. Sandeep S Naik, Assistant Professor, Dept. of CSE(IoT)

The hands-on session on Arduino by Mr. Sandeep S. Naik, provided participants with a practical and interactive experience in working with Arduino microcontrollers. Arduino is a versatile and user-friendly platform for creating electronic projects, making it accessible to beginners and experienced hobbyists alike.The session aimed to introduce participants to the fundamentals of Arduino and guide them through hands-on exercises.

The session began with an overview of Arduino, its history, and its various models and components. The speaker introduced the Arduino IDE, the software used for writing, compiling, and uploading code to Arduino boards. Participants engaged in a series of hands-on exercises, starting with simple LED blinking projects. They learned how to connect LEDs, resistors, and other components to the Arduino board and write code to control the LED's behavior. Mr. Sandeep discussed common challenges that participants might

encounter and provided guidance on troubleshooting and debugging their Arduino projects. Tips andbest practices were shared to overcome common issues.

Participants engaged in Hands-on Session on Arduino

SESSION-4

Topic: Out-of-the-Box Thinking and Poster Presentation

In this Session aimed to equip participants with the skills and mindset required to think creatively and present their ideas effectively through posters. Out-of-the-box thinking is essential for innovation and problem-solving. Students were divided into teams and given real-world problems to solve. The themes for ideating solutions were “Impact of Globalization”, “Waste Management”, “Challenges for improving Health care in rural areas”. Participants were introduced to the importance of breaking away from conventional thought patterns and fostering creativity.

The facilitator conducted engaging creativity exercises and brainstorming sessions where participants were encouraged to think laterally and generate unconventional ideas.

Participants learned how to approach complex challenges by reframing problems, considering multiple viewpoints, and seeking inspiration fromdiverse sources. Participants engaged in hands-on activities to create their own posters. They used the opportunity to apply the design principles discussed earlier. This session equipped participants with the skills and mindset needed to think creatively and communicate their ideas effectively through posters.

Brainstorming Session by facilitators

All the teams presented their ideas before the jury members confidently. The posters were designed following best practices for poster presentations. It featured a clear and concise title, an organized layout, and a visual hierarchy that guided viewers through the content, This session provided valuable opportunities for networking with fellow participants and peers,. These interactions led to fruitful discussions and potential collaborations. while each team was appreciated and received constructive feedback for their efforts, the best ones were rewarded.

Student Teams Presenting their ideas before the jury.

Recognition for the best innovative ideas.

VALEDICTORY PROGRAM

The valedictory program of the One day workshop on **Ideation and Design Thinking** was held at 4.30pm in Auditorium - 2. Participants from various schools shared their experiences about the workshop. Dr Prashanth C M, Principal MITE appreciated the active participation and overall success of the workshop. The program concluded by distribution of Participation Certificates to all the attendees of the workshop.

Distribution of Participation Certificates

Group Photo

Activity-40

EVENT DETAILS: **IEEE ProEdge: Empowering Student Professional Awareness**

RESOURCE PERSONS: **Dr. Mohit P. Tahiliani,**
Chair IEEE Mangalore Sub-Section &
Asst Professor Department of Computer Science and Engineering
NITK, Surathkal, India

DATE: 07.06.2023 **TIME: 10:00AM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering organized "IEEE ProEdge: Empowering Student Professional Awareness" program.

The main objective of this awareness program was to provide awareness about IEEE membership, access to technical, innovation, cutting-edge information, networking opportunities, and exclusive member benefits.

A total of 211 students from first and second year of Electronics & Communication Engineering Department participated in the awareness program.

SPEAKERS PROFILE:

Dr. Mohit P. Tahiliani is an Assistant Professor of Computer Science and Engineering at NITK, Surathkal and a Member of the Board of India Internet Engineering Society. He obtained Ph.D. in the area of Congestion Control Mechanisms for the Next Generation Internet from the NITK Surathkal, India in 2013. His areas of interest include Network Congestion Control, Queue Disciplines, Network Function Virtualization, Deterministic Networking, IPv6 deployments, Named Data Networks, and Distributed Ledger Technology.

He has executed projects in these areas that have been funded by Intel, ABB, Robert Bosch, Tata Communications, Epsilon, Robosoft Technologies, Samsotech International Dubai and Futurewei Technologies,USA.

Currently, Mohit is managing funded projects worth 2.5 crores. Mohit received the EMC Young Achiever of 2015 Award from EMC Corporation, Bangalore, and the Outstanding Young Professional Volunteer Award of 2021 by IEEE Bangalore Section.

Mohit has contributed to open-source projects for more than a decade. A packet scheduler developed by his team at NITK Surathkal to fight the Bufferbloat problem got merged into the mainline of the Linux kernel (v5.6).

He has 50+ technical publications in peer-reviewed international conferences and journals. He is a Reviewer for IEEE Internet of Things, IEEE Transactions on Cloud Computing, IEEE Transactions on Networking, Elsevier Journal of Network and Computer Applications, Computer Communications, Inderscience journals, IEEE Communication Letters, and held several other roles in IEEE and Springer conferences.

He served as a Guest editor for Annals of Telecommunications, Springer journal. He is a Senior Member of IEEE and was a Student Activity Chair of IEEE Mangalore Sub-Section during 2015 to 2017, Secretary during 2021, and a Member of the Executive Committee of IEEE Mangalore Sub-Section for 7 years. He is currently the Chair of IEEE Mangalore Sub-Section. He is also a member of ACM.

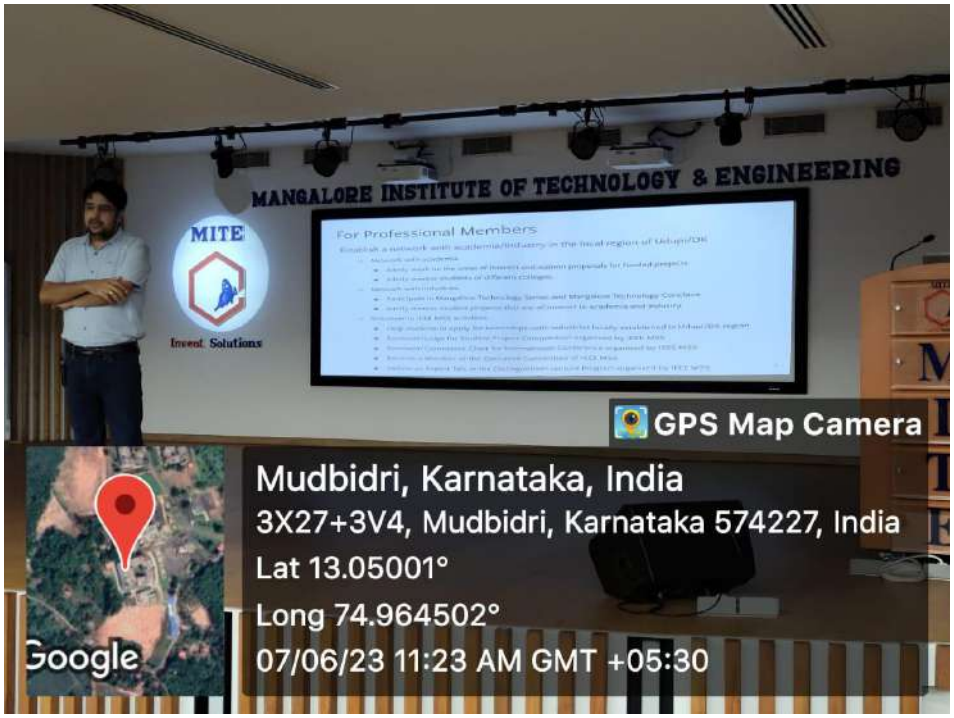
BRIEF ABOUT THE EVENT:

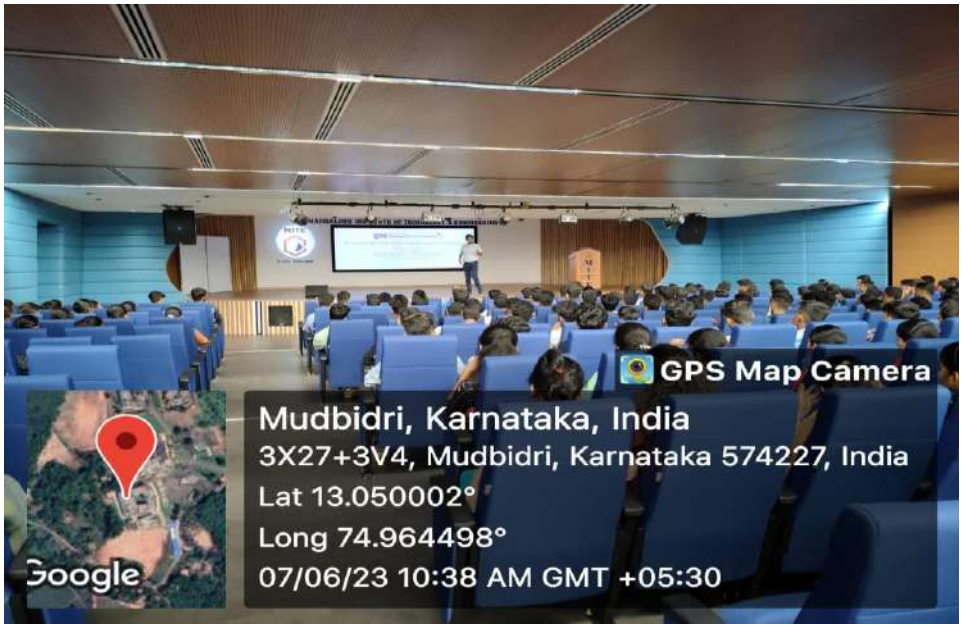
IEEE is the trusted “voice” for engineering, computing, and technology information around the globe. Members support IEEE's mission to advance technology for humanity and the profession, while memberships build a platform to introduce careers in technology to students around the world.

The awareness program stressed better understanding the IEEE's role in advancing technology, its various technical societies, publications, standards, and resources available to members. The program provided a platform for participants to connect with like-minded individuals, industry experts, and professionals in their field of interest. It created awareness about the benefits and value of IEEE membership, the program led to an increase in new members joining the organization. Which further strengthens the IEEE community and its ability to drive technological advancements. Also, the speaker spoke about IEEE activities such as conferences, workshops, technical presentations, and volunteer opportunities, which enhances professional development and contributes to the advancement of their respective fields.

Through the awareness program, participants gained access to valuable technical knowledge, research findings, and cutting-edge advancements in their areas of interest. This helps disseminate information and promotes the sharing of ideas. It helps establish IEEE as a go-to resource for individuals seeking reliable information and professional connections.

Participants in the awareness program gained a better understanding of the IEEE's role in advancing technology, its various technical societies, publications, standards, and resources available to members. The program provided a platform for participants to connect with like-minded individuals, industry experts, and professionals in their field of interest. It helped them build a community and fosters collaboration. By creating awareness about the benefits and value of IEEE membership, the program led to an increase in new members joining the organization. This further strengthen the IEEE community and its ability to drive technological advancements. which enhances their professional development and contributes to the advancement of their respective fields.





Dr. Mohit P. Tahiliani, Chair IEEE Mangalore Sub-Section & Asst Professor Department of Computer Science and Engineering NITK, Surathkal, India delivered a talk on "IEEE ProEdge: Empowering Student Professional Awareness".

Activity 39

Activity-41

EVENT DETAILS: **A Peer learning talk on Machine Learning using TensorFlow**

SPEAKER NAME: **Mr.Ruchira, Student 6th Semester, Dept. of ECE, MITE, Moodabidri**.

DATE: 24.06.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student branch organised a peer-to peer learning session.

The objective of a peer-to-peer learning session on Machine Learning using TensorFlow is to share fundamental knowledge and concepts related to Machine Learning and TensorFlow among peers, ensuring that participants have a solid foundation in the subject matter and to promote active engagement and interaction among participants, encouraging them to ask questions, discuss concepts, and learn collaboratively from one another.

