Dec 2022

Volume 4, Issue 1

LIVEWIRE!

A bi-annual newsletter

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

We are glad to present Volume 4 , Issue 1 of Livewire!, the Electrical and Electronics Engineering department newsletter. This issue contains reports regarding departmental advisory board meeting as well as reports on the various activities conducated with the objective of overall student development by the EEE Department, BMSIT & M. This issue also consists of technical, non-technical articles and other creative work by the students of the department

CHIEF EDITOR:
Dr. Prashant A. Athavale
HoD, Assistant Professor , EEE

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EDITORIAL TEAM
Mr.Vikram Chekuri
Assistant Professor, EEE

Vision of the Department

To emerge as one of the finest Electrical & Electronics Engineering Departments facilitating the development of competent professionals, contributing to the betterment of society.

Mission of the Department

Create a motivating environment for learning Electrical Sciences through teaching, research, effective use of state-of-the-art facilities and outreach activities.

Date: 09.07.2022

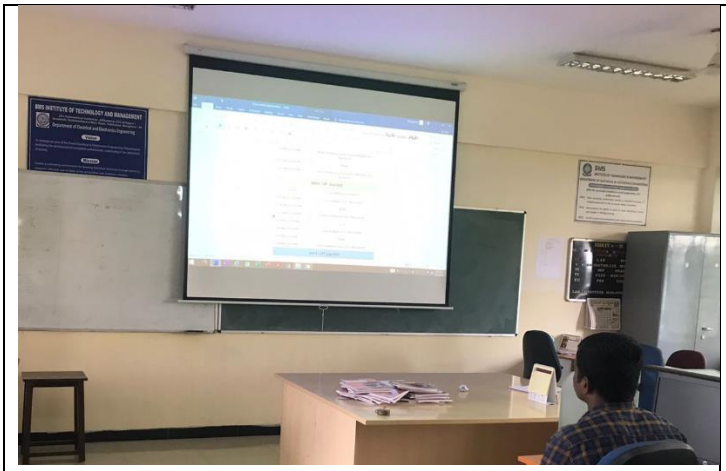
MEMORABLE MOMENTS / BEST PRACTICES:

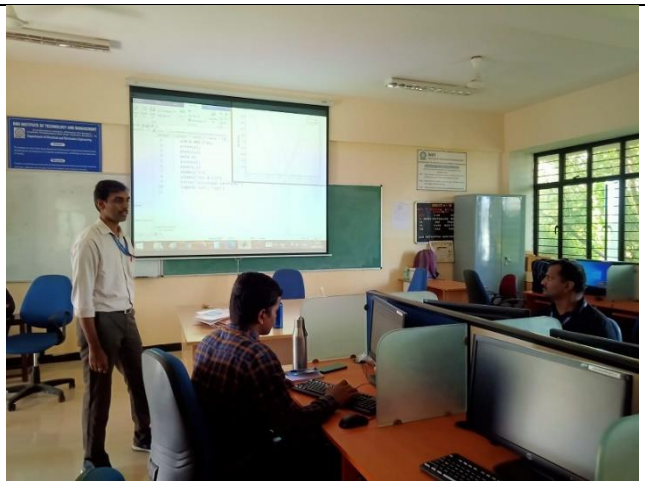
BoE:

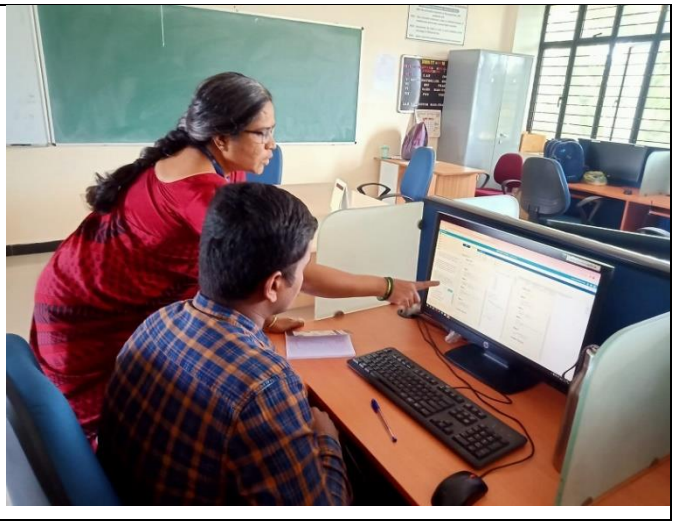
- Prof. H.D. Kattimani, Associate Professor, Dept. of EEE was a BoE Member for UG, PG and Ph.D Programs of Electrical and Electronics Engineering, Visvesvaraya Technology University, Belagavi on 22.06.2022 and 23.06.2022.
- Dr. Madhu Palati, Assistant Professor, Dept. of EEE was a BoE Member for UG Programs of Electrical and Electronics Engineering, Nitte Meenakshi Institute of Technology on 27.06.2022.

