



NEW HORIZON
COLLEGE OF ENGINEERING

**DEPARTMENT OF
ELECTRICAL AND ELECTRONICS
ENGINEERING**

CURRENTS – NEWSLETTER

EEE – we Light the world



2021
JANUARY – July

Volume 9
Issue 2

NEW HORIZON COLLEGE OF ENGINEERING

VISION

To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.

MISSION

- To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.
- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research & innovation among faculty members and students. To encourage long-term interaction between the academia and industry through their involvement in the design of curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities

QUALITY POLICY

To provide educational services of the highest quality both curricular and co-curricular to enable students integrate skills and serve the industry and society equally well at global level

VALUES:

Academic Freedom, Integrity, Inclusiveness, Innovation, Professionalism, Social Responsibility

ABOUT DEPARTMENT

Welcome to the Department of Electrical & Electronics Engineering (EEE) at New Horizon College of Engineering (NHCE), Bangalore. EEE is one of the prestigious branches of Engineering and one among the oldest departments of NHCE-Bangalore started in 2001. The EEE Department has been playing a vital role in producing engineers and technologists of high caliber ever since it was established in the year 2001. The Department is accredited by NAAC with 'A' Grade and accredited by NBA. The vision of EEE Department is to create contemporary Engineers, innovators and entrepreneurs to make a better nation and in turn, a better world. A critical investigation and innovation into the modern state-of-art and cutting edge technology lead to the fact that an electrical graduate fits better in today's competitive world.

The strength of the department is highly qualified faculty members with expertise in various fields of electrical engineering, state of art laboratory facilities. The department is inclined towards bridging the gap between Industry and academia by collaborating with Multinational Companies in the field of Electrical Engineering.

Indo-French Center of Excellence in Electricity, Automation and Energy (IFCEEAE) is one such initiative evolved through "MoU" with French Ministry of National Education and Schneider Electric India Pvt. Ltd., The main objectives of IFCEEAE are

- To train the students of all streams of engineering in automation field
- To facilitate interdisciplinary and applied research with a focus on innovative product development
- To provide excellent career opportunities to students through exchange programs with French Universities, industrial training, innovative learning and R & D activities especially in the areas like Smart Grid, Internet of things (IoT), Energy Management Systems, Embedded systems, Supervisory Control and Data Acquisition (SCADA) and industrial automation.

The Department nurtures the young minds beyond the curriculum by facilitating technical clubs in promoting technical events, community development/society impact and universal value/ethics programs. In supporting to this, Department of Electrical & Electronics Engineering has established Institute of Electrical and Electronics Engineers (IEEE) – Power Electronics Society (PELS) Student Branch Chapter (Geo-Code: SBC66131) which is the non- profitable, world largest technical professional organization for the advancement of technology. The students have a greater exposure and flexibility in campus placements in core industries, IT sectors and Public Sector Units (PSU).

VISION

To evolve into a centre of excellence in Electrical and Electronics Engineering for bringing out contemporary engineers, innovators, researchers and entrepreneurs for serving nation

MISSION

- To provide suitable forums to enhance the teaching-learning, research and development activities.
- Framing and continuously updating the curriculum to bridge the gap between industry and academia in the contemporary world and serve society.
- To inculcate awareness and responsibility towards the environment and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO 1: To provide good learning environment to develop entrepreneurship capabilities in various areas of Electrical and Electronics Engineering with enhanced efficiency, productivity, cost effectiveness and technological empowerment of human resource.

PEO2: To inculcate research capabilities in the areas of Electrical & Electronics Engineering to identify, comprehend and solve problems and adopt themselves to rapidly evolving technology.

PEO3: To create high standards of moral and ethical values among the graduates to transform them as responsible citizens of the nation.

MESSAGE FROM PRINCIPAL & HOD

Dear all,

In our college, we and our faculty always think we need to teach beyond curriculum to make our students 'Industry Ready'. Recent observations made by many stalwarts in the industry indicate the fact that most Engineering Graduates out of colleges are not employable. NHCE has always been in the forefront in ensuring that students are employable. It gives me immense pleasure to write a few words as prologue to the in-house 2021 Newsletter of the EEE Department. The issue is designed to present the events that have occurred in the department makes this newsletter resourceful and informative. I congratulate all the contributors and the editorial board for bringing out such a nice issue. Happy Reading.



Dr. MANJUNATHA
PRINCIPAL, NHCE

Dear readers,

I feel happy to release Newsletter titled as "Currents" 2021. Our editorial team has done an appreciable job in reporting all the events which have taken place in the Department over a time period of seven months. To all your notice, our Newsletter is presenting you the success of major events witnessed by students, faculty and external participants of Electrical Engineering fields. The objective of the Technical Newsletter is to provide information about involvement, inspiration and dedication in diversified areas of Electrical Engineering from students, faculty, parents and alumni- with a timely and honest portrait of our Department activities. This has made an earnest attempt in this direction and all the credit for its success falls upon faculty and students who have worked with dedication and enthusiasm to bring this forward. I convey my regards to all the readers.



Dr. M. MAHESH
Prof. & HOD EEE, NHCE

EDITORIAL TEAM

FACULTY ADVISORS



DR. M.MAHESH

PROF. & HOD EEE, NHCE



PROF. DEEPA V.B



Prof. RASHMI N



DR. VINOOTH KUMAR K

STUDENT CO-ORDINATOR



Mr. NISCHAL DINESH

DESIGNER

Mr. CHARANTHEJA

STUDENTS ACHIEVEMENT

GSSS Institute of Engineering and Technology for Women, Mysuru IEEE Student Branch in association with IEEE Bangalore Section and IEEE Mysore Sub Section Co-Sponsored by IEEE Circuits & Systems Society Bangalore Chapter. Organized, "Fifth IEEE National Level Project Competition-2021 (Virtual)" on 26th of June 2021. In that our final year EEE students Yashwanth Gowda S, Bhanu Prakash Naidu S, Sadashiv N Mantur, Shri Harsha S participated and won the best project award.



Geetha Shishu Shikshana Sangha (R)

GSSS INSTITUTE OF ENGINEERING & TECHNOLOGY FOR WOMEN

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi & Govt. of Karnataka)
Accredited with Grade 'A' by NAAC
Accredited Branches by NBA, New Delhi; UG – ECE, CSE, ISE & TE
(Validity: 01.07.2017 – 30.06.2020 & 01.07.2020 – 30.06.2023)

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IEEE STUDENT BRANCH

(STB 17861)

5th

National Level IEEE Project Competition

BEST PROJECT



Session 21: TRACK6B
Project ID: 431

Project Title: Military Support and Rescue Robot

Students Name: Yashwanth Gowda S, Sadashiv N Mantur, Bhanu Prakash Naidu S, Shri Harsha S

Guide Name: Mr.Vinod Kumar S

College Name: New Horizon College of Engineering Bengaluru

Co-sponsor

Pic: Fifth IEEE National Level Project Competition certificate

ACHIEVEMENTS

JUNE EVENTS:

The Inauguration of IEEE PELS Student Branch Chapter (Geo Code: SBC66131) of New Horizon College of Engineering, Bengaluru was held on 15th of June 2021 at the department of Electrical and Electronics Engineering, NHCE, Bengaluru through Zoom Meet. The program began with a welcome address by the Dr. M. Mahesh, Professor & HOD, EEE Department of NHCE. Dr. Vinoth Kumar K, IEEE PELS SBC Advisor introduced the biography of Chief Guest. The Chief Guest of Inaugural ceremony was Mr. Vishal Anand AG, Chair, IEEE PELS Bangalore Chapter Section & Principal Engineer, Bloom Energy (I) Pvt Ltd, Bengaluru delivered the inaugural speech. He emphasized the mission of the PELS student branch chapter and how this could help the academia in solving problems related to energy and also stressed that power electronics is the key for integrating renewable energy into the grid and the importance of power

OFFICE BEARERS FOR 2021



CHAIR: NISCHAL DINESH **VICE CHAIR:** NAYRAH M A **SECRETARY:** SARTHAK DAS



Pic: Office Bearers of IEEE PELS NHCE for the year 2021

electronics in energy generation, management and conservation. Dr. M.Mahesh, HOD Department of EEE, NHCE presented the information about IEEE PELS NHCE SBC activities and proposed the Office Bearers of IEEE PELS NHCE for the year 2021.