A total of 211 students from 2nd and 4th semesters of E&CE Department participated in the session.

SPEAKERS PROFILE:

Ruchira R is a dedicated student currently in the 6th semester, pursuing a degree in Electronics and Communication Engineering at MITE (Mangalore Institute of Technology and Engineering). Ruchira's academic journey has been marked by remarkable achievements and a passion for technology:

Python Game Development Excellence: Ruchira secured an impressive 24th place in a highly competitive Python game development competition organized by IIT Hyderabad. This achievement highlights their skills and creativity in the realm of programming and game development.

Hackathon Triumph: Ruchira clinched the second place in a hackathon focused on transformative education, hosted by SMVIT (Shri Madhwa Vadiraja Institute of Technology). This accomplishment underscores their ability to address real-world challenges through innovative solutions.

Multi-Faceted Competitions: Ruchira has consistently excelled in coding and circuit building competitions at various prestigious colleges. Their prowess extends across different domains of engineering and programming.

Academic Excellence: Ruchira's commitment to academic excellence is evident from their recognition as a course topper on the NPTEL (National Programme on Technology Enhanced Learning) website for the "Joy of Computing using Python" course. This acknowledgment highlights their dedication to mastering key concepts in computer science.

Ruchira R is a well-rounded individual with a passion for technology, a track record of success in competitions, and a commitment to academic excellence. Their achievements reflect their dedication to personal and professional growth in the field of electronics and communication engineering.

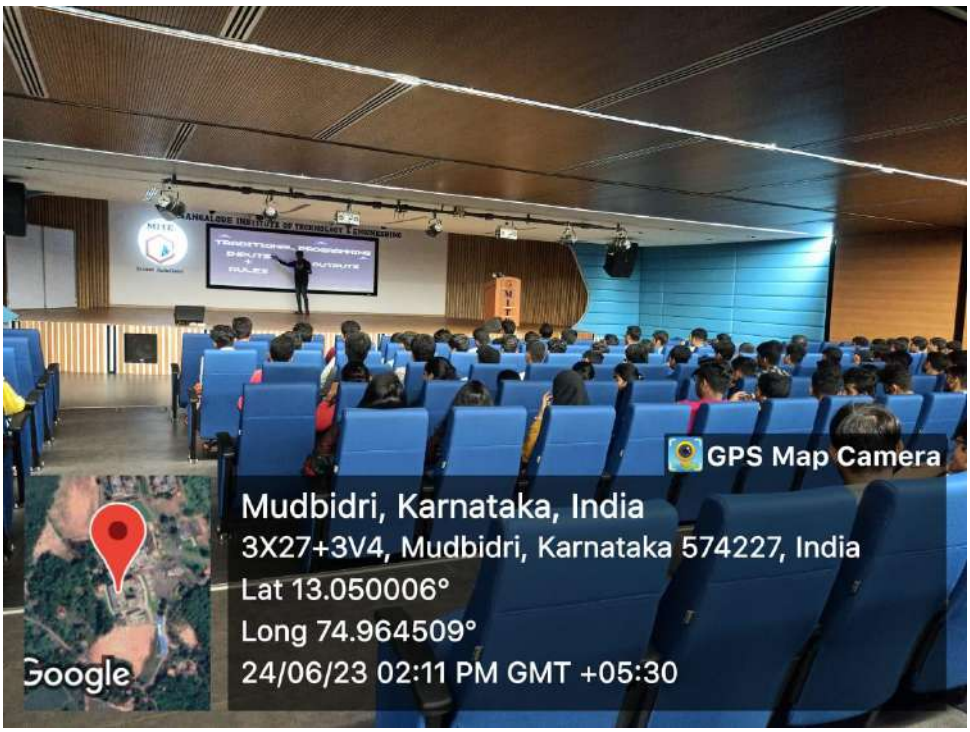
BRIEF ABOUT THE EVENT:

It was an interactive peer-to-peer learning session designed to inspire student engagement. The session commenced with a foundational explanation of Machine Learning (ML), positioning it as a pivotal branch within the realms of Artificial Intelligence (AI) and computer science. The speaker elucidated the essence of ML, emphasizing its core principle: the utilization of data and algorithms to emulate the learning processes observed in humans, with a continuous improvement in accuracy over time.

The discourse then delved into a comparative analysis between ML and traditional programming, highlighting the distinguishing characteristics of ML. Additionally, the speaker provided an overview of various ML types, imparting a comprehensive understanding of the field's diverse applications.

Subsequently, the spotlight shifted to TensorFlow, a cutting-edge, open-source platform tailor-made for machine learning endeavours. TensorFlow's versatility was underscored, emphasizing its capacity to manage every facet of a machine learning system. However, the session's primary focus was on harnessing a specific TensorFlow API for the development and training of machine learning models.

In essence, the peer-to-peer learning session was an insightful exploration of Machine Learning's foundational concepts, its contrast with traditional programming paradigms, and a hands-on introduction to TensorFlow, empowering students to embark on their machine learning journey with confidence.



Peer-to-Peer learning on "Machine Learning using TensorFlow" delivered by Ruchira 6th Sem E&CE.

Activity-42

EVENT DETAILS: **A Peer Learning on Get Started: Image Analysis using MATLAB**

SPEAKER NAME: **Prabal Raj & M Ullas Pai, Students 4th Semester, Dept. of ECE, MITE, Moodabidri**.

DATE: 01.07.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student chapter organized peer-to-peer learning on "Get Started: Image Analysis using MATLAB".

The main objective of this peer-to-peer learning session is to acquaint participants with the fundamental concepts of image analysis through the utilization of MATLAB, a versatile programming language and environment renowned for its widespread application in scientific and engineering domains, notably in the realm of image processing.

A total of 60 students from 2nd and 4th semesters of E&CE Department participated in the session.

SPEAKERS PROFILE:

Prabal Raj & M Ullas Pai is a well-rounded individual with a passion for technology, a track record of success in competitions, and a commitment to academic excellence. Their achievements reflect their dedication to personal and professional growth in the field of electronics and communication engineering.

BRIEF ABOUT THE EVENT:

Getting started with image analysis using MATLAB is a great way to explore the field of image processing and computer vision. MATLAB offers a comprehensive set of tools and functions for image analysis. MATLAB provides a wide range of functions and toolboxes specifically designed for image processing tasks.

The session commenced by providing participants with an introductory overview of both MATLAB and the field of Image Processing. During this segment, participants gained insights into the capabilities of MATLAB for image handling and processing. They developed an understanding of digital images, including the concepts of image representation and the significance of image analysis across diverse fields.

Moreover, the session featured a detailed exploration of fundamental image manipulation techniques using MATLAB. Participants were guided on how to effectively load, display, and save images within the MATLAB environment. They actively engaged in hands-on exercises, which included practical tasks like resizing, cropping, rotating, and flipping images to reinforce their comprehension.

In addition to these basic image manipulation skills, the session delved into essential image enhancement methods. Participants not only learned the theoretical underpinnings but also gained practical experience by actively adjusting parameters such as brightness, contrast, and applying gamma correction to images. These exercises equipped them with the skills needed to enhance image quality and make meaningful improvements to images using MATLAB.

Peer-to-Peer learning on "Get Started: Image Analysis using MATLAB" delivered Prabal Raj & M Ullas Pai 4th Sem E&CE.

Activity-43

EVENT DETAILS: **A Peer Learning on Technical Debate**

DATE: **01.07.2023** **TIME:** **02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student branch organised a peer-to peer learning on Technical Debate.

The objective of organizing a peer-to-peer learning on Technical Debate is to foster meaningful discussions, critical thinking, and collaborative learning among participants on a specific technical topic. This format encourages participants to engage in a structured debate where they present arguments, counterarguments, and evidence to support their viewpoints.

A total of 57 students from 2nd and 4th semesters of E&CE Department participated in the session.

BRIEF ABOUT THE EVENT:

The ongoing discourse regarding technology highlights the intricate interplay between advancements and apprehensions in our rapidly digitizing society. Key areas of debate encompass privacy, data security, automation, ethics within AI, cybersecurity, and equitable technology access. It is imperative to strike an equilibrium between embracing progress and addressing potential challenges.

To navigate this evolving landscape, it is essential for policymakers, industry influencers, and society at large to engage in purposeful dialogues. These conversations serve as a platform for shaping the trajectory of technology in a manner that maximizes benefits for all stakeholders while safeguarding fundamental values and principles.

The great technical debate is an intrinsic part of our technological evolution. It is a testament to the dynamism and complexity of our ever-changing digital landscape. While the debate often highlights challenges and concerns, it also underscores the potential for innovation and progress. Society's active engagement in these discussions, coupled with ethical considerations and responsible governance, will be instrumental in harnessing the transformative power of technology for the benefit of all.

Technical debates are a valuable tool for advancing technology, addressing challenges, and ensuring that innovation aligns with societal needs and values. They foster collaboration, critical thinking, and responsible decision-making in the ever-evolving world of technology.

Topics discussed were –

1. Innovation vs Invention - what is more important?
2. Can AI replace human beings?
3. Are computers a boon or curse?
4. Is the internet making us smarter or dumber?

Peer-to-Peer learning on "Technical Debate"

Activity-44

EVENT DETAILS: **A Peer Learning talk on The Art of Communication**

SPEAKER NAME: **Dhrithi Rao, 6th Semester, Dept. of ECE MITE, Moodabidri**

DATE: 08.07.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student chapter organized peer-to-peer learning on “The Art of Communication”.

The goal of integrating "The Art of Communication" into a peer-to-peer learning context is to establish a conducive space where participants can collectively refine their communication abilities through shared experiences, practical exercises, constructive feedback, and mutual encouragement. Peer-to-peer learning is centered on the idea of knowledge and skill exchange among like-minded individuals pursuing common objectives, fostering a vibrant and engaging learning journey.

A total of 113 students from 1st and 2nd year of E&CE Department participated in the session.

SPEAKERS PROFILE:

Ms.Dhrithi Rao has won several college and intercollege awards in debate and quiz which includes, Awards in debate competition and quiz at Akriti college fest held at Canara Enginnering college.She is the winner of Better Mangaluru Ideathon conducted by Y20 and won several debate, pick and speak awards in MITE as well during college fest
She has participated at National level youth conclave debate competition conducted at IIFM. Bhopal, Aerophilia paper presentation held at Sahyadri engineering college Mangalore, SMVITM IDEATHON 2022
She also won MITE FIRST IDEATHON and her idea is selected for funding.
Recently she received Silver honour in International Astronomy and Astrophysics competition 2023.She has also done MC for several college events.

