



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institution Under VTU)

Yelahanka, Bengaluru -560119

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIVEWIRE!

JAN - JUNE 2025 - 2024 -

VOLUME 8 | ISSUE 1

A BI-ANNUAL NEWSLETTER

We are glad to present Volume 7, Issue 2 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 conducted 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



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Late Sri B. M. Srinivasaiah
Founder, BMSCE



Late Sri B. S. Narayan
Founder, BMSET

Promoting prosperity of mankind by augmenting human resource capital through quality education and training

Institution

Vision:

- To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

Mission:

- Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

E&EE Department

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.

EDITORIAL TEAM



CHIEF EDITOR
Dr. Prashant A Athavale
HoD, Assistant Professor



EDITOR
Mr. Vikram Chekuri
Assistant Professor

NOTE FROM THE EDITOR

We are pleased to announce the release of Volume 7, Issue 2 of Livewire!, the esteemed newsletter of the Electrical and Electronics Engineering Department, BMSIT&M. In this issue, readers will find an in-depth account of the recent Departmental Advisory Board meeting, which addressed key priorities for academic advancement and set forth new directions for the department's future. These insights underscore the department's ongoing efforts to maintain high standards in both curriculum and student support.

The newsletter further chronicles a diverse array of activities and initiatives conducted by the department, all geared toward fostering the comprehensive growth of students. Featured events range from technical workshops and guest lectures to outreach initiatives and student-led competitions. Each report illustrates the vibrant academic culture and strong sense of collaboration that define the EEE Department at BMSIT&M.

Rounding out this edition are sections dedicated to technical articles, non-technical explorations, and creative works crafted by our talented students. Whether through innovative project write-ups, thought-provoking essays, or artistic contributions, this issue of Livewire! serves as a testament to the enthusiasm and multifaceted abilities of our student community. We invite readers to engage with this variety of content as we continue celebrating the achievements and creative spirit of our department.

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FACULTY ACHIVENMENTS

- Dr. Sanjay Lakshminarayanan, Professor in the Department of Electrical and Electronics Engineering, was among the Top 5% performers in the NPTEL course “Microprocessors and Microcontrollers” conducted during Jan–Apr 2025.
- Prof .Vikram Chekuri, Assistant Professor in the Department of Electrical and Electronics Engineering, was among the Top 5% performers in the NPTEL course “EV - Vehicle Dynamics and Electric Motor Drives” conducted during Jan–Apr 2025.

LIVEWIRE

STUDENT ACHIVENMENTS

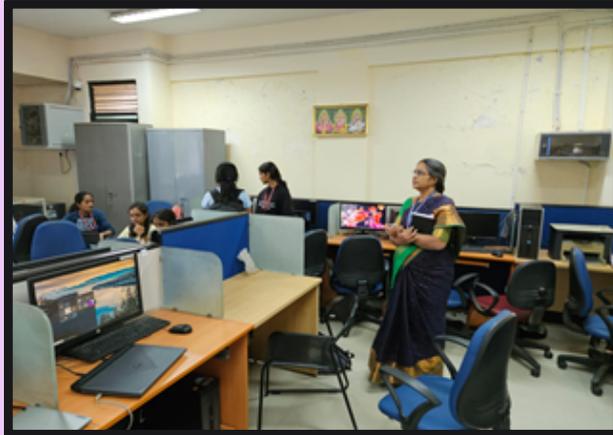
Our students from the CSE and EEE departments showcased outstanding innovation and synergy at the 36-hour Gameathon hosted by REVA University, earning the prestigious Runner-Up position along with a cash prize of ₹30,000. This remarkable feat reflects the strength of interdisciplinary collaboration. The winning team included Sai Karthik Ketha, Priya T S, and Tarin Agarwal from CSE, alongside Pratik Patil and Sambhram Rane from EEE.



During the farewell function for the graduating batch of 2021–2025 held on 24.04.2025, Ms. Rhea Renny Samuel (IBY21EE033) was honoured with the Best Outgoing Student Award in the Electrical and Electronics Engineering branch, recognizing her outstanding academic and co-curricular contributions. Mr. S. Sharavesh (IBY21EE035) received the Best Sports – University Blues Award at the institute level, celebrating his exceptional achievements in sports and representing the university.