OPEN COURSE:

The Open Course titled "Practical MATLAB Applications for Electrical Engineers" has been organised by E&EE Department, for the 4th and 6th Sem students from 13.06.2022 to 17.06.2022. Introduction to the basic MATLAB coding, and the SIMULINK in the first few sessions of the course. Gradually the concepts related to MATLAB applications were introduced. The students acquired hands-on experience on MATLAB and SIMULINK in four major Electrical Engineering areas: Basic Electrical Circuits, Electrical Machines, Power Systems and Control Systems.







Department Project presentations

Sl no:	Department	No: of Batches	Dates	No: of Students Participated	Description (Brief Domains)
1	EEE	19	28.06.2022 & 29.06.2022	71	The students have chosen variety of projects like core Electrical engineering, IoT, and simulation involving various IT tools.

Department Technical Seminar presentations

Sl no:	Department	No: of Batches	Dates	No: of Students	Description (Brief Domains)
1	EEE	-	07.06.2022 to 11.06.2022	71	Switch Gear and Protection, GIS, Electric vehicles, Power Generation and Renewable Energy

Department Internship Seminar Presentations

Sl no:	Department	No: of Batches	Dates	No: of Students	Description (Brief Domains)
1	EEE	-	16.06.2022 to 18.06.2022	71	Power Systems, Web Development, Electronic systems

Classes handled by the Department (from 1.06.2022 to 30.06.2022)

Sl no:	Department	Semester	No: of Theory Classes	No: of Practical's Classes
1	EEE	2	52	4
2	EEE	4	82	7
3	EEE	6	60	6
4	EEE	8	24	-

PARENT – TEACHER MEETING :

Parent – Teacher Meeting (PTM) was organized on 23.07.2022, in the department of Electrical and Electronics Engineering. Dr. N. Ramarao, HOD EEE, welcomed the Parents and briefed about the department activities related to academics, co-curricular and other activities going on. It was told to parents that college is taking every action to keep the students enthusiasm up to involve in academic and related activities. He briefed on the importance continuous practicing of numerical subjects to get good score in the exams. Subject handling Faculty members and Parents were asked to share their views on academic issues and performance of students and to share any doubts and quarries they have.

OPEN DAY:

The projects carried out under the Project Based Learning by the students of Department of Electrical and Electrical Engineering were exhibited on 09.07.2022 at the Open Day. The students of 4th and 6th Semester participated in the event. Prior to the Open Day several projects carried out under the PBL were scrutinized by Dr Prashanth N A, Prof Suma Umesh, Prof Shilpa G, Prof Vikram Chekuri in the preliminary rounds. On the Open Day, Mr L. Lakshminarayan (AGM-BHEL) was invited as an external Judge. Dr Madhu Palati from EEE Department, BMSIT&M was the internal judge. The shortlisted projects were further evaluated on the Open Day.

NBA Expert Committee Visit:

The NBA Expert Committee visited the EEE Department on 15th, 16th and 17th of July, 2022 for the review of the Outcomes Based Education teaching-learning process being practiced here. The Committee during the inspection, interacted with the stakeholders of the EEE Program (Students, parents, Alumni, Industry and Management) and gathered various inputs to establish the efficacy of the best practices in our Department. The Committee consisted of 2 members from reputed universities, and the interaction with them was very useful for the faculty members of the Department.