BRIEF ABOUT THE EVENT:

Peer-to-peer learning in "The Art of Communication" is a collaborative and interactive educational approach where participants actively engage with one another to enhance their communication skills. In this context, individuals in the learning group, often with common goals related to improving their communication abilities, come together to share knowledge, experiences, and insights. Here's how peer-to-peer learning can be applied to "The Art of Communication":

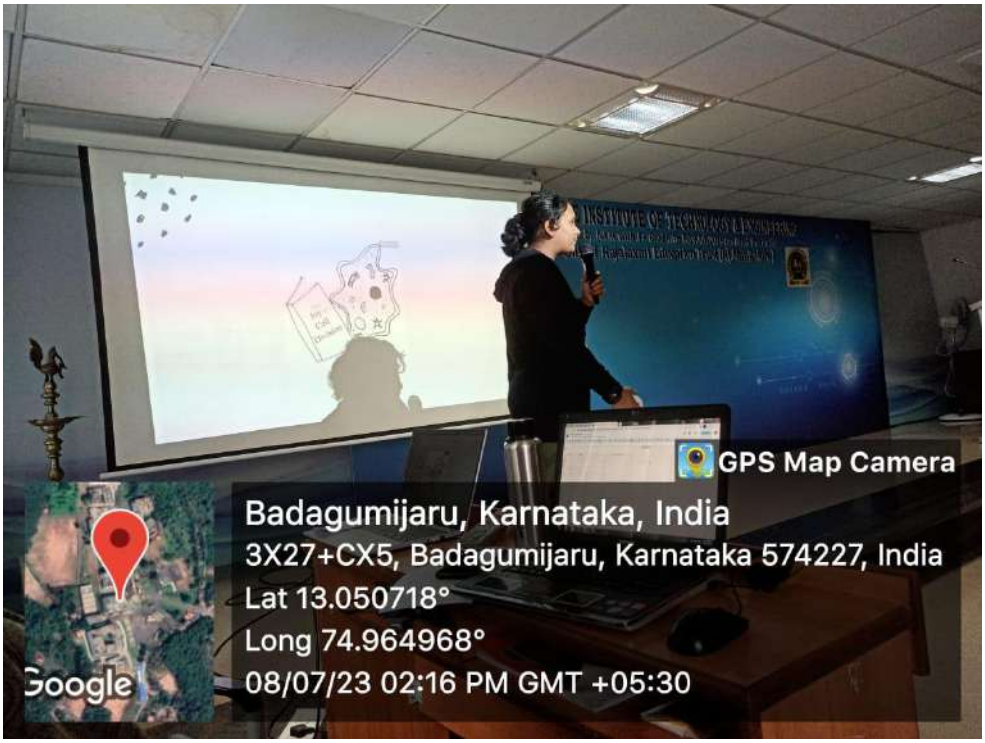
The speaker shared personal experiences and challenges related to communication. By hearing stories and strategies for improvement, individuals gained valuable insights and empathize with different communication styles and contexts.

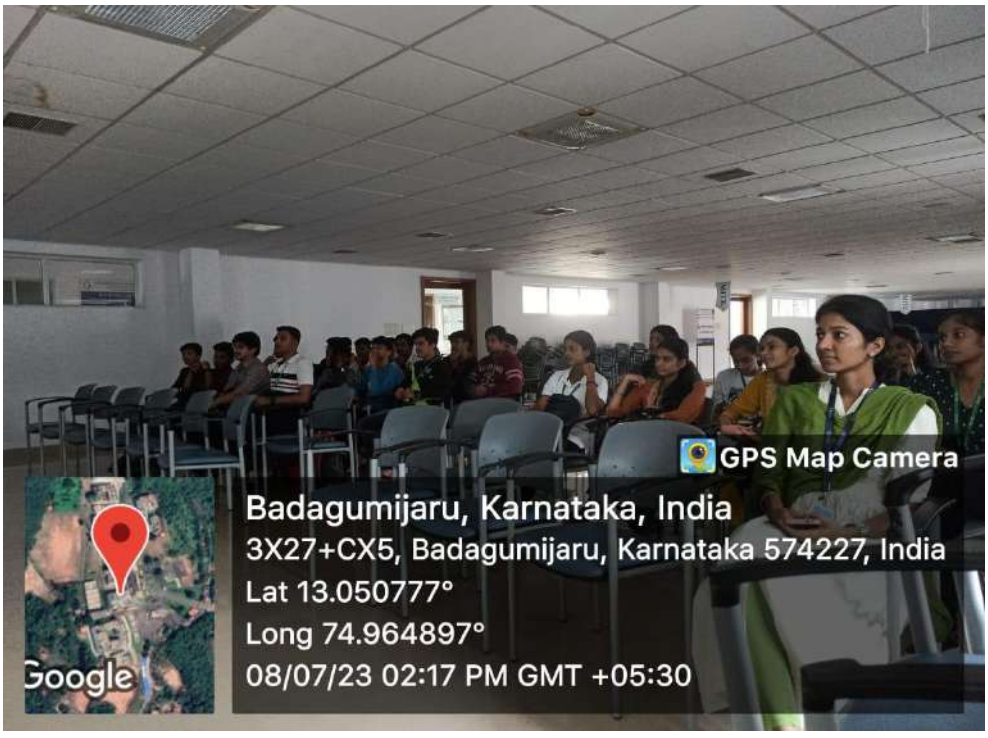
Feedback were exchanged with the participants on their communication skills, highlighting strengths and suggesting areas for improvement. This feedback loop is instrumental in refining communication abilities. Peers served as a source of motivation and encouragement. They shared success stories, and celebrate each other's progress, fostering a positive and motivating learning environment.

Peer-to-peer learning encourages open discussions and debates on various aspects of communication, such as effective listening, public speaking, or nonverbal communication. Participants shared diverse perspectives and learned from each other's viewpoints. Participants took on different roles and practiced communication skills in simulated situations, allowing for practical application and skill refinement.

Peer-to-peer learning in "The Art of Communication" encourages a holistic approach to skill development. Participants explored various dimensions of communication, from verbal and emotional intelligence. Peer-to-peer learning fosters a culture of continuous improvement, where participants regularly assess their progress and set new communication goals.

Overall, peer-to-peer learning in "The Art of Communication" creates a dynamic and enriching educational experience where participants actively contribute to each other's growth and development in the realm of effective and empathetic communication.





Peer-to-Peer learning on "The Art of Communication" delivered Drithi Rao 6th Sem E&CE.

Activity-45

EVENT DETAILS: **A Peer Learning on MATLAB Image Analysis and Processing: A Step-by-Step Approach**

SPEAKER NAME: **Prabal Raj & M Ullas Pai, Students 4th Semester, Dept. of ECE, MITE, Moodabidri.**

DATE: 22.07.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student chapter organized peer-to-peer learning on "MATLAB Image Analysis and Processing: A Step-by-Step Approach".

The objective of the session "MATLAB Image Analysis and Processing: A Step-by-Step Approach" is to provide participants with a comprehensive understanding of how to use MATLAB for analyzing and processing images. The session likely covers various techniques, tools, and functions available in MATLAB's Image Processing Toolbox. The step-by-step approach indicates that the session aims to guide participants through the process of image analysis and processing using MATLAB in a systematic manner.

A total of 73 students from 2nd and 4th semesters of E&CE Department participated in the session.

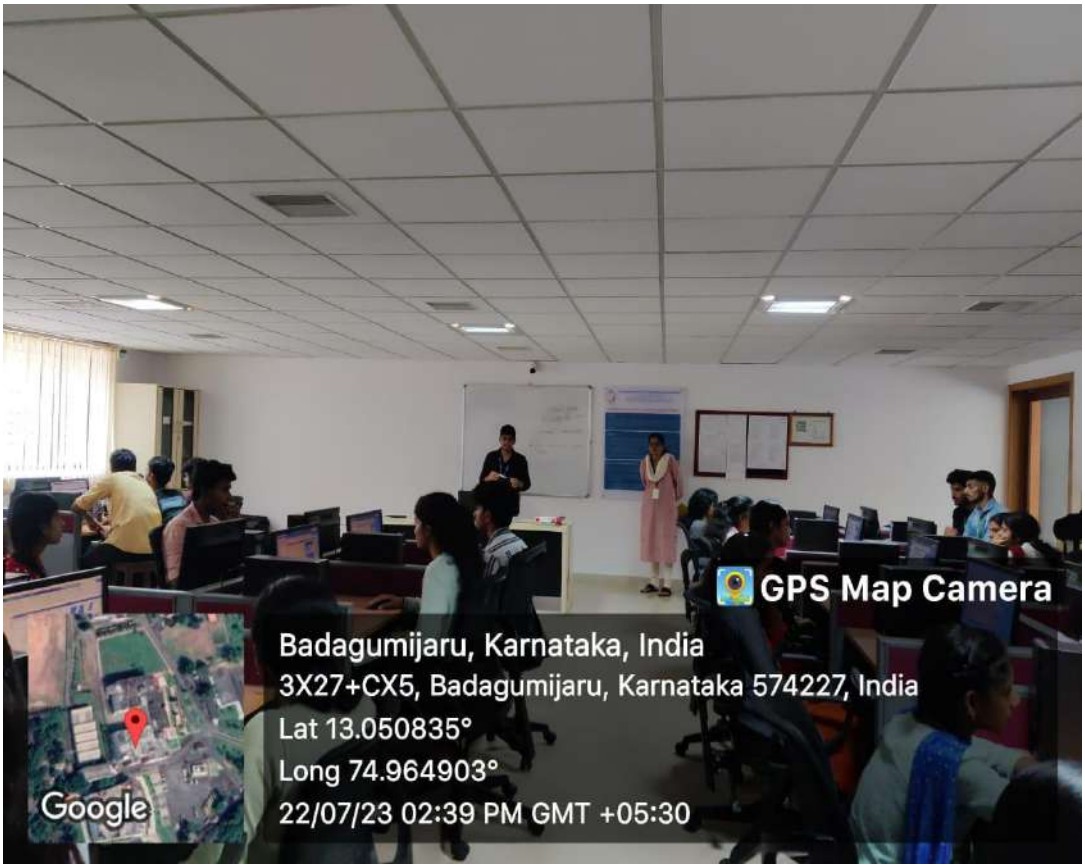
SPEAKERS PROFILE:

Prabal Raj & M Ullas Pai is a well-rounded individual with a passion for technology, a track record of success in competitions, and a commitment to academic excellence. Their achievements reflect their dedication to personal and professional growth in the field of electronics and communication engineering.

BRIEF ABOUT THE EVENT:

The course "MATLAB Image Analysis and Processing: A Step-by-Step Approach" is designed to instruct participants in utilizing MATLAB for image analysis and processing tasks. This comprehensive course systematically covers various concepts and techniques, beginning with an introduction to the importance of image processing and MATLAB's role in it. Participants are guided through setting up the MATLAB environment for image analysis and gain proficiency in essential MATLAB concepts, including syntax and image loading/display, which are fundamental for effective image processing.

The course delves into techniques for enhancing image quality, such as histogram equalization, contrast stretching, and gamma correction, to improve image visual quality. Participants also explore the capabilities of image filters for tasks like blurring and sharpening. The convolution process is demystified, and spatial operations like edge detection are thoroughly examined. Additionally, attendees learn to identify and extract significant features from images, including textures, shapes, and colors, as part of their comprehensive journey in image analysis and processing using MATLAB..



Peer-to-Peer learning on "MATLAB Image Analysis and Processing: A Step-by-Step Approach" delivered Prabal Raj & M Ullas Pai 4th Sem E&CE.

Activity-46

Title : **Workshop on Python Application in Medical Image Processing.**

Resource Person : **Dr. Niranjan U C, Director , Research & Training, Manipal DoT Net.**

Date :**15-07-2023**

Brief Profile of the Speaker:

Dr. Niranjan U C obtained his Ph D in Electrical Science from Indian Institute of Science, Bangalore in 1993. He was a visiting Researcher at PARAMA Bio- monitoring Institute, Fukuoka, Japan in 1994 and 1996. He is an Adjunct Professor at E&C Department and Director of Research &Training at Manipal Dot Net, Manipal. He is the president of Biomedical Engineering Society of India (BMESI), and past Chair of IEEE Mangalore Sub-section. He was the recipient of IEEE EMBS best student paper award in 1992 at Paris and Young Achiever paper award at ISCE, Arizona in 1996. He was felicitated with Distinguished Alumnus award by NITK during their Diamond Jubilee celebrations in the year 2019.

About the Workshop:

Python is a high-level, interpreted, and general-purpose programming language. It has gained immense popularity among developers due to its simplicity, readability, and versatility. Python emphasizes code readability and a clean syntax, making it easier to write and understand compared to many other programming languages.

Python programming has significant relevance in the field of Medical Image Processing and Analysis. Here are some key reasons why Python is widely used in this domain: Rich ecosystem of libraries, Machine learning and deep learning, Integration with imaging tools and frameworks, Data visualization, Open-source community and resources, Rapid prototyping and development

Dr. Niranjan started the session with introduction to Python language and gave an indepth knowledge into the Python. Later he emphasised on the realworld applications of Python language in Medival and data mining filed.