Education/Student Activities

PELS has a broad student program and supports exciting student activities:

- IEEE Future Energy Challenge**
 - International competition for innovation, conservation and effective use of electrical energy
- Student Travel Grants**
 - Supporting students who participate in PELS Conferences
- Mentorship**
 - Mentorship events at PELS Major conferences
 - Such as APEC, ECCE-NA, and others
- PELS Prize Ph.D. Thesis Talk**
 - Encourages recently graduated Ph.D. students to make a video of up to 200 seconds on their Ph.D. projects showcasing their research achievements in academics and industrial fields

Participants (63)

Participant	Status
SONIKA VENKATACHALAM	✓
Sowmyashree 1NH19EE107	✓
Srinivasa Govindaiah	✓
Sushma M	✓
Sushmitha	✓
Tahoori Imtiyaz	✓
Utkarsh (1NH18EE724)	✓
Vidya GR 1NH19EE122	✓
Vinith G A	✓
VINOD KUMAR S	✓
Vishnu	✓
Janamejaya Channegowda	✓
M Karthika	✓
sowmyasri C	✓

Pic: Mr. Vishal Anand A G, Chair, IEEE PELS Bangalore, HOD-EEE & Students

The proposed office bearers were accepted by Dr. Gunapriya B, Associate Professor, EEE, NHCE and seconding by Dr. K.C.R. Nisha, IEEE Student Branch Counselor of NHCE. The Presidential address was delivered by Dr. Manjunatha, Principal of NHCE. And finally, the vote of thanks is proposed by Dr. K.C.R.Nisha, IEEE NHCE Branch Counselor. The Inauguration was graced with the presence of Dr. Amarjeet Singh, Dean Academics of NHCE and Dr. Sanjeev Sharma, Professor & Head of ECE, NHCE and Dr. January amejaya, Vice Chair IEEE PELS Bangalore Chapter. The event was made colorful by the active participation of undergraduate students and faculties from Department of Electrical and Electronics Engineering, New Horizon College of Engineering and other college faculty members were present at the audience. Altogether the IEEE PELS NHCE SBC Inauguration was a great success and all the members are very excited in taking forward this society to greater heights.

vinod kumar Vino is presenting

DMI COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Presents Webinar on
INDUSTRIAL AUTOMATION & INDUSTRY 4.0

By
VINOD KUMAR S
Sr. ASSISTANT PROESSOR
IFCEEAE FACULTY
NEW HORIZON COLLEGE OF ENGINEERING
BENGALURU

People

Participant	Status
eee dmice (You)	✓
20-AKASH KUMAR M-4011	✓
5305surendranadh M S	✓
5704 Jayasurya E	✓
5709 POONGUZHALI R	✓
5714 KRISHNAN N	✓
Abisha Vijina V J	✓

Pic: Online inaugural function of Industrial Automation & Industry 4.0 Webinar

Dr. R Mohandas and Mr. Vinodkumar S from Department of Electrical & Electronics Engineering, New Horizon College of engineering were selected as resource person for Webinar organized by DMI College of Engineering, Chennai on 2nd of June 2021 and delivered a talk on "Industrial Automation & Industry 4.0". The students of that college got benefited and gained knowledge on the above topics.

International conference



Pic: Releasing proceedings of IOT in Hybrid Grid Integrated Renewable Energy Sources on International conference Inauguration by Dignitaries

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering organized three days International conference on “Research Perspectives: IoT in Hybrid Grid Integrated Renewable Energy Sources”, which took place from 24th to 26th of March 2021. This conference programmed of presentations, panel discussions and interactive sessions and is sponsored by the All India Council for Technical Education (AICTE) is the statutory body and a national-level council for technical education, under the Department of Higher Education, Ministry of Education, Government of India and also sponsorship from various funding agencies. This conference has made our academicians and research scholars to interact with experts in the domain of Hybrid Grid Integrated Renewable Energy.

The event brought together around 100 faculty members, research scholars and students from almost 70 leading institutions across our country to review the role expand capacity to address current and future development challenges and strategies in a Renewable Energy sector. ICRPHGIRES-2021 achieved an environment where the authors and participants established their research relations and collaborations with various eminent academicians, research fellows and scientists from India. The presentation of research papers is happened on ten different tracks like Smart Grid Architectures, Smart Grid Implementation, Smart Grid Interconnection, Power and Renewable Energy, Smart Cities, Clean and Renewable Energy, Automation, Artificial Intelligence, IoT and Management in Emerging Technologies. Congratulation to the entire organizing team.

Faculty Development Program

JULY EVENTS:

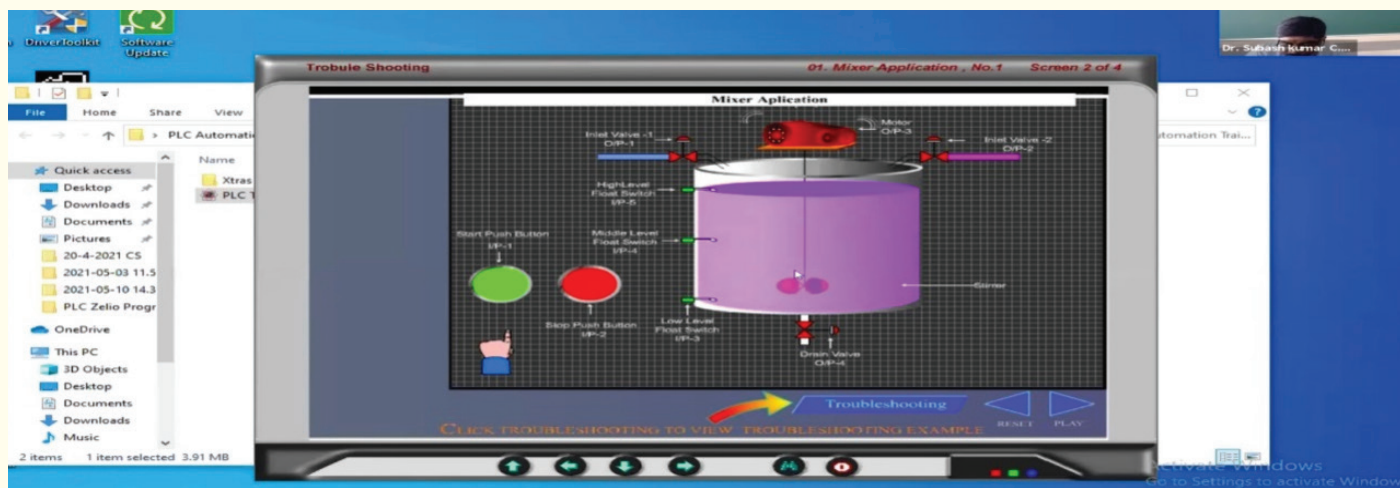
The Department of Electrical & Electronics Engineering, New Horizon College of Engineering organized ATAL-AICTE Faculty Development Program on “Implementation of Industry 4.0 & its Challenges” The rise of digital industrial technology, known as Industry 4.0, has transformed the machines and IT systems that are connected in the value chain.



Pic: Inauguration of Faculty Development Program

The objective of the Program was to provide exposure to Industry 4.0 concepts which revolutionize the boundaries between virtual reality and the real world. This concept incorporates interdisciplinary knowledge in artificial intelligence, machine learning, sensors and actuators, cloud computing, cognitive computing and Internet of Things. Throughout this FDP, the participants have got holistic information on various disciplines and their contributions, in realizing the concept of Industry 4.0. The recent trends in technological developments that form the building blocks of Industry 4.0 will be

covered in detail. The design principles, challenge and the future of employment was also addressed in the FDP. Program was organized by Dr. R.Mohandas, Mr. VinodKumar.S, Mr. Mohan B.S, Department of EEE, New Horizon College of Engineering, Bengaluru.



Pic: Introduction to PLC Programming – Dr. C S Subash Kumar

MARCH EVENTS:

In house Faculty Development Program “Training on Endless Automation” was held from 1st to 5th of March 2021. Faculty from Automobile, Civil, Electrical and Electronics, Electronics and Communication and Mechanical Engineering attended the program. The program was inaugurated by Dr. Manjunath, Principal, NHCE, Dr. M.Mahesh Co-director of IFCEEAE and the HOD EEE highlighted the importance and over view of the program.

