

LiveWire!

A Biannual News Letter

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT, Bengaluru
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Volume 3, Issue 3, May 2018

Here we bring yet another LiveWire!, the E&EE Department newsletter. This is very satisfying job, to bring out the new edition. We organized our Departmental Advisory Board Meeting. This issue has a brief report on the various activities oriented towards the students development organized by the E&EE Department, BMSIT&M. Hope to get many more entries in the next edition. These and other details are available on our Department website.

Prashant A. Athavale

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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.

Program Educational Objectives (PEOs)

Graduates of the program will,

PEO1	Have successful professional careers in Electrical Sciences, and Information Technology enabled areas and be able to pursue higher education.
PEO2	Demonstrate ability to work in multidisciplinary teams and engage in lifelong learning.
PEO3	Exhibit concern for environment and sustainable development.

After the successful completion of the Program, the graduate will be able to,

PO1	Apply knowledge of mathematics, science and engineering principles to the solution of engineering problems in electrical and IT enabled areas.
PO2	Identify and solve complex engineering problems using first principles of mathematics and engineering sciences.
PO3	Design system components and solve complex engineering problems that meet specific societal and environmental needs.
PO4	Conduct experiments, analyse, and interpret data to provide valid conclusion
PO5	Apply appropriate modern engineering tools to complex engineering activities with an understanding of the limitations.
PO6	Demonstrate understanding of societal health, safety, legal and consequent responsibilities relevant to the professional engineering practice.
PO7	Understand the impact of engineering solutions in a societal context and demonstrate the knowledge of and need for sustainable development.
PO8	Understand social issues and ethical principles of electrical engineering practice.
PO9	Function effectively as an individual and as a member or leader in diverse teams to accomplish a common goal.
PO10	Communicate effectively with diverse audiences and be able to prepare effective reports and design documentation.
PO11	Demonstrate knowledge and understanding of engineering and management principles and apply these as a member and leader in a team to manage projects in multi-disciplinary environments.
PO12	Recognize the need to engage in independent and lifelong learning in the context of technological change.

Program Specific Outcomes:

The Graduates of the Program will be able to

PSO1:	Analyze and design electrical power systems.
PSO2:	Analyze and design electrical machines.
PSO3:	Analyze and design power electronic controllers for industrial drives.
PSO4:	Analyze and design analog and digital electronic systems.

The Advisory Board Members of the Electrical and Electronics Engineering Department:

Sl.No	Name of the Member	Representing the following stakeholder
1.	Prof. H. D. Kattimani HOD, Department of EEE BMS Institute of Technology and Management Bengaluru	Faculty
2.	Dr Uday Kumar Professor, Department of Electrical Engineering IISc, Bengaluru – 560 012	Academics
3.	Sri B. M. Hiremani Manager/MM, BHEL – EPD Bengaluru – 560 012	Industry
4.	Sri B. N. Ramakrishna Dy. Manager, Spacecraft Ops & Control MOHA Group ISRO Telemetry, Tracking & Command Network	Industry
5.	Sri Prashant Sahasrabudhe General manager (Sales& Marketing) Advanced Mould Technology India Pvt. Ltd. Bengaluru	Parent and Industry
6.	Sri Muntasir H.Ahmed Sr. SAP Consultant Deloitte Consulting India Ltd.	Alumni
7.	Ms Nagashree B. Student of 7 th Sem, EEE	Student

Memorable Moments:

NAAC Peer Team visit: A Peer team from NAAC visited the Department on 29th August 2017. Dr T. C. Balachandra gave a presentation about the Department. The Team also visited the laboratories and other facilities in the Department, on 28th, 29th & 30th Aug. 2017.



The students of Electrical and Electronics Engineering Department actively participated in cultural events during NAAC Peer team visit on 28th August, 2017. They together with other department students presented Yakshagana, 'ATTAN' a folk dance of Afghanistan. An all electrical students' ensemble of instruments was also presented.



Mr Prashant A. Athavale coordinated for the SPIC MACAY Inauguration and Carnatic violin Concert of Padma Bhushan Prof. T. N. Krishnan. With an aim of promoting the Indian Music and Culture amongst the students of the institute, a Chapter of SPICMACAY was inaugurated at the BMS Institute of Technology and Management on 22nd August 2017 by Padma Bhushan Prof T. N. Krishnan and the principal Dr Mohan Babu G. N. This was followed by a violin concert of the maestro himself. The students and other invitees were enthralled to an hour long concert centred on *manodharma* of the highest order. Sri M. R. Sainath on mrudangam and Sri vaikom Gopalakrishnan on ghatam gave a able support.

The students and faculty of Electrical and Electronics Engineering Department partaken in “Shramadhaan conducted by NSS and Eco club” on 26-08-2017 at BMSIT&M. The team actively participated in “Shramadhaan - a plastic clean-up drive” at boys’ hostel.