Students learned the basics of medical image analysis using Pythonand to display and interpret X-ray and CT scans. This course focussed on relevant Python libraries and commands on medical images for format conversion, segmentation, and analyzing metadata. The goal is to familiarize with concepts around medical imaging and specifically Computed Tomography (CT).It is critical to understand how far one can go without deep learning, to understand when it's best to use it.

Dr. U C Niranjan Delivering the session

Workshop Outcome:

- Participants gained a comprehensive understanding Python Programming and applications.
- Participants developed hands on experience of Python programming in Medical Image Processing.

Participants in Hands on Session

Activity-46

EVENT DETAILS: **A Peer Learning on Exploring Perspectives and Solutions using Technical Debate**

DATE: 22.07.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student branch organised a peer-to peer learning on “Exploring Perspectives and Solutions using Technical Debate”.

The objective of "Exploring Perspectives and Solutions using Technical Debate" is to provide a platform for participants to engage in thoughtful and constructive discussions about complex issues, challenges, and solutions in a specific technical or professional domain. Through the medium of a debate, participants can explore different viewpoints, analyze problems from multiple angles, and collaboratively work towards identifying innovative solutions.

A total of 60 students from 2nd and 4th semesters of E&CE Department participated in the session.

BRIEF ABOUT THE EVENT:

Engaging in technical debates promotes critical thinking among participants, prompting them to meticulously examine different facets of a subject. This process involves scrutinizing information, verifying its credibility, and constructing logically sound arguments. Participants immerse themselves in the topic, achieving a holistic grasp of its intricacies and subtleties. Debates serve as a forum where individuals hailing from diverse backgrounds, possessing varying expertise and opinions, can openly voice their perspectives. This diversity cultivates a more comprehensive outlook on the subject. Additionally, participants refine their communication skills, becoming adept at expressing their thoughts with clarity and persuasion. This experience equips them with the ability to present intricate concepts in an accessible manner.

The ongoing discourse regarding technology highlights the intricate interplay between advancements and apprehensions in our rapidly digitizing society. Key areas of debate encompass privacy, data security, automation, ethics within AI, cybersecurity, and equitable technology access. It is imperative to strike an equilibrium between embracing progress and addressing potential challenges.

To navigate this evolving landscape, it is essential for policymakers, industry influencers, and society at large to engage in purposeful dialogues. These conversations serve as a platform for

shaping the trajectory of technology in a manner that maximizes benefits for all stakeholders while safeguarding fundamental values and principles.

The great technical debate is an intrinsic part of our technological evolution. It is a testament to the dynamism and complexity of our ever-changing digital landscape. While the debate often highlights challenges and concerns, it also underscores the potential for innovation and progress. Society's active engagement in these discussions, coupled with ethical considerations and responsible governance, will be instrumental in harnessing the transformative power of technology for the benefit of all.

Technical debates are a valuable tool for advancing technology, addressing challenges, and ensuring that innovation aligns with societal needs and values. They foster collaboration, critical thinking, and responsible decision-making in the ever-evolving world of technology.

Topics discussed were –

5. Renewable Energy vs. Fossil Fuels: The Future of Power Generation
6. Cybersecurity: Protecting Data in the Digital World
7. Ethics of Artificial Intelligence: Can Machines Possess Morality?

Peer-to-Peer learning on "Exploring Perspectives and Solutions using Technical Debate"

Activity-48

EVENT DETAILS: **Circuit Tinkering: An Approach to Electronic Circuit Exploration**

SPEAKER NAME: **Ms. Deepthi Kotian Asst Professor & Mr. Prakash L S Asst Professor, Dept. of E&CE, MITE Moodabidri.**

DATE: 05.08.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student chapter organized “Circuit Tinkering: An Approach to Electronic Circuit Exploration”.

The objective of "Circuit Tinkering: An Approach to Electronic Circuit Exploration" aims to provide participants with a hands-on and experiential learning opportunity to explore and understand electronic circuits through practical experimentation. This approach aims to foster a deeper comprehension of circuit theory, components, and their interactions.

A total of 104 students from 2nd semester of E&CE Department participated in the session.

BRIEF ABOUT THE EVENT:

A fundamental and engaging entry point into the world of electronics lies in the exploration of LED (Light Emitting Diode) circuits. These circuits are a straightforward yet essential introduction to basic components, circuitry, and hands-on experimentation. By immersing participants in the construction of functional LED circuits, we equip them with a foundational understanding of electronic circuits.

In this hands-on experience, we introduce participants to the key elements of electronic circuits: LEDs, resistors, and breadboards. These components play pivotal roles in the circuit's operation. LEDs illuminate the path, resistors act as gatekeepers by controlling current flow to the LEDs, and the breadboard serves as our canvas for this creative endeavor.

Our journey begins with the arrangement of LEDs and resistors on the breadboard, a critical step that sets the stage for the circuit's functionality. We emphasize the resistor's role in regulating the current, ensuring the LED operates within safe parameters. This knowledge lays the foundation for participants to grasp the intricate dance between components in a circuit.

As we progress, we encourage participants to embrace experimentation by playing with different LED colors and resistor values. This exploration illuminates how altering these parameters

impacts the circuit's behavior. It's not just about lighting up an LED; it's about understanding the nuances of electronic systems.

But we don't stop there. Creativity and active learning thrive when we give participants the freedom to modify the circuit, switch components, or rearrange connections. This hands-on approach empowers individuals to become architects of their electronic creations, fostering a deeper connection with the world of circuits.

In essence, our LED circuit exploration isn't just about lighting up LEDs; it's a dynamic journey that demystifies the world of electronics, one LED at a time, sparking curiosity, and igniting a passion for further exploration in the realm of circuits.

Hands-on Session on Circuit Tinkering: An Approach to Electronic Circuit Exploration

Activity-49

EVENT DETAILS: **A Peer Learning talk on Exploring the Journey Through IEEE**

SPEAKER NAME: **Alwin D'Souza student 6th Sem, Dept. of E&CE, MITE Moodabidri.**

DATE: 12.08.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE Student Branch is organising Peer to Peer learning on "Exploring the Journey Through IEEE"

The objective of "Exploring the Journey Through IEEE" is to provide participants with insights into the IEEE (Institute of Electrical and Electronics Engineers) organization, its significance, contributions, and opportunities it offers in the fields of technology, engineering, and related disciplines.

A total of 206 students from 2nd and 4th semesters of E&CE Department participated in the session.

SPEAKERS PROFILE:

Alwin D'Souza is a well-rounded individual with a passion for technology, a track record of success in competitions, and a commitment to academic excellence. Their achievements reflect their dedication to personal and professional growth in the field of electronics and communication engineering.

BRIEF ABOUT THE EVENT:

IEEE stands as a prestigious and globally esteemed professional association, spanning a wide spectrum of technical domains. Within the expansive IEEE landscape, participants delve into fields ranging from electrical engineering and computer science to telecommunications and beyond. This exploration spotlights IEEE's pivotal role in driving technological progress, setting industry standards, disseminating cutting-edge research, and fostering innovation.

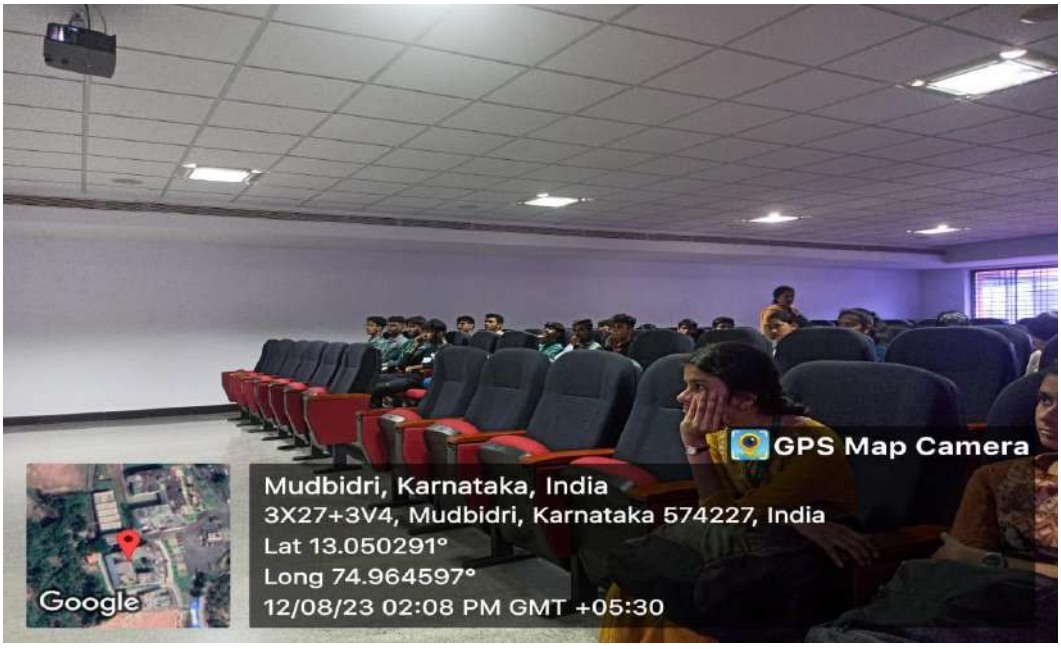
One of IEEE's chief strengths lies in its capacity to unite professionals, researchers, and experts on a global scale, creating a dynamic platform for collaboration and knowledge exchange. Membership in IEEE opens doors to a treasure trove of benefits, including access to invaluable technical resources, publications, and unrivaled networking opportunities.

As participants journey further into the IEEE realm, they uncover the organization's commitment to professional advancement. IEEE empowers growth through a rich tapestry of conferences, workshops, certifications, and collaborative ventures. Special attention is devoted to IEEE's dedication to nurturing the next generation, with initiatives tailored for students and early-career professionals, including scholarships, mentorship programs, and vibrant student chapters.

Moreover, participants gain insight into IEEE's unwavering dedication to ethical principles in technology development, championing responsible innovation. This ethical compass guides IEEE's mission to shape technology's future in a manner that benefits humanity.

An invitation to take up leadership roles and engage in volunteer opportunities within IEEE resonates as a call to action, encouraging participants to actively contribute to the organization's multifaceted endeavors. In essence, "Exploring the IEEE Odyssey" equips participants with a profound appreciation for IEEE's vast landscape, its contributions to technology, and the myriad opportunities it offers to shape a better future through responsible innovation and collaboration.

IEEE is a prestigious and globally recognized professional organization. Diverse Technical Fields exploration of the wide range of technical domains that fall under IEEE's umbrella, from electrical engineering and computer science to telecommunications and beyond. Showcased IEEE's contributions to technological advancements, industry standards, research dissemination, and innovation. Discussed on how IEEE serves as a platform for connecting professionals, researchers, and experts worldwide. Information on the benefits of becoming an IEEE member, including access to technical resources, publications, and networking opportunities. Insight into how IEEE supports professional growth through conferences, workshops, certifications, and collaboration. Explanation of IEEE's initiatives aimed at students and early-career professionals, such as scholarships, mentorship, and student chapters. Discussion on IEEE's commitment to ethical practices in technology development and its role in shaping responsible innovation. Encouragement to engage in leadership roles and volunteer opportunities within IEEE to contribute to the organization's activities.



Peer-to-Peer learning on "Exploring the Journey Through IEEE" delivered by Alwin D'Souza student 6th Sem, Dept. of E&CE

Activity-50

EVENT DETAILS: **A Peer Learning talk on Insights on Areas in Semiconductor Industries**

SPEAKER NAME: **Prabal Raj student 4th Sem, Dept. of E&CE, MITE Moodabidri**

DATE: 19.08.2023 **TIME: 02:00PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE student chapter organized a session on "Insights on Areas in Semiconductor Industries"

The objective of "Insights on Areas in Semiconductor Industries" involves providing participants with a comprehensive understanding of the various segments, trends, and challenges within the semiconductor industry. The goal is to equip participants with valuable insights that can inform their career choices, research pursuits, or business decisions

A total of 51 students from 2nd and 4th semesters of E&CE Department participated in the session.