INDUSTRIAL VISIT:

Department of Electrical and Electronics Engineering has organised Industrial visit to 4th sem students from 29.07.2022 to 30.07.2022.A total of 39 students have joined for this industrial visit accompanied by three faculties. During the Visit, Students have visited Linganamakki dam and the hydroelectric power house which is having a generation capacity of 54MW. Next day visited hydroelectric power plant in Varahi which is built in a cave, having total four units each generating unit capacity is 115MW. Students have seen the type of turbine used, generator, step up transformer, penstocks, controlling unit, governor, wicket gates, tailrace and spill way. Also seen how the generation is varied using SCADA system in the control room.

DATE: 07.09.2022

MOUS / AWARDS / RECOGNITIONS

Session Chair:

- Dr. Madhu Palati, Assistant Professor, Department of Electrical and Electronics Engineering was session chair for "2nd International Conference on Research Trends in Engineering & Management (ICRTEM-2022)" Organized by R R Institute of Technology, Bengaluru, India held on 25.08.2022 & 26.08.2022.

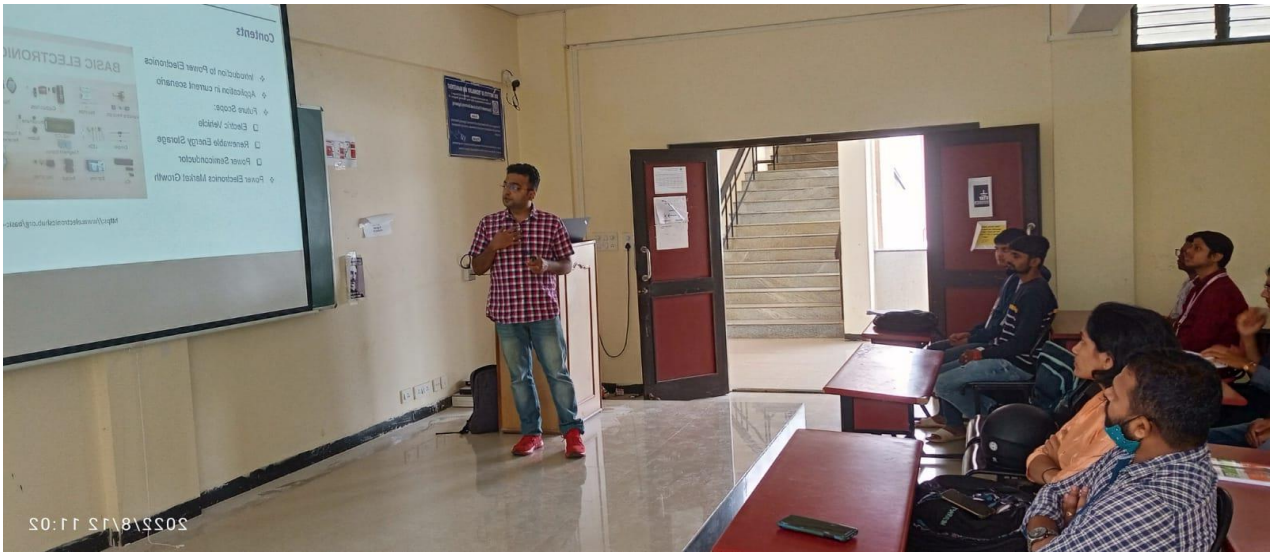
Faculty Awards:

- Dr.Madhu Palati, Assistant Professor, Department of Electrical and Electronics Engineering received certificate of Excellence in reviewing the paper in "Journal of Engineering Research and Reports"

WORKSHOPS / FACULTY DEVELOPMENT PROGRAMMES/ FESTS

Expert talk organized:

Department of Electrical and Electronics Engineering organized an expert talk on the topic "Power Electronics Applications in Future Industries" for 4th sem, EEE students on 12.08.2022. Dr. Raghu Raman, Co-founder & CEO of RC Labs Limited. RC Labs Ltd. designs smart battery management systems for electric vehicles and stationary energy storage systems. He gave an overview of the power electronics applications in relation to the needs of the industry. He also talked about the use of battery management systems for electrical vehicles. He gave idea about various battery kinds that are utilised in electrical vehicles. Organised by Mr. Babu Naik G and Mrs. Shilpa G