Shramadhaan Electrical team at BMSIT&M boys Hostel



Student volunteers in Shramadhaan Activity

Dr. T.C. Balachandra obtained certificate of appreciation from "Corporate Societal Environmental Responsibility" (CSER) on 18th August from E-R3 Solutions Pvt. Ltd. for contributing to e-waste disposal.

- Orientation Program for Fresher’s: Three days orientation program was conducted for freshers from 07.08.17 to 09.08.17. First day inaugural function was held followed by introduction to institute facilities, presentation on rules and regulations of the institute, Placement & Training, Library, Sports, Photography et.al. Second Day introduction to departmental facilities (Laboratories, library, Project Lab), activities conducted (VIDYUT, Project Exhibition, Industrial visits, Expert talks, co-curricular activities) and clubs (IEEE, ISTE, Energy Management) followed by interaction with Alumni and seniors. In the afternoon quiz on aptitude was conducted for freshers. Third day visiting laboratories and central facilities.
- Dr. Mohan Babu G.N, Principal, BMSIT&M felicitated Dr.T.C. Balachandra, Professor, Dept. of Electrical and Electronics Engineering on the occasion of superannuation on 12th September, 2017. Dr. Annamma Abraham (Vice Principal), Mr. Vishwanath Acharya (Administrative Officer), Dr. Narapareddy RamaRao(HOD-EEE), Faculty and Technical staff were present.



Dr. Narapareddy RamaRao, HOD, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on “Effect of Particle contamination in Gas Insulated Substations” on 27th September, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the Institute level.

BABU NAIK G, Asst. Professor, Department of Electrical & Electronics Engineering gave a technical talk on “Renewable Energy Sources” for fifth semester CIVIL students on 30th October, 2017 at Incubation Centre, BMSIT&M.

TechTransform 2017:

The second edition of TechTransform was organised on 27th and 28th October, 2017. The two day intercollegiate tech fest was organised at the Institute level and from the EEE Department, Prashant A. A. coordinated the event. In this edition, the EEE Department hosted two events viz. “Pulse”, and “ElectroRipple”. Mr Ashley, Mr Harshith badiger and few other students were volunteers from 5th Semester EEE.

The following are some of the photographs of the event.



Student participants trying to build the tallest structure using the material given. The materials were paper cups, straws, sticks etc. and the time allocated was 20 minutes. This was the qualifying round of “Electroripple”



Participants trying to crack the puzzle in “Pulse” on the second day of the event.

DEPARTMENT ADVISORY BOARD MEETING

The E&EE Program DAB meeting was held on 11th November, 2017, at 10.00 am in the E&EE Department board room. Along with the faculty members of the program, meeting was attended by the following DAB members and special invitees.

Sl. No.	Name of the Member / Special Invitee	Organization / Affiliation
1.	Dr. Subba Reddy B.	Principal Research Scientist, IISc
2.	Sri Prashant Sahasrabudhe	GM, Advanced Mould Technology, Bengaluru
3.	Sri Shashank R. N.	Ekzen Robotics
4.	Sri Vinay A. N.	J. N. Tech Solutions
5.	Sri Aranya Khinvasara	Cognizant Technologies

Ms Varsha Bhadi of the present 7th Semester was the student representative.

The meeting started with a brief welcome and introductory speech by Mr Prashant Athavale, E&EE Department NBA Coordinator.

Dr Narapareddy Ramarao, Head of the Department gave a presentation about the Department, and covered various aspects about the Electrical and Electronics Engineering program. He highlighted the suggestions in the previous DAB meeting and the incorporation thereof. The results, attainment of COs and POs, data through various surveys conducted etc., were presented.

Then the floor was open for discussion among the members and other faculty members of the E&EE program.

Then the DAB members were escorted to the Laboratories and class rooms of the E&EE Department



ALUMNI INTERACTION

A Second Alumni interaction was held on 4th of November 2017. This interaction was attended by the following Alumni of department of EEE.

1. Mr. Raghavendra, 2007 batch Alumnus, AGM, RelyOn Solar
2. Mr. Ravi Shankar, 2009 batch alumnus, Senior Business Analyst, EMDIS Technologies
3. Mr. Pradyumna, 2011 batch alumnus, Senior Engineer, Bureau Beritas India Pvt Ltd
4. Mr. Bharath, 2011 batch alumnus, Senior Engineer, Cognizant Tech

In the meeting, members discussed about Student Internships, placements and entrepreneur issues related to current academic scenario. Many valuable inputs have been suggested by Alumni.