SPEAKERS PROFILE:

Prabal Raj is a well-rounded individual with a passion for technology, a track record of success in competitions, and a commitment to academic excellence. Their achievements reflect their dedication to personal and professional growth in the field of electronics and communication engineering.

BRIEF ABOUT THE EVENT:

Integrated Circuits (ICs) encompass the intricate world of designing, producing, and verifying integrated circuits that empower our electronic devices. In the realm of Memory Devices, we delve deep into the evolution of memory technologies, encompassing DRAM, NAND flash, and the emergence of novel non-volatile memory types.

Our exploration extends to the fascinating domain of Semiconductor Materials, where we uncover the characteristics and production methods of materials like silicon and gallium arsenide. Furthermore, we embark on a journey into the realm of nanoscale technologies, where we witness their transformative impact on the development of cutting-edge semiconductor components.

Additionally, our quest takes us into the convergence of optics and electronics, shedding light on technologies such as LEDs, lasers, and optical communications. This fusion of disciplines illuminates the path to groundbreaking innovations.

Integrated Circuits (ICs) focus on the design, fabrication, and testing of integrated circuits that power electronic devices. Memory Devices delve into the development of memory technologies such as DRAM, NAND flash, and emerging non-volatile memory types. The session focused on Semiconductor Materials thier properties and fabrication processes of semiconductor materials like silicon, gallium arsenide, and more. Discovering how nanoscale technologies are shaping the development of advanced semiconductor components. Learning about technologies that combine optics and electronics, such as LEDs, lasers, and optical communications. Gaining insights into microelectromechanical systems (MEMS) and sensors used in various applications, including IoT devices and automotive. Learn about cleanroom processes, photolithography, etching, and other techniques used in semiconductor manufacturing.

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Peer-to-Peer learning on "Insights on Areas in Semiconductor Industries" delivered by Prabal Raj student 4th Sem, Dept. of E&CE

Activity-51

EVENT DETAILS: **Mind the Master of Body: A Mind Mapping Program**

SPEAKER NAME: **Mr. Prakash L S Assistant Professor, Dept. of E&CE, MITE Moodabidri**

DATE: 26.08.2023 **TIME: 02:30 PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE Student Branch organized a session on "Mind the Master of Body": A Mind Mapping Program.

The objective of the "Mind the Master of Body" Mind Mapping Program is to empower participants with effective mind mapping techniques and tools to enhance their cognitive abilities, boost productivity, and streamline their thought processes

A total of 143 students from 2nd and 4th semesters of E&CE Department participated in the session.

SPEAKERS PROFILE:

Mr. Prakash LS is a certified Patanjali yoga trainer. He is also the Yoga coordinator for the NCMC course by VTU.

BRIEF ABOUT THE EVENT:

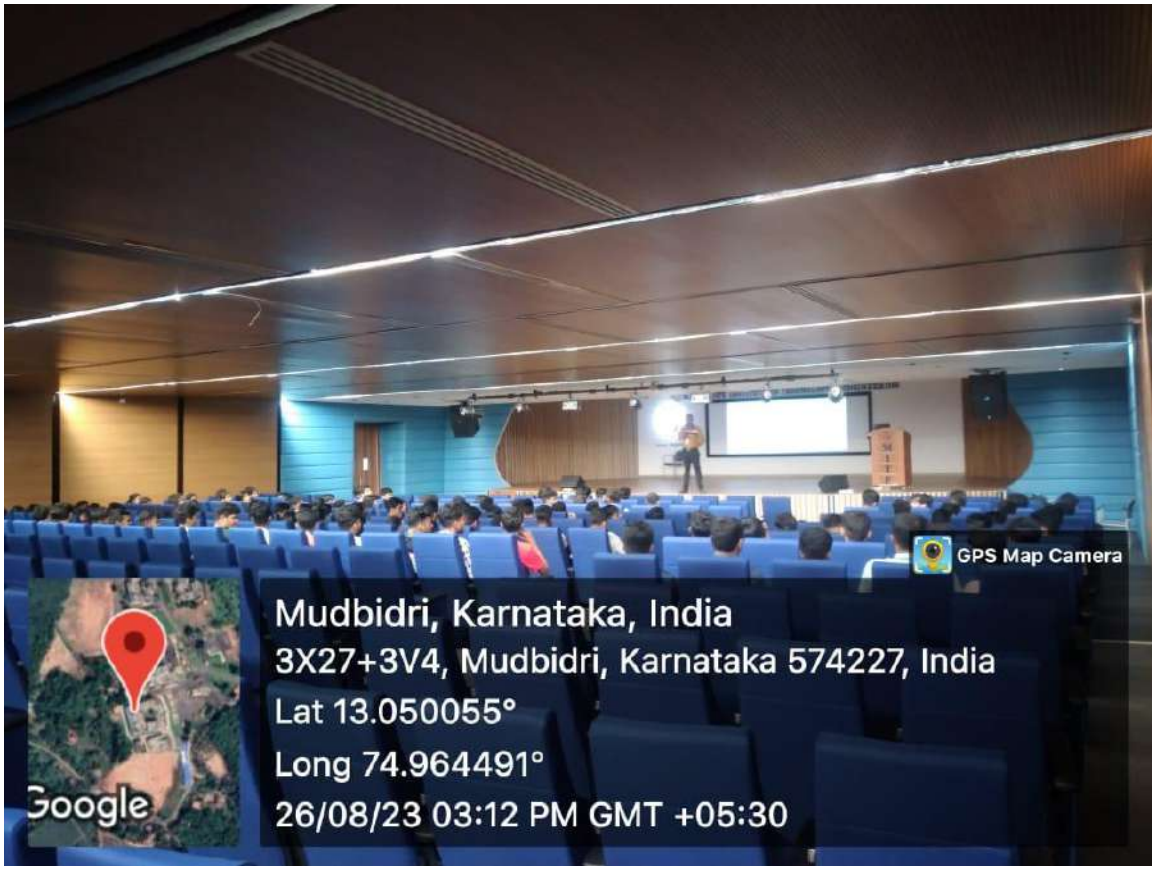
Participants were introduced to the core principles of mind mapping, including hierarchical structure, visual representation, and the use of keywords. Interactive sessions allowed participants to brainstorm and create mind maps on various topics, fostering creativity and problem-solving.

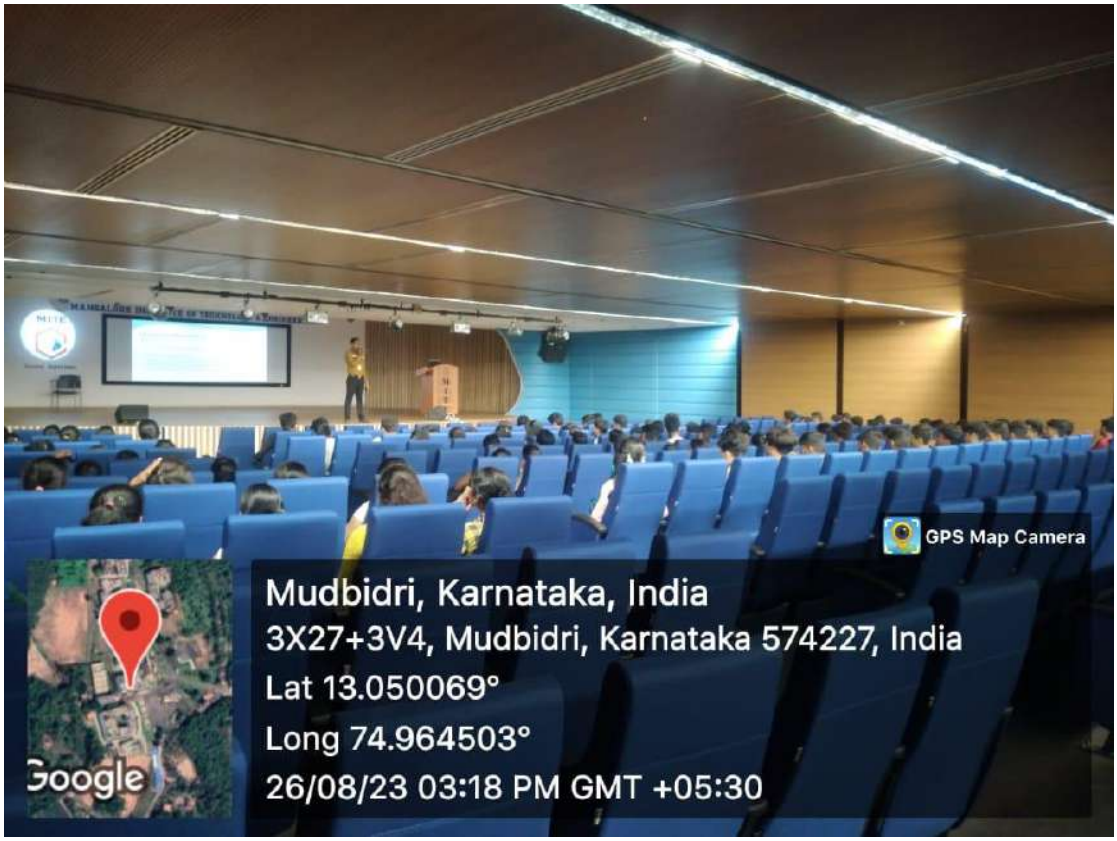
Participants learned strategies for using mind maps to improve memory and information recall, making learning more efficient. The program covered the use of mind maps for clear and concise communication, including presentations, reports, and project planning. Participants explored real-world applications of mind mapping in education, business, project management, and personal development.

The "Mind the Master of Body" Mind Mapping Program yielded the following outcomes like Improved Mind Mapping Skills where Participants demonstrated a significant improvement in their ability to create structured and visually appealing mind maps, Enhanced Creativity, many participants reported increased creativity and a more organized thought process as a result of the program, Better Information Retention, The program's strategies for information retention were

effective, with participants reporting enhanced memory recall. Effective Communication, Participants successfully applied mind maps to improve communication in both personal and professional contexts.

The "Mind the Master of Body" Mind Mapping Program has achieved its objectives by equipping participants with valuable mind mapping skills. The positive feedback and demonstrable improvements in participants' abilities underscore the program's success.





Mr. Prakash L S Assistant Professor, Dept. of E&CE, MITE Moodabidri delivering a session on "Mind the Master of Body": A Mind Mapping Program

Activity-52

EVENT DETAILS: **Power of Music in Facilitating Professional Growth**

SPEAKER NAME: **Dr. Sruthi Dinesh Assistant Professor, Dept. of E&CE, MITE Moodabidri**

DATE: 02.09.2023 **TIME: 02:00 PM**

ABOUT THE SESSION:

Department of Electronics & Communication Engineering in association with IEEE Student Branch is organizing a talk on “Power of Music in Facilitating Professional Growth”

The objective of a "Power of Music in Facilitating Professional Growth" session is to explore and harness the potential benefits of music as a tool for personal and career development. Such a session aims to educate participants on how music can positively impact various aspects of their professional lives and provide them with practical strategies for integrating music into their daily routines to enhance their professional growth.

A total of 79 students from 4th semester of E&CE Department participated in the session.

SPEAKERS PROFILE:

Dr. Sruthi Dinesh (PhD in RF Electronics) is an Experienced researcher in RF, Antenna design, 5G, and wireless communication. She is also skilled in the simulation, design, and testing of RF components. She is also a trained Carnatic vocalist and has delivered various programs.

BRIEF ABOUT THE EVENT:

Music can be a powerful tool for managing stress and promoting relaxation. Listening to calming music can help lower blood pressure, reduce anxiety, and improve overall well-being. When choosing music for stress management, it's important to select tunes that you find personally soothing and calming. Nature sounds like rainfall, ocean waves, chirping birds, and rustling leaves can create a serene atmosphere, making it easier to relax and de-stress. There are many recordings and apps available that offer nature sounds combined with calming music. Stress has become an inevitable part of our lives. The demands of work, personal life, and societal pressures often leave us feeling overwhelmed and anxious. Amidst this chaos, music emerges as a powerful and accessible tool for stress management. This essay explores the profound impact of music on our stress levels, delving into its therapeutic properties and the diverse genres that offer solace to the weary soul.