The program was organized in such a way that elements of Industrial Automation was trained by Prof. Thomas BRIERE. Human Machine Interfacing, SCADA was trained by Mr. Suresh Butte, Automation project Engineer, Fluid control and Systems, Mr. Arindam Patra Deputy Manager, Eco buildings Schneider electric India handled session on Building Automation, Mr. Anand, project Engineer Techmech Systems handled session on Fire Alarm Systems.

The program was successfully completed by validictory ceremony on 5th of March 2021, by distributing participation certificates to the participants by Dr. Ganesh Prasad, Dean and HOD Mechanical Engineering and Dr. Sanjeev Sharma, HOD Electronics and Communication Engineering. The five days Faculty Development Program helped the participants to know the importance of Industrial and Building Automation and motivated them to involved in the R&D initiatives in the same field.



Pic:Inauguration of FDP Training on Endless Automation

Short-term Training Program

FEBRUARY EVENTS:

The Department of Electrical and Electronics Engineering organized an AICTE Sponsored online Short-Term Training Program "Smart Grid Technologies for Energy Efficiency and Active Demand Side Management" Phase 3: "An overview of Smart Grid Infrastructure for Demand Side Management" during 1st to 6th of February 2021. It was a grand success and got great positive feedback from all the participants.

Totally 12 resource people from various prestigious institutions in and around India have delivered their lectures on the area of Smart grid on loss reduction and rural electrification and demand side management. This Short-Term Training Program acted as a platform to train the trainers on Smart Grid Technologies to help the students to have successful careers in the Smart Grid industry. Congratulations to organizer's Dr. Singaravelan, Prof. Mohan B.S and Prof. Muniprakash T and the HOD EEE Dr. M.Mahesh for successful completion of events.

ABOUT THE SHORT-TERM TRAINING PROGRAM

Excessive usage of electricity in the residential sector is the main reason for frequent peak demand in India. Proper implementation of Demand-Side Management (DSM) along with the Energy-Efficient (EE) method is an efficient way to address these peak demand issues.

Smart Grid Technologies can be an efficient tool to implement DSM and EE. There are plenty of opportunities available in the public and private sectors to those who know Smart Grid Technologies. In this context, it is important to motivate faculty and industry personnel to get trained on Smart Grid Technologies. This Short-Term Training Program would act as a platform to train the trainers on Smart Grid Technologies to help the students to have successful careers in the Smart Grid industry.

OBJECTIVE:

- To train the trainer by providing theoretical & practical skills on Energy Efficiency and Active Demand Side Management with the latest smart grid technologies.
- To create awareness among the faculty about the opportunities available for students in the Smart Grid Industry.
- To train the faculty to upgrade their skills from the conventional power system technology to multidisciplinary smart grid technology.
- To introduce "OpenDSS and SGsim" open-source simulation tools used for smart grid technology.

EXPECTED OUTCOME AND BENEFITS TO FACULTY:

On completing the course, the faculty will be able

- To define the different components of the smart grid
- To choose appropriate smart grid technology to implement energy efficiency
- To demonstrate the active demand-side management by utilizing the smart grid technology
- To guide and teach students by providing the inputs of several smart grid technologies
- To apply the smart grid technologies on research and development frontiers

CHIEF PATRON
Dr. Mohan Manghnani
Chairman, NHEI, Bangalore

PATRONS
Dr. Manjunatha
Principal, NHCE, Bangalore

Dr. Gopalakrishnan.K
Prof & Dean – R&D, NHCE

CONVENER/ ORGANISING SECRETARY
Dr. Mahesh M
Prof & Head
Department of EEE

ORGANIZING COORDINATOR
Dr. Singaravelan A

ORGANIZING COMMITTEE
Mr. Mohan BS
Mr. Muni Prakash T

Free REGISTRATION

Link : <https://forms.gle/yonruZKeaDvg5tZG9>

WhatsApp : <https://chat.whatsapp.com/DYx5nk9yIwJGlwZXr6XPUB>

NEW HORIZON 50
COLLEGE OF ENGINEERING

Presents
A Short-Term Training Program (STTP)
On

"SMART GRID TECHNOLOGIES FOR ENERGY EFFICIENCY AND ACTIVE DEMAND SIDE MANAGEMENT"
Phase-III

"AN OVERVIEW OF SMART GRID INFRASTRUCTURE FOR DEMAND SIDE MANAGEMENT."

1st to 6th February 2021

Sponsored By


Organized By
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

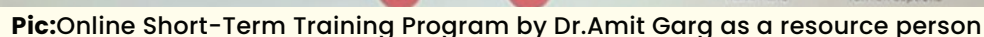


Pic: Brochure of Short-Term Training Program

JANUARY UARY EVENTS:

The Department of Electrical and Electronics Engineering organized – AICTE Sponsored Short Term Training Program (STTP) on THE ROLE OF IOT IN RENEWABLE ENERGY SOURCES DRIVING ELECTRICAL POWER GRIDS from 18th to 23rd of January 2021. The IoT devices in renewable energy management are used to monitor and control manually or automatically to manipulate the electricity production. The objectives achieved in the STTP are

- The faculty members of Engineering Institutions, Universities, Research Scholars, Industry persons attended online STTP sessions at Morning 10:00 AM to 12:00 PM and Afternoon Session 2:00 PM to 4:00 PM via Google meet app. The organizers Mr. Satishkumar D, Dr. Prabhakaran and Mrs. Rashmi N are successful in conducting this STTP with positive feedback and all the participants were provided with the E-certificates.





NEW HORIZON
COLLEGE OF ENGINEERING

50th Anniversary

**Six Days AICTE sponsored
Online Short-Term Training Program (STTP)**

**“SMART GRID TECHNOLOGIES FOR ENERGY EFFICIENCY
AND ACTIVE DEMAND SIDE MANAGEMENT”**

**Phase -II
“The Role of Smart Grids on Loss Reduction
and Rural Electrification”**

4th to 9th January 2021

Organized by
Department of
ELECTRICAL AND ELECTRONICS ENGINEERING



FN (10:00 AM to 12:00 PM)		AN (2:00 PM to 4:00 PM)	
 04 January 2021 ROLE OF STAND ALONE WIND DRIVEN DRESS FOR RURAL ELECTRIFICATION Dr. Vigneshwar S. IITGD Kanchipuram	 05 January 2021 ELECTRIC VEHICLE GRID INTEGRATION : ENABLING SUPPORT THROUGH ELECTRICITY STORAGE Dr. Pradeep Jain Assam Institute of Technology, Mangal	 04 January 2021 A NOVEL MULTISCALE INVERTER WITH REDUCED CIRCUIT COMPONENTS FOR SOLAR PV APPLICATIONS Associate Professor C. Pradeep Department of Electrical Engineering, VIT University, Vellore	 05 January 2021 CHALLENGES IN RENEWABLE SOURCE INTEGRATION Dr. Pradeep Jain Assam Institute of Technology, Mangal
 06 January 2021 DSG INTEGRATION ON LOSS REDUCTION AND PLANNING LOADS IN RURAL AREAS Dr. Pradeep Jain Professor, BIM College of Engineering, Bangalore	 07 January 2021 POWER CONVERTERS FOR SMART GRID ARCHITECTURES AND ITS USE CASES Dr. Pradeep Jain Professor & Associate Prof., IITGD, IITGD Kanchipuram	 06 January 2021 DEVELOPMENT OF SMART GRID INFRASTRUCTURE Professor, Dr. Jayaraman, Trancopham University, Annamalai Nagar, Coimbatore	 07 January 2021 AI BASED DEMAND SIDE INTEGRATION Dr. Jayaraman, Trancopham University, Annamalai Nagar, Coimbatore
 08 January 2021 DIGITAL COOPER FOR THE FUTURE Professor, Rajaraja Institute of Technology, Coimbatore	 09 January 2021 CONTROL OF GRID-CONNECTED POWER CONVERTERS Dr. Arun Kumar S. Reddy Vellore Institute of Technology, Vellore	 08 January 2021 CONTROL AND MANAGEMENT OF ENERGY STORAGE SYSTEM FOR ENERGY EFFICIENCY Associate Professor, CHETU University, Bangalore	 09 January 2021 PROTECTION STRATEGIES IN SMART GRID SCENARIO Dr. Arun Kumar S. Reddy Birla Institute of Technology & Science (BITS), Pilani

Pic:Brochure of Online Short-Term Training Program

Workshop

JAUNARY EVENTS:

The Department of Electrical and Electronics Engineering has organized 5 days Workshop on Research Conclave on Power Electronics (Online Mode) from 25th to 29th of January 2021. This workshop is to kindle the research minds towards innovation. This Conclave also intends to provide an opportunity for young researchers in the field of Electrical Engineering for adoption and enhancement of recent advancements and Research in Power electronics. The organizers were successful in conducting, with positive feedback and all the participants were provided with the E-certificates.