PROJECT BASED LEARNING EXHIBITION

The E&EE Department held an exhibition of the projects carried out by the students of 3rd and 5th Semester under Project Based Learning on 3rd November, 2017. The students took part in the proceedings enthusiastically. Dr T. C. balachandra, Dr Sanjay Lakshminarayanan, Dr Madhu Palati and Prof Suma Umesh observed the performance of each batch and selected the best one among each class. The students felt that the interaction was very useful.



Third semester Electrical and Electronics Engineering program students Mr.GuruprasadAgali and Miss. AwatiSpandana represented Visvesvaraya Technological University –Belagavi and won second

prize in state level Red cross quiz competition on 5th December 2017. Students from 20 universities have



participated in the competition.

ELECTRICAL DEPARTMENT JNANAVARDHAN SERIES-1:

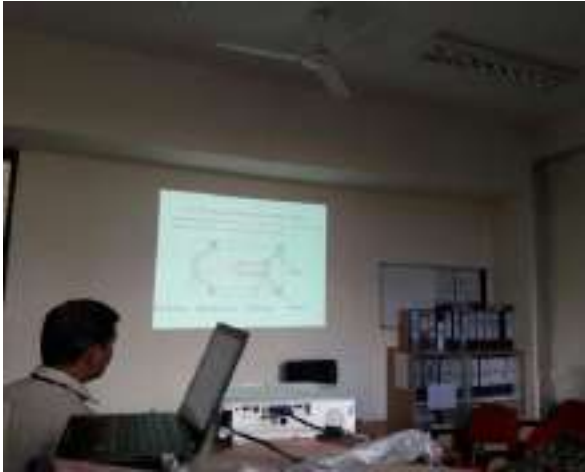
Nagaraj D C, Asst. Professor, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on "Interval Arithmetic" on 17th October, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the department level.



Manjula B K, Asst. Professor, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on "Data Acquisition system in Fatigue Testing Machine" on 25th October, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the department level.



Dr. N Ramarao, Associate Professor & Head, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on " Metallic Particle contamination in Gas insulated substation " on 8th November, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the department level.



Rajnikanth, Asst. Professor, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on "Programmable Logic Controller" on 15th November, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the department level.



Dr. Sanjay Laxminarayanan, Professor, Dept. of Electrical and Electronics Engineering, BMSIT&M delivered a technical talk on "Maximum Power Point Tracking" on 28th November, 2017 as a part of Jnanavardhan (programme for knowledge enrichment) at the department level.



Faculty Development Program on “Renewable Energy –Challenges and Opportunities for Research”

The Department of Electrical and Electronics Engineering organized a 5 days Faculty Development Program on “Renewable Energy –Challenges and Opportunities for Research” from July 31st to August 4th 2017. The aim of the FDP was to bring all researchers and faculty working in the area of renewable energy on to a common platform and discuss their ideas, progress and exposure to new trends in this area. The FDP had many distinguished resource persons from various organizations like Power Research and Development Company (PRDC), Karnataka Power Corporation Limited (KPCL), National Power System Training Institute (PSTI), etc. The department also had organized an industrial visit to renewable energy plants like biomass and solar power generation units at GKVK, Bengaluru and also to southern load dispatch Centre (SRLDC), Anand Rao Circle, Bengaluru as part of the FDP. The FDP was coordinated by Mrs. Suma umesh and Mr. Manjunath Babu, Asst. professors, Dept. of EEE, BMSIT&M.



Industry – Institute Interaction:

A two day Industrial visit was arranged to 5th semester students of Electrical and Electronics Engineering program on 13th and 14th of October 2017. This visit was attended by 34 students and four

faculty members.

On Day1 students and accompanying faculty members visited Varahi Underground Hydel Power Station owned by Karnataka Power Corporation Limited. Students were exposed to electricity generation fundamentals, turbine operation, single line diagram and SCADA features. Total installed capacity of 460MW (4x115MW).

On day 2, we visited Udupi Power Corporation Limited, a fully owned enterprise of M/s Adani Group. UPCL is a thermal power plant with a generating capacity of 2 X 600MW. Each unit of 600 MW capacities has one sub critical coal fired steam generator connected to a reheat type condensing steam turbine and generator with sea water cooled condenser and all other required auxiliaries.

Few snap shots.....



An Industrial visit was organised to first semester EEE students to Visvesvaraya Industrial Technological Museum, Bangalore on 10th November 2017. Around 44 students along with staff left the college at around 10.15 am by BMSIT bus and reached the place at 11.15am. Students visited various exhibition Galleries at the museum, it has scientific experiments and demonstration models from almost every field of science.