The session started with the Awareness and Understanding of Music's Impact. Discussion on the emotional, cognitive, and behavioural effects of music and the Presentation of research findings on the power of music in professional settings were discussed. Music has a unique ability to affect our emotions and physiology. Research has shown that listening to music triggers the release of neurotransmitters like dopamine and serotonin, which promote relaxation and reduce stress. Moreover, music has been linked to the regulation of heart rate and blood pressure, making it an effective stress-reducing therapy. Classical music, with its intricate compositions and soothing melodies, has been a timeless remedy for stress. The works of renowned composers like Bach, Mozart, and Chopin create a serene ambiance that helps in calming the mind and alleviating stress. The intricate harmonies and symphonic arrangements provide a sense of order and tranquillity amidst chaos.

Speaker also quoted that using Music for Stress Management techniques is to reduce workplace stress and briefly spoke on the testimonials and personal experiences. Enhancing Creativity and Innovation were discussed in Exploring how music can stimulate creative thinking.

The session was concluded by telling, In the symphony of life, where stress often takes the lead, music emerges as a harmonious counterpoint. Its therapeutic effects, spanning classical compositions, ambient soundscapes, and personal favourites, offer a diverse range of options for stress management. As we tune into the healing melodies, we find solace, peace, and a momentary escape from the pressures of the world. Music, in its myriad forms, stands as a testament to the profound connection between sound and human emotions, reminding us that even in the midst of chaos, there exists a calming rhythm waiting to embrace our weary hearts.

Dr. Sruthi Dinesh Assistant Professor, Dept. of E&CE, MITE Moodabidri delivering a session on "Power of Music in Facilitating Professional Growth"

Activity-53

Title: **Social Awareness programme**

Date: **30.7.2022**

Brief about the event: Under AICTE activity point program on spreading public awareness under rural outreach programs related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

With connection to AICTE activity point program the students of 3rd year EC1 of Electronics & Communication department made an attempt for the conduction of awareness program for school children's in Govt. Higher primary school, Kallamundkur, for one day. Total 50 students were participated in this event. A different team of students gave the information regarding importance of moral education, importance of health& hygiene, how to maintain clean campus, involvement in making simple science projects, craft making, memory games, benefits of indoor and outdoor games also its importance.

The awareness programme was conducted for students from Govt. Higher primary school, Kallamundkur. The children were sensitized about the importance of washing their hands before and after eating and exercising daily and the importance of playing sports and inculcating other healthy habits to avoid falling sick. A chart on balanced diet, cleanliness and maintaining oral and personal hygiene was also shown. The children were asked to share their daily routines and the steps they took every day to maintain hygiene. The children learnt a lot from the session and promised to follow all the good habits.

A group of students highlighted on various topics like Livelihood through crafts, importance of design in crafts, creation of good design quality etc. They also showed live demonstration on various crafts.

Ms. Anusha and team discussed about moral values. Moral values are the key components of a person's character. They are personality traits guiding people to make decisions and judgements

according to their own sense of what is right and wrong, based on collective and individual experiences. While moral values form the fundamentals in any student's life.

The moral values such as kindness, courage, humility, honesty, truthfulness, integrity, respect, hard-work, tolerance, compassion, empathy, and inclusivity are extremely important to be instilled from an early age, to build a child's character, as it forms the very core of their being and becomes the foundation of their moral beliefs throughout their lives.

It is said that students are the future of India, and this future of our country depends greatly upon the values imparted to them during their student life. Moral values pave the path for all their decisions in life, as without these values, children do not have any guidance and their life may seem directionless. In order to be accepted and respected by society, parents and caregivers should make sure of imbibing these strong moral values in children as a lifestyle itself.

Demonstrating on importance of health and hygiene

Demonstrating on moral values

Demonstrating on simple science models

Demonstrating on art and craft with few craft making

Demonstrating on craft making

Group photo with school children's of Kallamundkur

Posters made on "Healthy Habits" is donated to school

Posters made on “Technology daily life” is donated to school

Posters made on “Efficient waste disposal system” is donated to school

Activity-54

Title: **Swachh Bharath Programme**

Date: **7.10.2022 to 12.10.2022**

YouTube Link: https://youtu.be/SbNQ8mUEAHc

Brief about the event: Under AICTE activity point program on spreading public awareness under rural outreach programs related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

Swachh Bharat Programme is one of the most significant and popular missions to have taken place in India. Swachh Bharat Abhiyan translates to Clean India Mission. This drive was formulated to cover all the cities and towns of India to make them clean. This campaign was administered by the Indian government in the vision of a Clean India. The cleanliness campaign of Swachh Bharat Abhiyan was run on a national level and encompassed all the towns, rural and urban. It served as a great initiative in making people aware of the importance of cleanliness.

The department undertaken a Swachh Bharat programme in Belthangady, Dakshina Kannada. Total 87 students from the third year E&CE along with faculty members were actively participated in Swachh Bharath Programme. The students of Electronics & Communication cleaned up various venues in surroundings of Belthangady (Dakshina Kannada district) in association with JCI Manjushri Belthangady for five days. The students were cleaned the areas of Belthangady city, Balanja grama panchayath, river cleaning in Laila grama panchayath and Ujire grama panchayath.

Swachh Bharat Abhiyan set a lot of objectives to achieve so that India could become cleaner and better. In addition, it not only appealed the sweepers and workers but all the citizens of the country. This helped in making the message reach wider. It aims to build sanitary facilities for all households. One of the most common problems in rural areas is that of open defecation. Swachh Bharat Abhiyan aims to eliminate that.

Moreover, the Indian government intends to offer all the citizens with hand pumps, proper drainage system, bathing facility and more. This will promote cleanliness among the citizens. Similarly, they also wanted to make people aware of health and education through awareness programs. After that, a major objective was to teach citizens to dispose of waste mindfully. India is in dire need of a cleanliness drive like Swachh Bharat Abhiyan to eradicate dirtiness. It is important for the overall development of citizens in terms of health and well-being. As the majority of the population of India lives in rural areas. In connection to this various grama panchayath PDO's and Presidents helped to make this event happen in spreading the awareness in association with JCI Manjushri Belthangady.

In short, Swachh Bharat Abhiyan is a great start to make India cleaner and greener. If all the citizens could come together and participate in this drive, India will soon flourish. Moreover, when the hygienic conditions of India will improve, all of us will benefit equally. India will have more tourists visiting it every year and will create a happy and clean environment for the citizens.

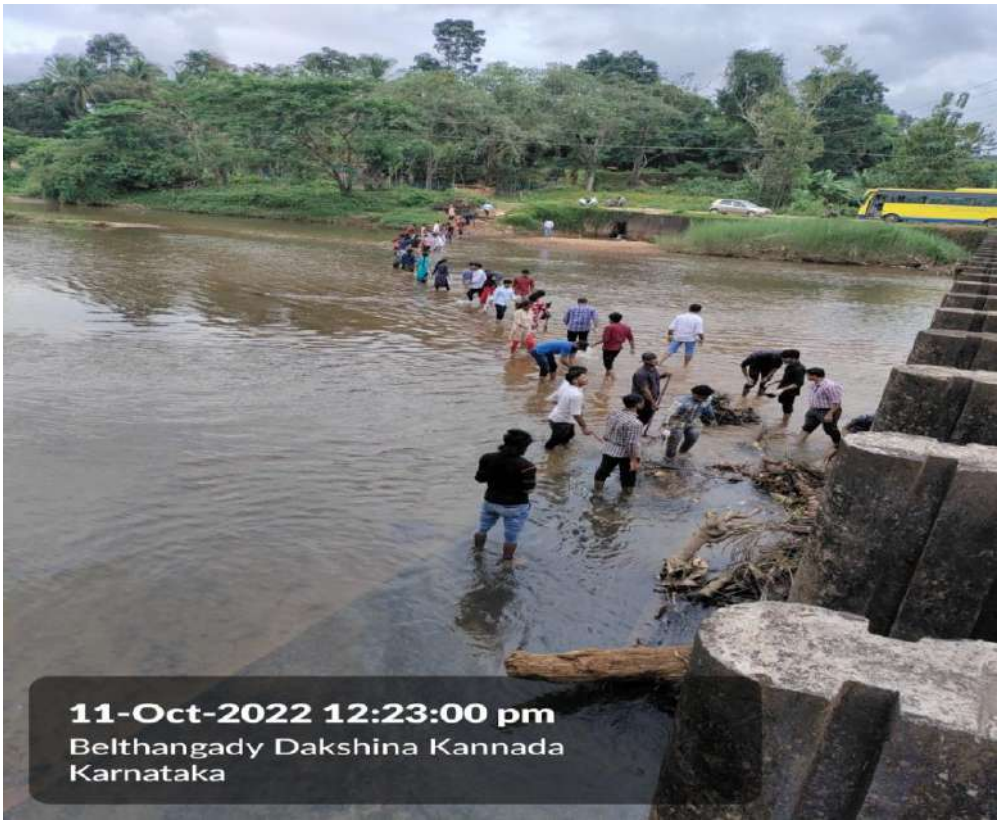
The main aim of this Program is: To motivate the villagers to live in hygienic surroundings. To inculcate the importance of the clean and green surrounding. To appreciate and protect the serene beauty of the village. To make them aware of the different types of the epidemics and diseases that break due to unclean surroundings. To generate the feelings of cleanliness in the village.

Inaugural function on “Swachh Bharath programme” with JCI Manjushri, Belthangady

Day 1: Belthangady city cleaning

Day 2: Cleaning at Surroundings of Laila Grama Panchayath

Day 3: Cleaning at Surroundings of Balanja Grama Panchayath



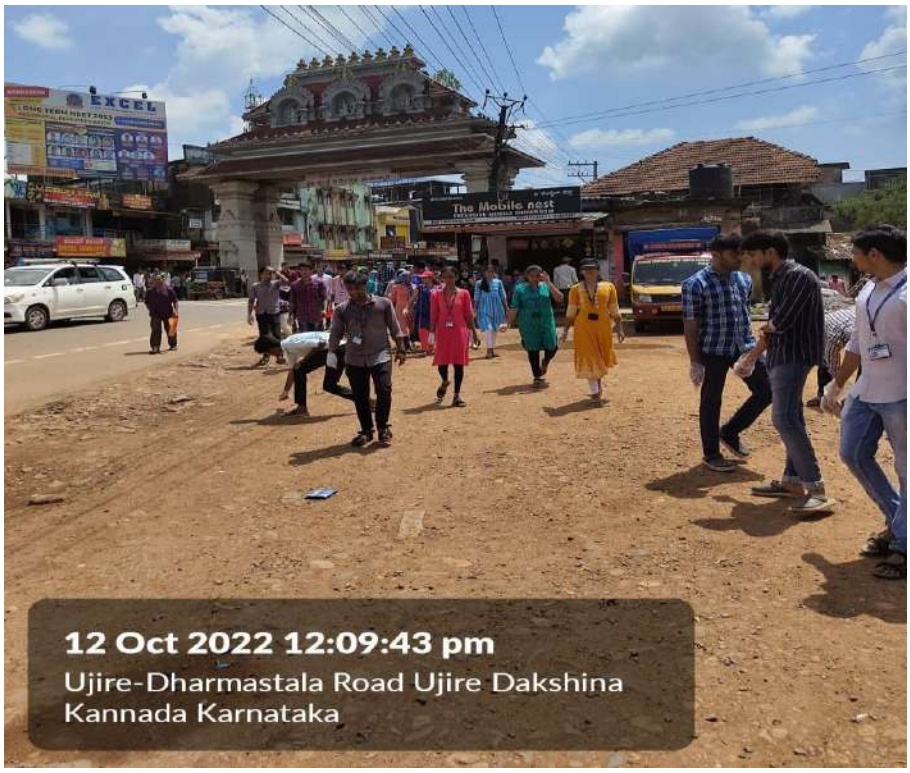
Day 4: River cleaning at Belthangady

Before

After

River cleaning at Laila, Belthangady

Day 4: Cleaning at Ujire



Swachh Bharath programme in Ujire city

Valedictory function on “Swachh Bharath programme” at Ujire grama panchayath

Group photo at Ujire grama panchayath

ಜೆಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಮತ್ತು ಮೈಟ್ ಕಾಲೇಜಿನಿಂದ ಸ್ವಚ್ಛತಾ ಕಾರ್ಯ

ಬೆಳ್ತಂಗಡಿ: ಪ್ರತಿಷ್ಠಿತ ಜೆಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಆಶ್ರಯದಲ್ಲಿ ಮೈಟ್ ಕಾಲೇಜು ಮೂಡಬಿದ್ರೆ ಇವರ ಸಹಭಾಗಿತ್ವದಲ್ಲಿ ನಗರ ಸ್ವಚ್ಛತಾ ಕಾರ್ಯ ಅ.7 ರಂದು ಬೆಳ್ತಂಗಡಿಯಲ್ಲಿ ನಡೆಯಿತು. ಸ್ವಚ್ಛತಾ ಕಾರ್ಯದ ಉದ್ಘಾಟನೆಯನ್ನು ಶಟ್ಟಣ ಪಂಚಾಯತ್ ಸದಸ್ಯ ಜಗದೀಶ್ ಡಿ ನೇರವೇರಿಸಿ ಶುಭಕೋರಿದರು.