SPEAKERS OF CONCLAVE



OPTIMIZATION TECHNIQUES IN ELECTRICAL ENGINEERING
Dr. A. Soundarajan
Associate professor,
PSG college of Technology, Coimbatore



RESEARCH CHALLENGES IN RENEWABLE ENERGY SYSTEMS
Dr. V. Karthikeyan
Assistant professor,
NIT, Calicut



RESEARCH ASPECTS IN POWER QUALITY
Dr. C. Subash kumar
Associate professor,
PSG Institute of Technology & Applied Research, Coimbatore



'MULTILEVEL INVERTER' RESEARCH PERSPECTIVES
Dr. M. Kalliamoorthy
Associate Professor,
Dr. Mahalingam College of Engineering & Technology, Pollachi



IOT & SECURITY FOR SMART GRID APPLICATIONS USING POWER ELECTRONICS
Mr. S. Selvakumar
Head, Engineering & Design,
Power projects, Chennai



POWER ELECTRONICS-A LINCHPIN TO MATERIAL JOINING PROCESS
Dr. Arungalavendan
Associate Professor,
Dayananda Sagar University, Bengaluru



DESIGN OF HYBRID DISTRIBUTED GENERATOR FOR EV CHARGING
Dr. M. M Rajan Singaravelan
Assistant Professor,
NIT, Pondicherry



'PWM TECHNIQUES' A RESEARCH PERCEPTIVE
Dr. E. Chandrasekaran
Professor, Coimbatore Institute of Technology, Coimbatore



RECENT TRENDS IN POWER ELECTRONICS & DRIVES
Dr. F. T. JOSH
Assistant professor(SG),
Karunya University, Coimbatore



RESEARCH OPPURTUNITIES IN WIRELESS CHARGING SYSTEMS IN ELECTRICAL VEHICLES
Dr. C. BharathiRaja
Associate Professor,
SRM Institute of Science & Technology, Chennai

ABOUT RESEARCH CONCLAVE :
The research conclave is organized to kindle the research minds towards innovation. It aims to provide a gateway for scholars to get the ideas to pursue their research successfully. The conclave also intends to provide an opportunity for young researchers in the field of Electrical Engineering for adoption in EV charging, Electrical vehicles and renewable energy systems.

ELIGIBILITY:
This programme is open to the faculty members of Electrical and Electronics Engineering, Research Scholars, People from Industry and allied branches of Engineering , Basic Science Departments of AICTE approved Engineering Colleges.

"Research is to see what everybody else has seen and to think what nobody else has thought".

Note: E-certificate will be issued to the participants who have attended the program for all sessions.

CONTACT DETAILS
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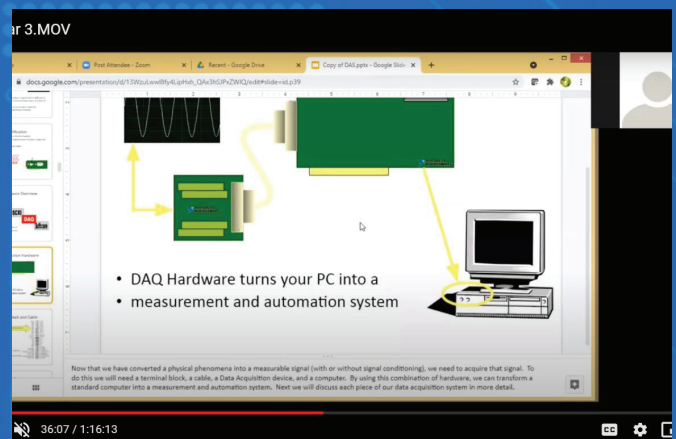
Pic: Brochure of Online Short-Term Training Program

WEBINAR

JULY EVENTS:

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru organised the Webinar on "Real Time Implementation of Switch Mode DC Converter" on 30th of June 2021, Wednesday from 05:00 PM to 06:30 PM in association with IEEE PELS Student Branch Chapter of NHCE. The objective of the program is to bring the researchers and academic experts from reputed institutes of our country to a collective gathering for exchanging and sharing the knowledge about the recent developments and research challenges in Switch Mode DC Converter. The entire session is handled by a resource person Dr. R. Saravanakumar, Professor, Department of Control and Automation, School of Electrical Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India and delivered a speech with a wide range of industrial applications. The entire session was informative and enthusiastic manner in the area of power electronics industry. The eminent expert from the VIT Deemed-to-be-University delivered the

lecture and his talk has been well received by the 163 participants. Congratulations to Event coordinator Dr. Vinoth Kumar K, Associate Professor, Department of EEE, NHCE & IEEE PELS NHCE SBC Advisor successfully completing this event.



Pic: Webinar on Real Time Implementation of Switch Mode DC Converter

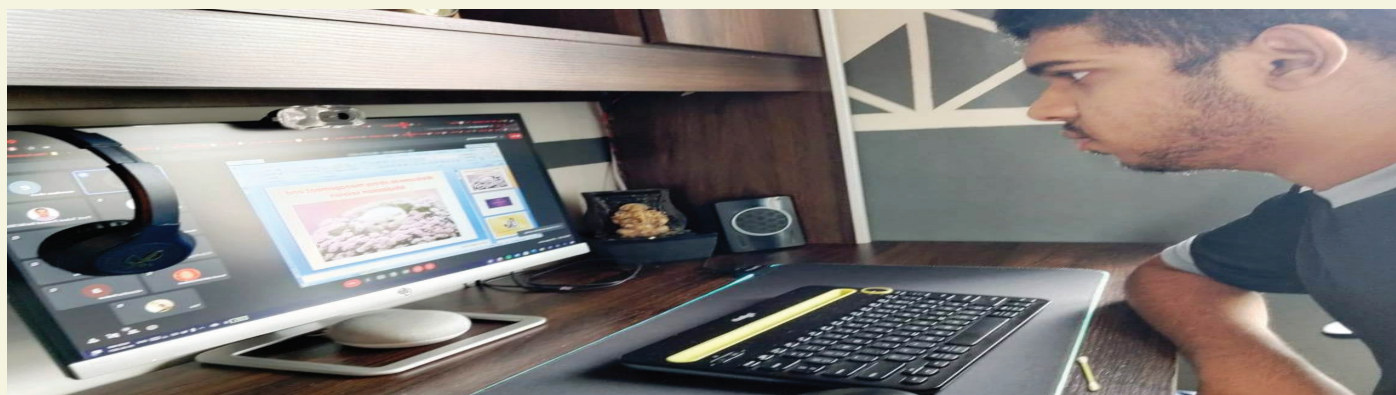
JUNE EVENTS:

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru organized the Webinar on “Students’ Perception and Preference for Online Education in India During COVID -19 Pandemic” on 26th of June 2021, in association with IEEE PELS Student Branch Chapter of NHCE. The current worldwide trend is to learn online since the corona virus pandemic outbreak, whereby E-learning is not optional rather it is mandatory. This session has been carried out to assess the effectiveness of E-Learning facility for both the students and faculty. There are few common problems faced by students in e-Learning classes and which they need to be solved through proper initiatives for the students future benefits, Adaptability Struggle, Technical Issues, Computer Literacy, Time Management and Self-Motivation. The session was handled by a resource person Mr. Muthuprasad T, Scientist-B (Forest Economics) Division of Forestry Statistics Directorate of Administration ICFRE (Head Quarters), Dehradun. It was organized by Mr. Muniprakash, Sr Asst. Professor and conveyed by Dr. M.Mahesh, HOD - EEE Department, New Horizon College of Engineering.