Faculty Internships:

Sl. No.	Name of the faculty	Industry Name	Internship Date	Internship Outcomes
1	Dr.Sanjay Lakshminarayanan	Cell Propulsion Pvt. Ltd	12 th to 21 st December 2017	<p>Able to design transformer and inductors for Battery Management System(BMS).</p> <p>Able to simulate BMS battery charger using three phase.</p> <p>Understood about vector control method for three phase VSC rectifiers.</p> <p>Can design flux switching motors for electric vehicles.</p>
2	Dr. Narapareddy Ramarao	Cell Propulsion Pvt. Ltd	12 th to 21 st December 2017	<p>Able to design transformer and inductors for Battery Management System (BMS).</p> <p>Able to simulate BMS battery charger using three phase.</p> <p>Understood about vector control method for three phase VSC rectifiers.</p> <p>Can design flux switching motors for electric vehicles.</p>

Seminars / Expert Talks:

Department of Electrical and Electronics Engineering in coordination with Department of Electronics and Communication Engineering conducted an orientation program towards formation of International Society of Automation Student Section at BMSIT&M on 18th August 2017. The following executive council members delivered talk on benefits and activities of ISA Student Section.

Mr. Ram Kerur, President & Society Delegate, ISA Bangalore Section.

Mr. M Sukumaran, Membership Chair, ISA Bangalore Section.

Mr. Vinay Avanchi, Education Chair, ISA Bangalore Section.

Dr. Veena Hegde, Student Section Mentor, ISA Bangalore Section.

Mr. Ankur Gajjar, Student Liason, ISA Bangalore Section.

The orientation was followed with a Technical Talk on Industry Internet of Things (IIOT) delivered by Mr. M Sukumaran. The total number of students participated are 129 from EEE, ECE, Telecommunication departments.



Introduction to ISA by Mr.Ram Kerur



Students in Technical Talk Session



Technical Talk by Mr.M Sukumaran



Vote of Thanks by Prof.Nagaraj D C, EEE,
BMSIT&M

Interaction of German Delegates with EEE Student: An informative talk was arranged for 5th Semester EEE students on “Higher studies opportunities in Germany”. An education consultancy named ‘EDUCARO’ located in Germany delivered this talk. Mr. Aditya, a 2011 batch Alumnus from the department of TCE, currently working for EDUCARO enlightened the participants about the fee structure in Germany, premier universities of Germany and employment opportunities to name a few. This session was attended by 30 students.



A technical talk was given by Dr. Mathews Bobby on 26th October 2017 entitled "Multilevel Inverters". Dr. Mathews Bobby, Completed his PhD at DESE, IISc. Has been selected for Post-doctoral fellowship at Concordia University, Montreal, Canada. It was attended by 5th and 7th semester students of Electrical and Electronics Engineering. The speaker also briefed upon applications of inverters, two level inverters and importance of multilevel inverters. After technical talk interacted with department faculty to share his project experience in the area of "Multilevel Inverters".



Mr. Aranya Khinvasara gave a talk on ‘The Role of personal finance and management’ to the third semester EEE students held on 4th November 2017. This was an activity particularly aimed at creating an awareness on the finance and investment. The students were given a variety of examples on the necessity and importance of these aspects. The curriculum doesn’t have any component directly imparting any knowledge on finances. Hence this activity is of importance.



Departmental Co-curricular Activities:

Ethical Practices of Electrical Installation at BMSIT&M Campus: The 3rd semester students of Electrical & Electronics Engineering were briefed about the ethics and its practices in the field of engineering. 12 groups comprising of 6 students each were formed to survey ethical practices in electrical installation at BMSIT&M campus on 12th October, 2017. Team members collected information about the electrical installation and also safety rules that has to be followed. A report is to be submitted to the department along with the scope for improvement in the installation.

Think Pair share, a collaborative learning strategy was implemented for 1st semester students (section-A, Computer Science and Engineering) by Mr. Vikram Chekuri on 3rd October, 2017. The students were given 50 objective based questions from “DC Circuits, Electromagnetism and Single Phase AC circuits” were two students work together, think individually about a answer to a question and come up with unique solution.

Workshops / Seminars / FDPs attended:

Dr. T.C. Balachandra, H.D. Kattimani, Dr. Narapareddy RamaRao, Dr. Madhu Palati, Suma Umesh, Prashant A. Athavale, Manjula B.K, Vikram Chekuri, Manjunath Babu P, Ozwin D’souza, Babu Naik G,

Shilpa G, Nagaraj D C and Rajnikanth attended Five Day Faculty Development Program on “Renewable Energy –Challenges and Opportunities for Research” organised by the Department of Electrical and Electronics Engineering, BMSIT&M, Bengaluru from 31st July to 4th August,2017.

NPTEL online Certification: Manjunatha Babu P, Babu Naik G, Ozwin Dominic Dsouza and Shilpa G completed successfully the NPTEL online course on “Photovoltaic Systems” a 12 week course (July-October, 2017).

For any Suggestions, articles, queries etc contact:

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