ಅಧ್ಯಕ್ಷತೆಯನ್ನು ಜೆಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಅಧ್ಯಕ್ಷ ಪ್ರಸಾದ್ ಬಿ.ಎಸ್ ವಹಿಸಿದ್ದರು.

ಮುಖ್ಯ ಅತಿಥಿಗಳಾಗಿ ಸುದ್ದಿಬಿಡುಗಡೆ ವಾರಪತ್ರಿಕೆಯ ಸಹಾಯಕ ವ್ಯವಸ್ಥಾಪಕ ಜಾರಪ್ಪ ಪೂಜಾರಿ, ಮೈಟ್ ಕಾಲೇಜಿನ ಉಪನ್ಯಾಸಕರಾದ ಪ್ರಕಾಶ್ ವಿಷ್ಣಾ, ದೀಕ್ಷಾ, ಜೆಸಿರೇಟ್ ಸಂಯೋಜಕಿ ಸುನಿತಾ ಬೈಲು ಉಪಸ್ಥಿತರಿದ್ದರು.

ಪೂರ್ವಾಧ್ಯಕ್ಷ ಚಿದಾನಂದ ಇದ್ಯ ವೇದಿಕೆಗೆ ಆಹ್ವಾನಿಸಿದರು, ಪ್ರಸಾದ್ ಬಿ.ಎಸ್ ಸ್ವಾಗತಿಸಿದರು, ಆಶಾಲತಾ ಚೇಸಿವಾಣಿ ಉದ್ಘೋಷಿಸಿದರು, ಪೂರ್ವಾಧ್ಯಕ್ಷ ಸಂತೋಷ್ ಪಿ ಕೋಟ್ಯಾನ್ ಬಳಂಜ ವಂದಿಸಿದರು. ಪೂರ್ವಾಧ್ಯಕ್ಷ ನಾರಾಯಣ ಶೆಟ್ಟಿ ಸದಸ್ಯರಾದ ಪ್ರೀತಂ, ವಿಜಯ್,ರಕ್ಷಿತ್, ಸಹಕರಿಸಿದರು.

ಸುದ್ದಿ ಬಿಡುಗಡೆ

ಜೆಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಮತ್ತು ಮೈಟ್ ಕಾಲೇಜಿನಿಂದ ಸ್ವಚ್ಛ ಭಾರತ್ ಅಭಿಯಾನ

ಉಜಿರೆ: ಜೆಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಮತ್ತು ಮೈಟ್ ಕಾಲೇಜು ಸಹಯೋಗದೊಂದಿಗೆ ಅ. 07ರಿಂದ ಅ.12 ರ ತನಕ ಸ್ವಚ್ಛತಾ ಅಭಿಯಾನ ಕಾರ್ಯಕ್ರಮವು ಬೆಳ್ತಂಗಡಿ, ಉಜಿರೆ, ಬಳಂಜ ಪ್ರದೇಶದಲ್ಲಿ ನಡೆಯಿತು.

ಜೆಸಿ ಭವನದಲ್ಲಿ ಸ್ವಚ್ಛತಾ ಅಭಿಯಾನಕ್ಕೆ ಚಾಲನೆ ನೀಡಿ ಬೆಳ್ತಂಗಡಿ ನಗರ ಸ್ವಚ್ಛತೆ, ಲಾಯಿಲ ಗ್ರಾಮ ಪಂಚಾಯತ್ ಸಹಕಾರದೊಂದಿಗೆ ಲಾಯಿಲ ಪರಿಸರ ಸ್ವಚ್ಛತೆ, ಬಳಂಜ ಗ್ರಾಮ ಪಂಚಾಯತ್ ಸಹಕಾರದೊಂದಿಗೆ ಬಳಂಜ ಪರಿಸರ ಸ್ವಚ್ಛತೆ, ಬೆಳ್ತಂಗಡಿ ನದಿ ಸ್ವಚ್ಛತೆ ಹಾಗೂ ಉಜಿರೆ ಪಂಚಾಯತ್ ಸಹಕಾರದೊಂದಿಗೆ ಉಜಿರೆ ನಗರದಲ್ಲಿ ಸ್ವಚ್ಛತೆ ಮಾಡುವ ಮುಖೇನ ಅಭಿಯಾನ ಸಂಪನ್ನಗೊಂಡಿತು. ಕಾರ್ಯಕ್ರಮದ ಸಮಾರೋಪ ಸಮಾರಂಭ ಉಜಿರೆ ಗ್ರಾಮ ಪಂಚಾಯತ್‌ನಲ್ಲಿ ನಡೆಯಿತು. ಈ ಸಂದರ್ಭದಲ್ಲಿ ಉಜಿರೆ ಗ್ರಾಮ ಪಂಚಾಯತ್ ಅಧ್ಯಕ್ಷೆ ಪ್ರಭಾವತಿ ಶೆಟ್ಟಿ, ಉಪಾಧ್ಯಕ್ಷ ರವಿ ಕುಮಾರ್ ಬರಮೇಲು, ಪಂಚಾಯತ್ ಅಭಿವೃದ್ಧಿ ಅಧಿಕಾರಿ ಪ್ರಕಾಶ್ ಶೆಟ್ಟಿ ನೊಚ್ಚ, ಉಜಿರೆ ವರ್ತಕರ ಸಂಘದ ಅಧ್ಯಕ್ಷ ಅರವಿಂದ್ ಕಾರಂತ್, ಜೇಸಿಐ ಬೆಳ್ತಂಗಡಿ ಮಂಜುಶ್ರೀ ಅಧ್ಯಕ್ಷ ಪ್ರಸಾದ್ ಬಿ.ಎಸ್ ರಮ್ಯಾ, ಮೈಟ್ ಕಾಲೇಜಿನ ಪ್ರೊಫೆಸರ್ ಗಣೇಶ್, ಪಂಚಾಯತ್ ಕಾರ್ಯದರ್ಶಿ ಜಯಂತ್ ಅತಿಥಿಗಳಾಗಿ ಭಾಗವಹಿಸಿ ಕಾರ್ಯಕ್ರಮ ಬಗ್ಗೆ ಮೆಚ್ಚುಗೆ ವ್ಯಕ್ತ ಪಡಿಸಿ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಶುಭಹಾರೈಸಿದರು. ಕಾರ್ಯಕ್ರಮದಲ್ಲಿ ಚಂದ್ರಹಾಸ ಬಳಂಜ, ಆಶಾಲತಾ ಪ್ರಶಾಂತ್, ರಕ್ಷಿತ್ ಅಂಡಿಂಜೆ, ಪೂರ್ವಾಧ್ಯಕ್ಷರಾದ ಚಿದಾನಂದ ಇದ್ಯಾ, ನಾರಾಯಣ ಶೆಟ್ಟಿ,ಸಂತೋಷ್ ಪಿ ಕೋಟ್ಯಾನ್, ಉಪಾಧ್ಯಕ್ಷ ರಂಜಿತ್ ಹೆಚ್.ಡಿ, ಮೈಟ್ ಕಾಲೇಜಿನ ಪ್ರೊಫೆಸರ್‌ಗಳಾದ ಡಾ. ಗಣೇಶ್, ಪ್ರೊ.ಡೋನಿ ಡಿಸೋಜಾ, ರಂಜಿತ್ ಹೆಚ್.ಡಿ, ಉದಯ್ ಜೆ, ಭವ್ಯ ಎಸ್, ಪ್ರಕಾಶ್, ದೀಕ್ಷಾ, ವಿಷ್ಣಿತಾ ಭಾಗವಹಿಸಿದ್ದರು.

Activity-55

Title: **Digital awareness programme**

Date: **27/12/2022**

Brief about the event: Under AICTE activity point program on social awareness related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

Digital India is a campaign to ensure the government services are available to all the citizens of this country electronically through increasing internet connectivity and improved online infrastructure or by making the citizens of this country empowered (digitally) in the field of technology.

The main aim of this initiative is to connect rural areas with high-speed internet connectivity and increase digital literacy. The main objective of the campaign was to make the citizens digitally literate and also to provide various government services online. It helps to reach out to the masses and encourages them to use technology in their daily lives.

Electronics and Communication department students of final year students along with faculty members were actively participated in spreading digital awareness in Kallamundkur village. Total of 98 students were actively participated in this awareness campaign. Students visited the houses and conveyed the awareness to the village people about digital India.

All group of students visited the houses in and around Kallamundkur village by giving them the information on digital India awareness through online payments in government services. The impact of Digital India was expected to in some of the ways: Reduce Corruption, increase the speed with which public sector services are provided to citizens of the country and reduce the use of paperwork.

The main purpose of this program was to create awareness among the students and villagers regarding various online digital usages. The initiative of Digital India has brought a great success

for the Indian citizens. This was evident in the pandemic period where all the corporates, schools were closed down. With the help of digitization, the employee can work from their home there was no requirement to go to their offices for work.

A batch of students spreading the digital awareness about online payments

A major component of the Digital India campaign is to deliver government services and other essential services digitally. It is easier to change the way of delivering services from physical to digital. Many services of the Government of India were digitized under the Digital India Campaign.

A batch of students spreading the digital awareness

All ministries would be linked under this scheme, and all departments will be able to reach out to the people with fundamental services like health care, banking, education, scholarships, gas cylinders, water and electricity bills, and judicial services. The daily monetary transactions of people were also converted into digital mode. To ensure transparency in the transactions and curb corruption all the money transactions are being made online, and are supported by one-time passwords.

A batch of students spreading the digital awareness about online payments

With the help of digitalization in education, the students are able to enroll in various short-term or long-term courses and hone their skills and knowledge from any institution from anywhere in the world. Moreover, the government's focus on research and innovation is further strengthening digital education in India.

Team involved spreading the digital awareness

The Digital India campaign is an ambitious campaign by the Government of India towards a paperless society. It also aims for providing several government services to the citizens with ease of accessibility. The campaign not only seeks to strengthen the infrastructure but also to digitally

empower the citizens. Digital India plays a vital role in enabling the citizens to avail them of several government services. It was a very wonderful experience to students and villagers, village peoples were happy that students were able to share their thoughts, experience and knowledge. We hope that this was helpful to them in one or the other way. This also helps students in grooming as a socially responsible citizens and when they grow up will be able to connect with people easily.