The brochure features logos for IEEE NHCE Student Branch, New Horizon College of Engineering, and IEEE Power Electronics Society. It includes the text: "Department of Electrical and Electronics Engineering, IEEE PELS NHCE STUDENT BRANCH CHAPTER (GEO-CODE:SBC66131)", "Webinar on 'Students Perception and Preference for Online Education in India During COVID -19 Pandemic'", "Free registration", and the URL "https://tinyurl.com/cjwfntix". A calendar icon shows the date "JUNE 26 4pm". The resource person is "Dr. Muthuprasad T, Scientist-B (Forest Economics), Division of Forestry Statistics Directorate of Administration ICFRE (Head Quarters), Dehradun". Other organizers listed are Dr. M. Mahesh, Mr. T Muni Prakash, and Mr. Nischal Dinesh.

Pic: Brochure of online webinar

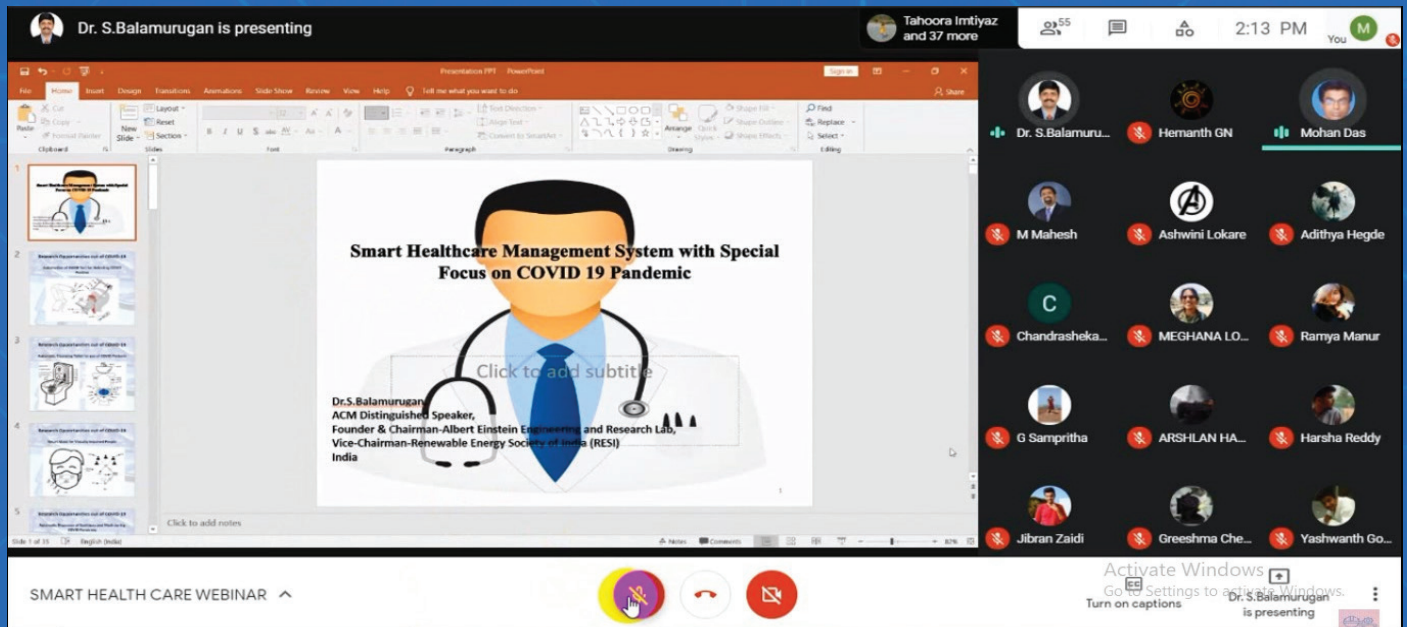
The Department of Electrical and Electronics Engineering, New Horizon College of Engineering – Bengaluru, Organized the National Webinar on “Stress Management and Meditation”, in association with IEEE Power Electronics Society Student Branch Chapter on 5th of June 2021. Resource person: B.K.Chaya, Raj Yoga Teacher, Brahma Kumaris, Bangalore. It was organized by Mr. Satish Kumar.D, Sr Asst. Professor and conveyed by Dr. M.Mahesh, HOD - EEE Department, New Horizon College of Engineering.



Pic: webinar attending by student participant

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru organized the Webinar on “Smart Health Care System with Special Focus on Covid 19 Pandemic” on 1st of June 2021. The objective of the Program is in a Smart Healthcare System, privacy is an important issue to be taken into consideration when one wants to use the information, especially at a time when the sensitive information is to be disclosed. In order to protect sensitive information application of privacy preserving data mining techniques are employed. It has recently become clear that the data must be

adequately protected from unauthorized disclosure when testing new applications related to the data. This lecture aims at delivering a detailed overview of Smart Healthcare System with special focus on COVID-19 Pandemics. The entire session is handled by a resource person Dr. S.Balamurugan, SMIEEE, ACM Distinguished Speaker, Founder and Director- Albert Einstein Engineering and Research Labs, Vice Chairman-Renewable Energy Society of India.



Pic: Online Webinar on Smart Health Care System with Special Focus on Covid 19 Pandemic

MAYEVENTS:

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering – Bengaluru. Organized a National Webinar on: “IEEE Awareness Talk”, in association with IEEE Power Electronics Society Student Branch Chapter on 6th of May 2021. The speaker is Dr. Rajesh M. Pindoriya, Project Engineer from Indian Institute of Technology, Mandi.

Topics Covered were: What is IEEE, Value of IEEE membership and its benefits, IEEE Volunteering Opportunities IEEE Travel Grants, IEEE Societies offering grants, IEEE Student Project grants, etc. Session organized for UG – PG Students and all IEEE members by Mr. Satish Kumar.D Sr. Asst Professor and supported by the HOD DR. M.Mahesh, EEE Department, NHCE.

EXPERT/GUEST LECTURE

JULY EVENTS :

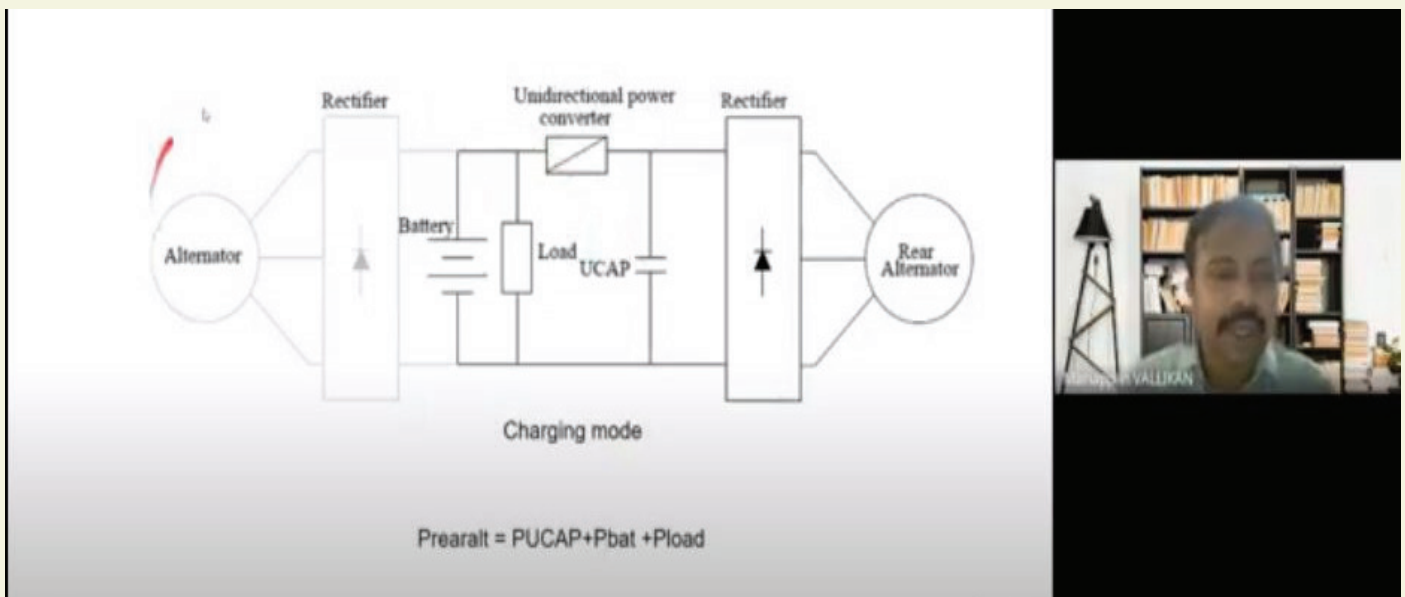
The Department of EEE, New Horizon College of Engineering organized “GUEST LECTURE” on Evolving Technologies & Progressive Markets in Power Systems, 27th of July 2021 from 10:00 AM to 12:00 PM for 4th Sem EEE students. Session was organized via GOOGLE meet online platform. The need for well-qualified engineers & professionals is more critical with complex problems & global challenges. Further, making the educational curricular and training more conducive to the technological developments are becoming a top priority.