Date: 08.10.2022

MoUs / Awards / Recognitions

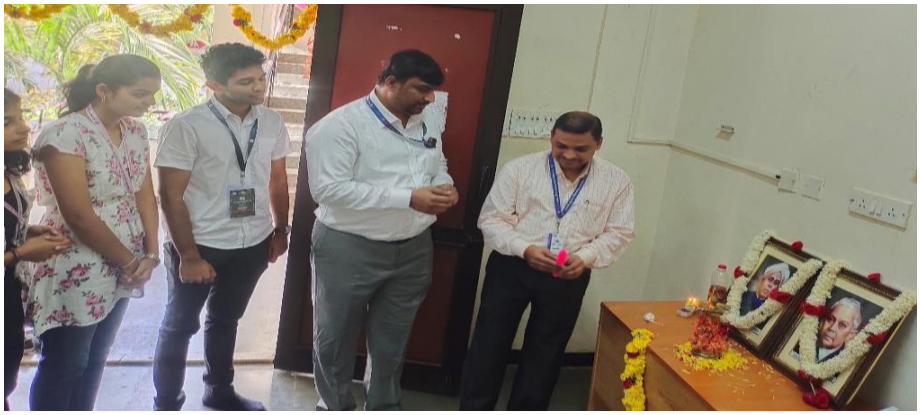
BOE:

- Dr. Madhu Palati, Assistant Professor, Dept. of EEE was a BOE Member for PG Programs of Electrical and Electronics Engineering, Nitte Meenakshi Institute of Technology, Bengaluru, Sep-2022.

Workshops / Faculty Development Programmes/ Fests

Technical Fest: TechTransform (Vidyut 8.0)

The Poster making, Circuit Debugging, Quizathon and Logic Optimization competitions were organized by Department of Electrical and Electronics Engineering as part of the Vidyut 8.0 under the aegis of TechTransform–2022 on 25.11.2022 & 26.11.2022.



SEMINARS / EXPERT TALKS

ALUMNI INTERACTION

Department of Electrical and Electronics Engineering organized an expert talk on the topic "Career Guidance" for the 3rd semester students on 23.11.2022. Mr. Mohammad Adil Ansari is an Alumni of 2019 graduating batch. He gave a brief idea about Importance of Career Guidance. Career is a much larger and significant part of our todays life and any decision in terms of career planning. With numerous courses, certifications, college activities, job opportunities available. On this basis he suggested students to involve in the internship program, online courses, PBL activity, etc which gives a self-confidence and overall personality development to lift up their carrier.

Date: 07.11.2022

WORKSHOPS / SEMINARS / FDPS ATTENDED

FDP /WORKSHOPS/STTP ATTENDED (FACULTY):

Department	No. of faculty attended the FDP/Workshop/STTP During (1.10.2022 to 31.10.2022)
EEE	03

INDUSTRY – INSTITUTE INTERACTION: (NOV2022)

Publication of Research Papers by the Faculty Members, BMSIT&M (July TO DEC 2022)

International Journal:

- Madhu Palati and Prashanth N A, “Characterization of a compact low cost 6.5kV Cockcroft voltage multiplier”, Bulletin of Electrical Engineering and Informatics (BEEI), Volume 11, No 4, 2022, Pages 1789-1797. DOI: 10.11591/eei.v11i4.3809.

- H D Kattimani, Bharath A J, Rakesh R, Umar Afthab. "Efficiency improvement of Photovoltaic panels by Design improvement of cooling system using Back water cooling tubes." International Journal of Innovative Science, Engineering and Technology, ISSN 2340-9981, July 2022.

- H D Kattimani,K Rajashekar, N Nawaz, D Manoj Kumar, G venkat Manoj. "Smart Accident Revealing and Ambulance Salvage System." International Journal of Innovative Science, Engineering and Technology, ISSN 2340-9981, July 2022.

- Manjunatha Babu P. “Reliability Enhancement Using Static Variable Compensator (SVC) in Worst Case Scenario” Journal of East China University of Science and Technology, Vol.65, 1006-3080.