Group of students involved in spreading the digital awareness programme in Kallamundkur Village

Activity-56

Title: **Science and Technology Awareness programme**

Date: **27/12/2022**

Brief about the event: Under AICTE activity point program on social awareness related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

Science and technology are important parts of our day-to-day life. We get up in the morning from the ringing of our alarm clocks and go to bed at night after switching our lights off. All these luxuries that we are able to afford are a resultant of science and technology. Most importantly, how we can do all this in a short time are because of the advancement of science and technology only. It is hard to imagine our life now without science and technology. Indeed, our existence itself depends on it now. Every day new technologies are coming up which are making human life easier and more comfortable. Thus, we live in an era of science and technology.

Electronics and Communication department students of final year EC2 students along with faculty members were actively participated in spreading Science and technology revolutions awareness programme in Govt. higher primary school, Kallamundkur. Total of 49 students were actively participated in this awareness programme. Students gave the information regarding science and technology in daily life with charts and demonstration of few science models and projects.

Essentially, Science and Technology have introduced us to the establishment of modern civilization. This development contributes greatly to almost every aspect of our daily life. Hence, people get the chance to enjoy these results, which make our lives more relaxed and pleasurable.

Rithika and her friends emphasised the numerous benefits of science and technology. They explained the scientific progress using posters and charts starting with morning newspaper, electrical devices like a refrigerator, AC, microwave and more are a result of technological

advancement. In addition, science and technology have enabled man to look further than our planet. The discovery of new planets and the establishment of satellites in space is because of the very same science and technology.

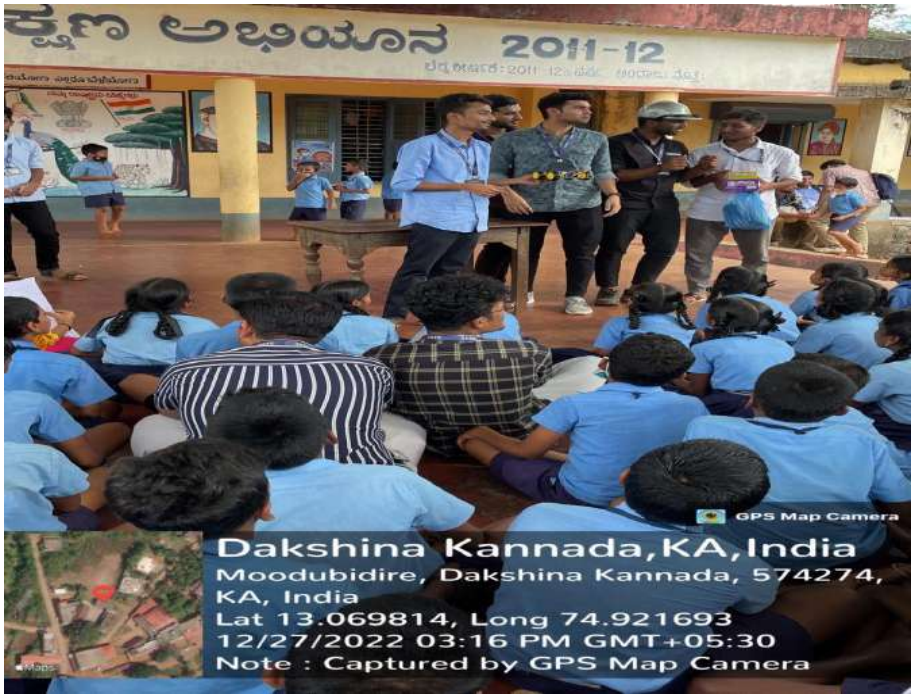
Team involved in science and technology in daily life to its advancement

Similarly, science and technology have also made an impact on the medical and agricultural fields. The various cures being discovered for diseases have saved millions of lives through science. Moreover, technology has enhanced the production of different crops benefitting the farmers largely. Spoorthi and her team given the demo on home automation and Gouthami and her friends explained smart agriculture system.

Team involved in demonstrating home automation system

Team involved in demonstrating smart agriculture system

Vikas Jain and his team elaborated advantages and various applications of electric vehicles and demonstrated the same. They also mentioned that, EVs include, but are not limited to, road and rail vehicles, surface and underwater vessels, electric aircraft and electric spacecraft. For road vehicles, together with other emerging automotive technologies such as autonomous driving, connected vehicles and shared mobility, EVs form a future mobility vision called Connected, Autonomous, Shared and Electric (CASE) Mobility.



Team involved in demonstrating electric vehicle applications

Shreyas and his team exhibited an ultrasonic sensor and its numerous applications. These sensors can be found in self-parking technologies and anti-collision safety systems in automobiles. The team demonstrated Ultrasonic sensors, which are employed in robotic obstacle detection systems and manufacturing technology.

Team involved in demonstrating ultrasonic sensor applications

In conclusion, we must admit that science and technology have led human civilization to achieve perfection in living. However, we must utilize everything in wise perspectives and to limited extents. Misuse of science and technology can produce harmful consequences. Therefore, we must monitor the use and be wise in our actions. As a result of encouragement, the school children are extremely curious and highly energetic and making them come up with an exciting science project idea will definitely make their attention to be focussed.

Group of students involved in science and technology awareness programme

Activity-57

Title: **Election Awareness Programme**

Date: **7/3/2023**

Brief about the event: Under AICTE activity point program on social awareness related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

An election is considered the prime pillar of democracy. Not only for the country but the election can also be conducted in any case where public opinion matters the most. An election is also defined as a decision-making process within a group of people sharing similar interests. It ensures the active participation of the people where the citizens get the chance to choose their government.

In this regard the 2nd year Electronics & Communication Engineering students made an effort to spread the election awareness along with faculty members in Kallamundkur village. Total of 122 students were actively participated in this social awareness programme. Students provided the information regarding election procedure through ballot voting machine and explained does and don'ts via posters and charts.

Many individuals want to vote, but they are unaware of its importance of voting and how to cast it. This is where election awareness comes into play. The idea of election awareness is to help people understand the importance of voting. Election is an important way for voters to exert influence over their government. It is a method for citizens to express what they want from their leaders by raising awareness about election. This will lead to better governance and what everyone wants – a democracy that is free, fair and representative.

Election awareness educates people about the importance of voting and how it can be used for their welfare, growth and development. It also makes them aware about the luring and deceptive election campaigns of the political parties and how not to fall prey to cash, liquor or gifts in lieu of their vote.

Team involved in spreading the Election Awareness

Voting helps citizens become more involved in their government and keep it accountable. In addition to voting, there are a few laws that ensure fair elections around the world. This voting awareness helps village people to understand the vote's significance.

Team involved in spreading the Election Awareness

Six groups were made to spread the awareness to ensure the importance of election system and voting in the various places of Kallamundkur village. It's a civic duty that can significantly impact the future of our country. Voting helps keep politicians accountable for their actions and creates the framework for our democracy. Voting also ensures that public officials are paid with the tax amount from the people who can afford to pay them. The most consequential decision of all is how to spend tax – voting ensures that there is accountability for what goes into our government's budget. The last thing we want is for politicians to be able to spend public fund without being held accountable by the public's vote.

Team involved in spreading the Election Awareness

Team involved in spreading the Election Awareness

To conclude, this awareness helps students and villagers to understand the significance of voting in a democracy. Voting gives citizens, a voice and an opportunity to participate in the democratic process.

Election awareness is very important to motivate people so that they take part in the electoral process and give their helping hand to build a healthy democracy in the country. Hence it is the prime responsibility of the youths of the country to educate people about the importance of election and make them understand the power of voting then only we can value the democracy in real terms.

Group of students involved in Election Awareness Programme

Activity-58

Title: **Awareness Programme on "Environment Protection"**

Date: **19/5/2023**

Brief about the event: Under AICTE activity point program on social awareness related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

Environmental protection is a practice that aims to protect the natural environment from the hands of individuals, organizations, and governments. It is the need of the hour because the Earth's environment is deteriorating every day, and the reasons are human beings. They are mishandling the Earth's environment to fulfill their needs. If it goes like this, then it is difficult to say that the future generation will have a safer environment to live in. Through this awareness we made the people to learn the importance of environmental protection.

In this regard the 3rd year Electronics & Communication Engineering students made an effort to spread the awareness along with faculty members in Kallamundkur village. Total of 87 students were actively participated in this social awareness programme. Students provided the information regarding environment protection and also related to rain water harvesting & water borne diseases through posters and charts.

The main goal of protecting the environment is to make it a healthy place for the present and future generations to live in. People are exploiting the natural resources in the name of development without thinking of its adverse consequences on the earth and its living beings. However, we can still come together and save our environment from degradation.

There are many ways to protect the environment, but the most important ones are Reduce, Recycle and Reuse, Save Trees, Don't Litter, Educate and Inspire. To define environmental awareness, we must first understand the environmental movement. Environmentalism is an ideology that evokes the necessity and responsibility of humans to respect, protect, and preserve the natural world from its anthropogenic (caused by humans) afflictions.

Environmental awareness is an integral part of the movement's success. By spreading awareness to others that the physical environment is fragile and indispensable, we can begin fixing the issues that threaten it.

Team involved in spreading the Awareness on "Environment Protection"

Team involved in spreading the Awareness on "Environment Protection"

Sample chart “Rain Harvesting”

Students with Posters & Charts on “Environment Protection”

Team involved in spreading the Awareness on "Environment Protection"

Team involved in spreading the Awareness on "Environment Protection"

Group of students involved in Environment Protection Awareness Programme

Group of students involved in Environment Protection Awareness Programme

Activity-59

Title: **"River Cleaning Abhiyan"**

Date: **03/06/2023**

Brief about the event: Under AICTE activity point program on social awareness related activities for the current academic year & motivate the students to inculcate the team work and self-confidence.

Swachh Bharat Programme is one of the most significant and popular missions to have taken place in India. Swachh Bharat Abhiyan translates to Clean India Mission. This drive was formulated to cover all the cities and towns of India to make them clean. This campaign was administered by the Indian government in the vision of a Clean India. The cleanliness campaign of Swachh Bharat Abhiyan was run on a national level and encompassed all the towns, rural and urban. It served as a great initiative in making people aware of the importance of cleanliness.

The department undertaken a River cleaning Abhiyan programme in Thodar village, near Vishnu Moorthy temple. Total 124 students from the 2nd semester E&CE along with faculty members were actively participated in River Cleaning abhiyaan. The students of Electronics & Communication cleaned up the surroundings of Nandini river in association with NSS MITE . The students were cleaned the River Nandini in Neerkere grama panchayath.

The students who have covered a large part of the targeted two-kilometre length in the cleaning programme. students cleaned both sides of the river by collecting garbage, plastic and other waste materials. It became a memorable experience and forgot about the awfulness of the river," said a student volunteer.

Moreover, the Indian government intends to offer all the citizens with hand pumps, proper drainage system, bathing facility and more. This will promote cleanliness among the citizens. Similarly, they also wanted to make people aware of health and educate through awareness programs. After that, a major objective was to teach citizens to dispose of waste mindfully.

India is in dire need of a cleanliness drive like Swachh Bharat Abhiyan to eradicate dirtiness. It is important for the overall development of citizens in terms of health and well-being. As the majority of the population of India lives in rural areas. In connection to this grama panchayath PDO's and Presidents helped to make this event happen in association with MITE NSS.

Mr. Akshath raj, NSS coordinator giving Instructions to students about the programme

Rivers are essential as they are nature's blessings for human beings. It provides us with so many things but nowadays, they are being polluted on a very large scale. We must all come together to prevent this from happening and saving our rivers for a better future.

Garbage collected from the river by the group of students

Team involved in “River cleaning abhiyan”

The main aim of this Program is: To motivate the villagers to live in hygienic surroundings. To inculcate the importance of the clean and green surrounding. To appreciate and protect the serene beauty of the village. To make them aware of the different types of the epidemics and diseases that break due to unclean surroundings. To generate the feelings of cleanliness in the village.

Group of students involved in River Cleaning Abhiyaan