Pic: Guest Lecture organized in Smart class room EEE

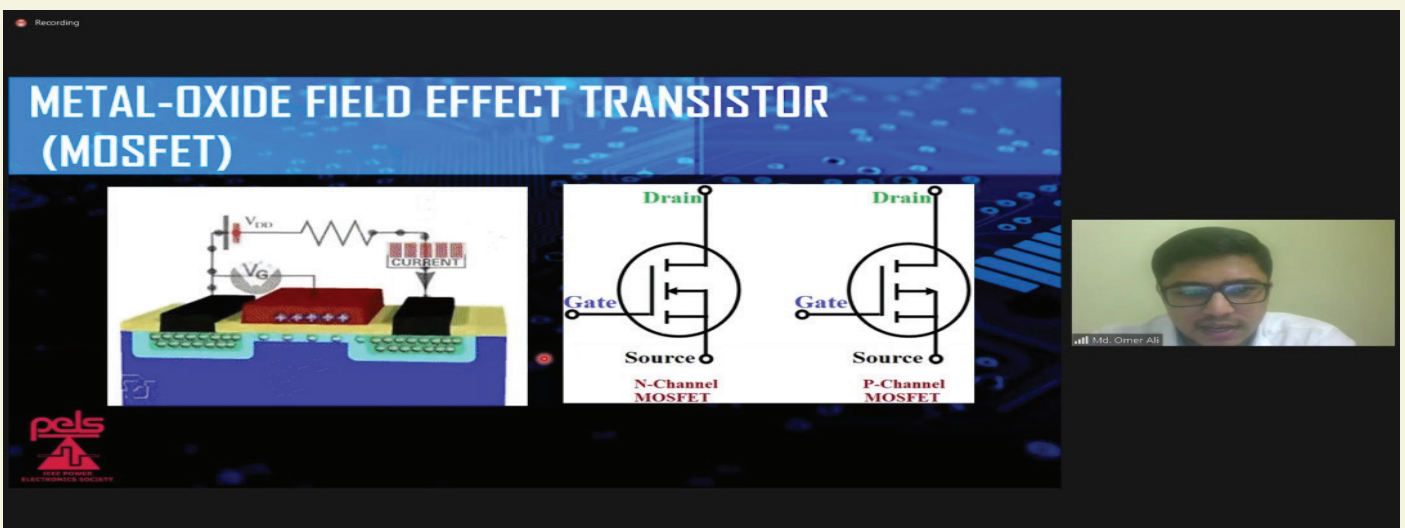
Under the Venture “QuikTeckTalk (QTT)”, expert have been working with various Institutions (including NPTI), to bridge the gap between organically evolving academia and exponentially growing technological advancements. The students should be able to increase own attitude towards innovation and apply them in research and development initiatives. Participated students are from 4th semester EEE shared their positive feedback with the expert Mr. Prasad S Ranga, is from QTT, for Services on Technical Training, Skill Development & Student Innovation & Product development Modules India. This would be a key part, in equipping the young engineers with the knowledge & skills to prepare them better to face diverse industry careers.

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering Organized Online Guest lecture on “Simulation Model for prediction of optimum fuel economy” in association with IEEE PELS Student Branch chapter, 6th of July 2021, 11.00 AM– 12.00 PM (IST) for 6th Semester EEE students. Resource person Mr. V. Mariappan, Deputy Manager, Valeo India Pvt Ltd, Chennai. Participated students are from EEE shared their positive feedback with the expert. Congratulations to Coordinators Mr. Satish Kumar. D & Ms. Anitha. A from EEE Department, New Horizon College of Engineering, Bengaluru.



Pic: Online Guest lecture on Simulation Model for prediction of optimum fuel economy

IEEE PELS NHCE Student Branch Chapter of Electrical & Electronics Engineering Department, NHCE organized the Students Technical Event on “PRAUDYOGEEK” from 9th to 10th of July 2021 for the benefit of B.E/B.Tech students of NHCE and other External Institutions. The whole aim behind the event is to familiarize the participants with the basic principles and the concepts of circuit building and Simulation. This event benefitted 139 participants in having a better understanding of logic building in electric circuits. Congratulations to Event Coordinator Dr. Vinoth Kumar K, Associate Professor, Department of EEE, NHCE & IEEE PELS NHCE SBC Advisor successfully organized this event.



Pic: Students Technical Event on PRAUDYOGEEK

The Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru organized the guest lecture on “Modern Trends in Power System Protection” on 3rd of July 2021, 03.00 PM – 04.00 PM (IST) and 120 Students and 2 Faculties are benefitted.

The objective of the programme is to make the student understand about modern trends in power system protection, different testing of equipment, the conceptual as well as electrical domain and latest technologies used in the protection. The session is handled by a resource person Mr. Balakrishna, Technical Manager, ECIL. Students had acquired good knowledge about protection. Congratulations to Coordinator Ms. Kavita Ch from EEE Department, New Horizon College of Engineering, Bengaluru.

NEW HORIZON COLLEGE OF ENGINEERING
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA
New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103

50th Golden Jubilee
YEARS OF EXCELLENCE IN EDUCATION

IEEE NHCE STUDENT BRANCH

ECIL
ELECTRONICS CORPORATION OF INDIA LIMITED

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Presents
An Expert Lecture on
"Modern Trends in Power System Protection"

POWER SYSTEM PROTECTION

OUTCOME

- ❖ Understand the conceptual as well as practical knowledge of electrical domain & latest technologies being used to achieve the same.
- ❖ Learn the fundamentals of Power System Protection Principles.
- ❖ Learning modern trends in power system protection & its applications in 'Electrical & Electronics Engineering' domain.

Speaker
Balakrishna D
Technical Manager
Electronics Corporation of India Limited
(A Govt India Enterprise- DAE),
HYDERABAD, 500062

Convener
Dr. M Mahesh
Professor & HoD-EEE

Faculty Co-ordinator:
Ms. Kavitha Chenna Reddy
Ph- 9620870621

Event Schedule:
3rd July, 2021 (Saturday) : From 03:00pm to 04:00pm

Pic: Brochure on Modern Trends in Power System Protection guest lecture

The Department of EEE, New Horizon College of Engineering organized an International Webinar on “Controlling Megawatts with Power Electronics” in association with IEEE PELS NHCE Student Branch Chapter on 11th of June 2021, will defined the concept of research trends of automation in industry. Dr. Tobias Geyer, ABB Corporate Research, Switzerland, and Stellenbosch University, South Africa served as resource person for an international webinar and delivered a speech on high power converters in the megawatt range link large wind turbines with the grid, help transfer electrical power over long distances and drive large motors. To operate these converters intelligent control algorithms are required. This talk introduces high power electronics reviews its control challenges and proposes model predictive control methods. For large electric machines, as in wind turbines, these control methods increase the converter power and their availability. For HVDC-connected offshore wind farms, intelligent control is required to ensure reliable operation of the converter-based power grid. The eminent expert from Industry delivered the lecture and his talk has been very well received by the participants. The session was organized by Coordinator Dr. Vinoth Kumar K, Associate Professor and conveyed by Dr. M. Mahesh, HOD - EEE Department, New Horizon College of Engineering.