Reviewer for Journal / Conference:

- Prof. Babu Naik G, Assistant Professor, Dept. of EEE, BMSIT&M was a reviewer for 3rd Conference on “Flexible Electronics for Electric Vehicles (FlexEV - 2022)”. Organized by School of Electrical, Electronics and Communication Engineering (SEEC) Manipal University Jaipur from July 28-29, 2022
- Dr. Madhu Palati, Assistant Professor, Dept. of EEE was a reviewer for International Journal of Environment and Climate Change, Sep-2022.
- Dr. Madhu Palati, Assistant Professor, Dept. of EEE was a reviewer for IEEE MYSORE CON 2022, Sep-2022.

International Conference:

- Babu Naik G, Moinuddin Pasha, Deepa P, Kusuma K Y, Ponnam Naga Roopa “An Inverter for Solar Power and A Battery Management System”, International Conference on “Flexible Electronics for Electric Vehicles (FlexEV - 2022)”. Organized by School of Electrical, Electronics and Communication Engineering (SEEC) Manipal University Jaipur from July 28-29, 202
- Madhu Palati, " Real-Time Flora Species Identification using Unmanned Aerial Vehicle", in IEEE MysuruCon 2022, hosted by JSS Science and Technology University, Mysore during 16.10.2022 and 17.10.2022.
- Prashanth N A, Madhu Palati, "Design of integrated dual output converter for smps application in matlab/simulink", in IEEE MysuruCon 2022, hosted by JSS Science and Technology University, Mysore during 16.10.2022 and 17.10


Article Section
LIVEWIRE!

Dr. SANJAY LAKSHMINARAYANAN
Professor, Department of E&EE
BMSIT&M, Bengaluru - 64

BEACHES AND SEA WAVE ENERGY:

I grew up mainly in Bangalore, but my grandparents on my mother's side lived in "Madras" as it was then known, not "Chennai". In fact, I was born in Madras. One of the charms about living in Madras, was that we could go to the "beaches". I had three teenage cousins, boys who wore shorts, we used to be in shorts then and we were separated in ages by a few years only. So on some days my cousins and my aunt the boy's mother would go to the beach. Sometimes my mother would also come. We would troop out of the house at about 5 pm and take a bus, the tickets would be a few paisa. The bus journey was only for 10 minutes; we were fairly close to the beach. Marina beach was our favourite. There is a "beach smell" in the air. There are always waves an incessant movement of water to and fro. We would take off our slippers and go to the water's edge. My aunt was very vigilant and would not allow us to go far towards the sea front. I don't think any of us knew how to swim, so we never ventured into deep waters. While facing the sea, on our right we could see the light house, and on our left we could see the port with some ships docked. Sometimes we saw the fisher man boys, take into the waters on their catamarans, nothing more than some logs tied together. They would be in loin clothes and half in the water, swimming and wading in the water as they pushed towards deeper water. Their black moving bodies were hypnotizing to watch as they grew smaller and smaller and vanished.

The world's total wave resource has been estimated to be as much as 2 terawatts (TW) of energy— the equivalent of world's electricity consumption. Of course there are practical problems involved. Machines have to be designed to tap wave energy. A buoy for example can bob up and down, and a linear generator can be used to generate electricity, such a device is called a point absorber but how to send power to the land? Long cables will be required. Another type of machine is the "Pelamis" type converter. The machine is made up of connected sections which flex and bend as waves pass; it is this motion which is used to generate electricity using hydraulics, also known as an attenuator. It also resembles a sea snake. An oscillating water column (OWC) in which the water column acts like a piston causes air to oscillate and rotate a turbine generating electricity has been installed near the sea shore.: One of the earliest and most well-known OWC installations is the LIMPET (Land Installed Marine Powered Energy Transformer) located on the island of Islay, Scotland. It was installed in 2000 and was the world's first commercial-scale wave energy device connected to the grid. LIMPET had a capacity of 500 kilowatts and operated successfully for many years.

On the beach in Madras, we can also see the level to which the sea comes up during high tide and subsides during low tide from the sea weeds and debris littered on the beach. The tides are another potential source of renewable energy though not possible in Madras as the geography is not suitable. I must add that the beaches were not always clean and I have no idea how it is now as I have not visited "Chennai" in recent years.

For any suggestion, articles queries

Contact:

Dr. Prashant A. Athavale

Dept. Electrical & Electronics Engineering

BMS Institute of Technology & Mangement

Avalahalli, Bengaluru-64

Email : prashanth@bmsit.in/hod_eee@bmsit.in

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