Controlling Megawatts with Power Electronics

Tobias Geyer
ABB Medium-Voltage Drives
ETH Zurich and Stellenbosch University

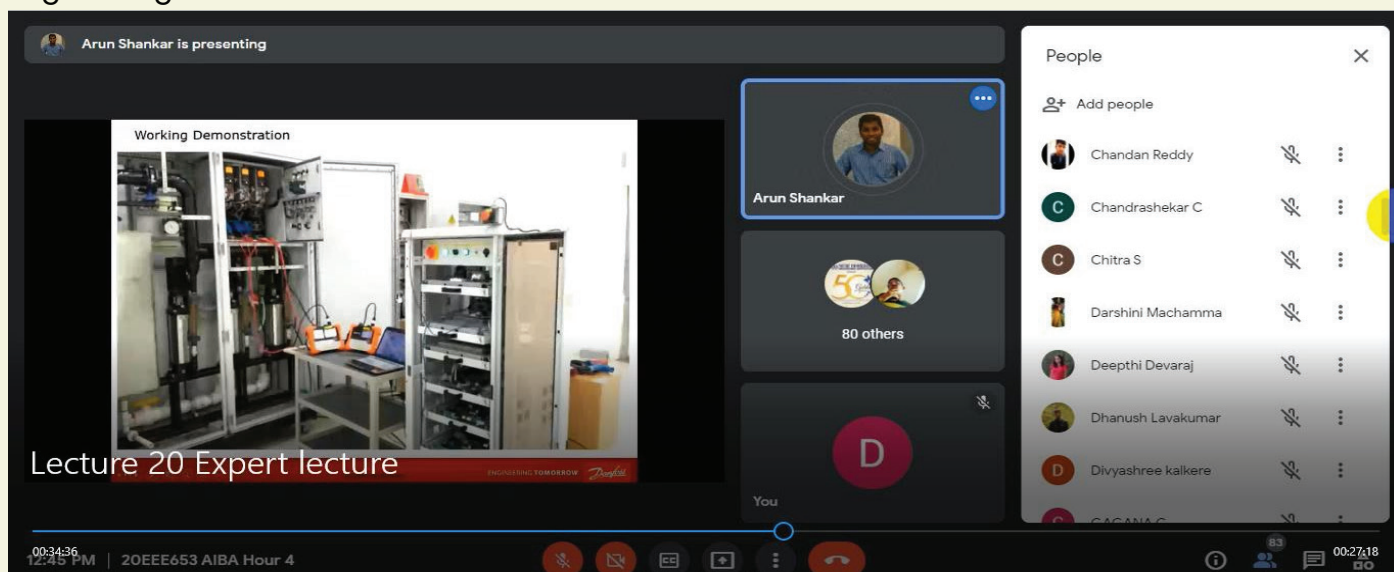
11. June 2021

Participants:

- TG tobias geyer
- 18059-EE-021
- 1NH18EC703_Ankush Bhattacha...
- 1NH19AU047 Mahalakshmi
- 1NH20CV009 Aman
- 20125A0209 Kosuri Reddyjyosh...
- 20125A0212 Rathana Kumari M...
- Agarwal Rahat, Manoj kumar 1...
- Ashu Anand (EEE-0A)
- Badri narayan Mishra
- Basireddy Mythili
- CHAIR IEEE PELS - Nischal Dinesh
- Chandrashekar C - 1NH18EE712

Pic: Webinar on Controlling Megawatts with Power Electronics in association with IEEE PELS NHCE Student Branch Chapter

The Department of EEE, New Horizon College of Engineering organized an Expert Lecture on “Role of Graphical Programming Language in Industrial Automation” in association with Danfoss Industries Pvt Ltd, Chennai on 9th of June 2021. Session defined the concept of research trends of automation in industry. Mr. V.K Arun Shankar, Testing Engineer, Danfoss Drives Segment – R&D (SW), Sriperumbudur served as resource person for an Expert Lecture and delivered a speech on Graphical Programming Language interconnections with synchronous motors and generators is available with a wide range of industrial applications. Expert also mentioned that electric motors have become an integral part of industrial production and convert electrical energy into mechanical energy, enabling industrial machines to perform the tasks assigned to them by using graphical programming language. The programmed covered the following important aspects namely applications of industrial automation in Danfoss. The eminent expert from Industry delivered the lecture and his talk has been very well received by the participants. Session was benefited by III Year B.E EEE 6th Semester students of NHCE – 100 Students and it was organized by Dr. Vinoth Kumar K, Associate Professor and conveyed by Dr. M.Mahesh, HOD – EEE Department, New Horizon College of Engineering.



Pic: Expert Lecture on Role of Graphical Programming Language in Industrial Automation

INDUSTRIAL VISIT

APRIL EVENTS:

Department of EEE organized Industrial Visit to SMC Corporation was held on 6th of April 2021, the objective of the meeting was to visit the training centre of SMC and know the range of pneumatic products and to discuss the possibilities of further extension of the Indo-French Centre of Excellence in Electricity Automation and Energy with Pneumatic work benches. The requirements of the work benches were discussed with the sales team and requested for the quote.

The Beneficiary are listed below

Members	Designation
Prof. Thomas BRIERE	Director, indo French centre of excellence in Electricity, Automation and energy(IFCEEAE)
Dr. M Mahesh	Professor/HOD-EEE & Co director IFCEEAE, NHCE
Prof. Binod Kumar	Head IIC, NHCE
Prof. Deepa V B	Senior Assistant Professor- EEE, NHCE



Pic: Industrial Visit to SMC Corporation by faculty and the HOD EEE, NHCE

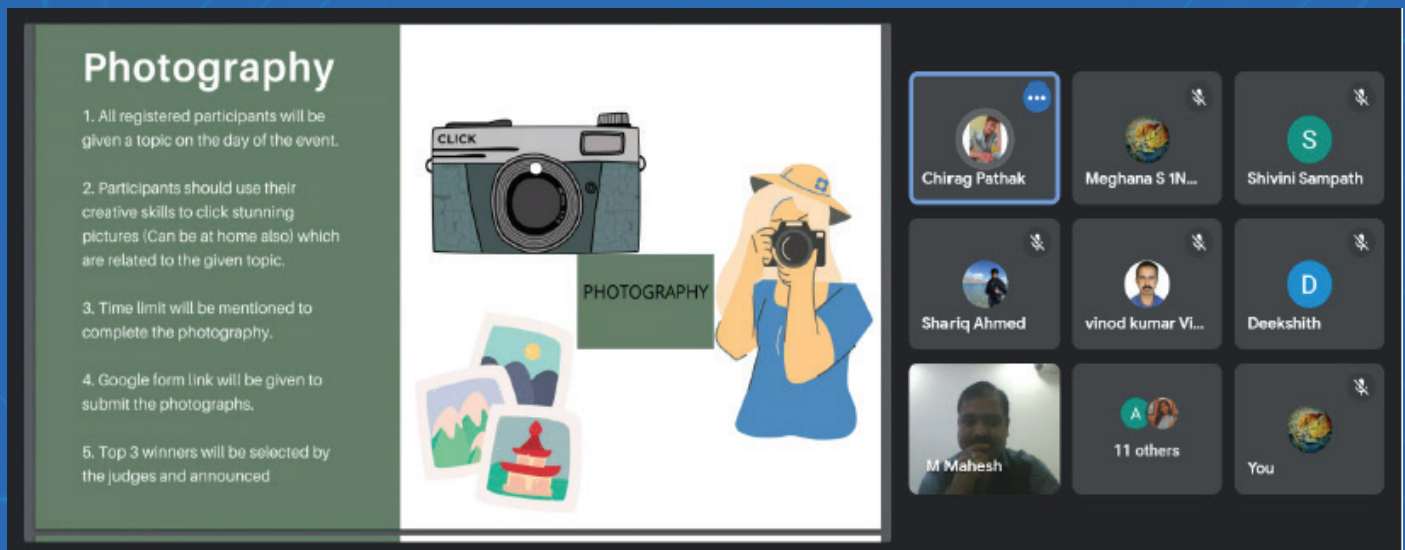
Club Activities

JULY EVENTS:

"GREEN FEST 2.0" was conducted by the Green Energy Club, Electrical and Electronics Engineering Department, NHCE on 11th and 12th of July 2021 to bring out the best participants, to acquire knowledge on various topics and enhance the participants thinking skills, creative skills and their knowledge on various topics like Environment, Technical, Riddles, Entertainment & General Knowledge. The event was inaugurated by HOD of the EEE Department, Dr. M Mahesh in the presence of the faculty coordinator of Green Energy Club, Mr. Vinod Kumar S and all the participants. All participated in events like PHOTOGRAPHY, RAPID FIRE, CIRCUIT DEBUG, T-SHIRT DESIGN, TRIVIA.

WINNERS OF "PHOTOGRAPHY"	WINNERS OF "RAPID FIRE"
1. Revanth Gowda A 1NH18CV147 2. Prashanth M N 1NH18CV134 3. Shivani Sampath 1NH18CS745	1. Vaibhav Sharma (1Year I section) 2. Akangsha das 1NH20CS019 3. ShivaniSampath 1NH18CS745
WINNERS OF "CIRCUIT DEBUG"	WINNERS OF "T-SHIRT DESIGN"
1. Vishwas 1NH19EC757 2. Vaibhav Sharma (1Year I section) 3. Hemanth G N 1NH19EE037	1. Vishwas 1NHEC757
WINNERS OF "TRIVIA"	
1. Akangsha Das - 1NH20CS019 2. Vaibhav Sharma - (1Year I section)	

The event was successfully completed with the vote thanks by the Event coordinator - Chirag Pathak and all the winners and participants were provided with the E-certificates.



Pic: Events of GREEN FEST 2.0 by the Green Energy Club, EEE, NHCE

JUNE EVENTS:

The U-Create club in association with the Department of Electrical and Electronics presents the event. The club has taken an interesting approach of the typical game of Escape Room to fit the current situation where everything is online and virtual.

The event is conducted on Microsoft Teams. In order to escape the "virtual" room, participants are required to use their wits and problem-solving skills to solve a variety of questions which feature a broad range of topics such as technology, brain teasers, space and books. These questions can be in the form of a simple picture, or a puzzle, or a well framed riddle, so the participants must put on their thinking hats to escape the room before time runs out. E-certificates were also provided to all the participants. The faculty Coordinators Dr. A. Singaravelan and Mr. Mohan BS thank all teaching staff, club members, and participants for making this event a grand success.



Pic: Brochure of U-CREATE club, EEE, NHCE

MAY EVENTS:

The Terranova (Ideathon) was conducted by the Green energy Club, Department of Electrical and Electronics Engineering, on 22nd & 23rd of May 2021 in online mode (Google Meet). Inaugurated by Dr. M. Mahesh, HOD-EEE, Club Coordinator. Mr. Vinod Kumar S, Judges are Mr. Ramesh Balakrishnan, Assistant Professor Life skills Department, New Horizon College of Engineering, Bengaluru and Dr. R. Jayapragash, Associate Professor, School of Electrical Engineering (SELECT), VIT University, Chennai in the presence of all members of the club and participants. The primary objective of the ideathon was to bring out the creative, inquisitive and innovative side of the participants who bring out their solutions to the world's biggest problem and thrive to make a change in this world.

ACTIVITIES: The event had three Rounds

1. Preliminary Round- All the registered 50 participants took part in the Preliminary round, in this all participants were asked questions based on Global and Environmental issues and general knowledge through Quizizz platform. In those, top 15 participants were selected for next level.

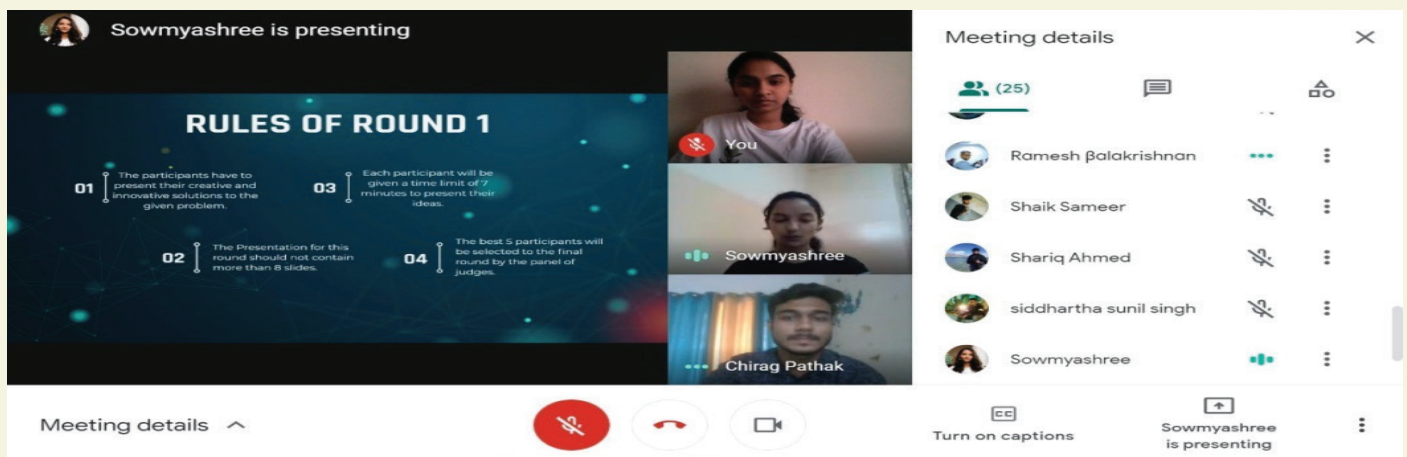
2. Round 1 – Each participant was given a time limit of 5 minutes to present their ideas and showcase their creativity and give innovative solutions to the given problem. In those the best 5 participants were selected to the final round by the panel of judges

3. Round 2 (Finals) – The Selected participants were given 7 minutes to explain their idea in detail. The participants were asked questions by the judges after each presentation. The points were awarded based on the presentation and the given solutions. The best two were awarded.

After the final round, results were announced by the judges. The winners of the event were:

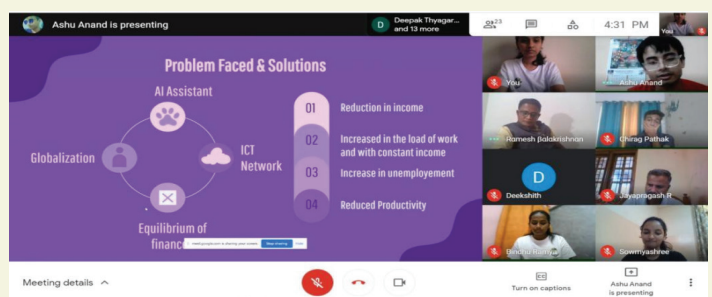
1st: Shruthi Singh (1NH20EC011)

2nd: Anarghya Rao (1NH19IS012)



Pic: Terranova (Ideathon) by the Green energy Club, EEE, NHCE

Pic: Events organized and student's participation in Green energy Club, EEE, NHCE



MARCH EVENTS:

The CLEANLINESS DRIVE was conducted by the Green energy Club, Department of Electrical and Electronics Engineering, on 4th of March 2020 at Jakkur lake in association with JalaPoshan-NGO. The main objective to keep the Jakkur Lake surroundings clean and sustaining the plants and trees by mulching and watering them. And safe disposal of Bio masses around the lake. Around 50 volunteers were representing college.

Activities by the drive are:

1. Watering all the plants and trees on either side of the walking tracks.
2. Mulching – it is a process to ensure that all bare soil is covered with fresh leaves in order to provide nitrogen to other plants.
3. Clearing the pathway and walking tracks from plastic waste and disposing them. The cleanliness drive helped volunteers to gain knowledge on many aspects of plants, biomass and as to how much their sustainability matters.



Pic: Cleanliness Drive was conducted by the Green energy Club, EEE, NHCE

JAUNARY EVENTS:

The Department has initiated a new student club called "U- Create". To stimulate lateral thinking, inculcate creative and innovative thoughts among the young budding engineers for the enhancement of society. As the club is a new initiative from the department. The club needed a logo, to exemplify the club objective. In this regard, a Logo Design competition was scheduled for a week in the month of January uary from 11th of January 2021 to 16th of January 2021. Winner prize amount of 500 rupees. The participants of the Logo Design Competition are listed below

- 1) Ms. Sanskriti Agarwalla
- 2) Ms. Likitha J
- 3) Mr. Ashu Anand
- 4) Mr. Hemanth GN
- 5) Ms. Harshitha R
- 6) Ms. Rachna Palli
- 7) Mr. Abhisek Bedant

Pic: Logo Design competition certificate of U- Create club event



The department shortlisted the winner as Ms. Rachna Palli from 2nd Year EEE. The prize amount Rs. 500/- was handed over to the winner on 19th of January 2021 by Dr. M. Mahesh, HOD, Dept of EEE. On behalf of the U-Create Club, The faculty Coordinators Dr. A. Singaravelan and Mr. Mohan BS thank all teaching staff, club members, and participants for making this event a grand success.