STUDENT ACHIVENMENTS



A Hands-on MATLAB Workshop was conducted for the 6th semester students of the Electrical and Electronics Engineering department on 15.04.2025. The session was led by Dr. Riyaz from CoreEL Technologies, who served as the resource person. He delivered a comprehensive session covering the Control Systems and Power Systems toolboxes in MATLAB. The workshop enabled students to gain valuable insights into simulation techniques and the use of MATLAB for analyzing and designing electrical systems. The workshop was organized by Prof. Ozwin Dsouza and Prof. Manjula B.K., with the objective of providing practical exposure to MATLAB applications in engineering.

Mr. Shreyas M.N from 6th semester EEE participated in an interdisciplinary project as part of Team SRJAN. The team from BMSSA and BMSIT&M won Runner-Up in Solar Decathlon India (Construction Workers' Housing Division), held on 24.05.2025 at Infosys Campus, Mysuru. The event recognized their modular, net-zero housing design. The project was developed in partnership with Century Real Estate Holdings Pvt. Ltd. and stood out among national entries for its practicality and impact.



HACKATHON

The Department of Electrical and Electronics Engineering in association with the Institution's Innovation Council (IIC), organized a one-day Hackathon for the 6th semester students on 26.05.2025. The event focused on the Design and Simulation/Implementation of an Efficient Power Electronic Converter for Li-ion Battery Charging and Discharging. The hackathon provided EEE students with a hands-on platform to apply theoretical concepts in practical scenarios, fostering innovation, teamwork, and problem-solving. With strong faculty support and enthusiastic student participation, the event highlighted the department's commitment to industry-relevant, experiential learning. The faculty coordinators were Dr. Narapareddy Ramarao and Dr. Babu Naik G.



STUDENT TECHNICAL EVENT

The Department of Electrical and Electronics Engineering organised the Technical Fest Vidyut 10.0 under Techtransform on 27.03.2025. The technical events organised were Hackathon titled "CiruiThon" and a Challenge named "Mystery Mesh", which demonstrated the technical expertise and problem-solving skills of the students. The event "No pain No Gain" gave an experience of cramp simulator with a twist. The students of sixth semester organized the events for first, second and third year students of the department.



TECHTRANSFORM BY SIX SEM STUDENTS

EXPERT TALKS

Department of Electrical and Electronics Engineering organized an expert talk on the topic "PV & BESS Hybrid system Introduction" for 4th semester students on 28.06.2024. The expert talk was delivered by Mr. Nataraja MS, Head Technical Dept., SUNGROW Private Limited, Bengaluru. He briefed on advancements in battery technology, smart grid integration, Renewable energy policies with respect to Solar photovoltaic. The activity was coordinated by Dr. Prashanth N A and Vikram Chekuri.



Expert talk by Mr. Nataraja

An expert talk was organised by Department of Electrical and Electronics Engineering on "Entrepreneurship Journey – Motivational session by Start Up Co-founders" held on 31.05.2025 for 4th semester students. Start-up co-founders Mr. Srinivas Mishra and Mr. Prateek Sable from Fastr India Pvt. Ltd. shared insights on initiating entrepreneurial thinking. The students were made aware of the how to tap the opportunities available in the surroundings and act upon to provide the solutions to the problems. The speakers also stressed upon the observation of the market status and demand before jumping into any product or service.



Expert talk by
Mr. Srinivas Mishra
Mr. Prateek Sable

PROJECT EXHIBITION



PROJECT EXHIBITION

A project review and exhibition was conducted for the 8th semester students of the Electrical and Electronics Engineering department on 16.05.2025. Eighteen projects were reviewed. An external evaluator Mr. Amarnath, General Manager, from Karnataka Renewable Energy Development Limited, KREDL was the judge for the project exhibition.

INDUSTRY – INSTITUTE INTERACTION

Department of Electrical and Electronics organized an industrial visit to Vignesh Vidyut Controls, Bengaluru on 18.01.2025. Total 50 students of 3rd semester were accompanied with 2 faculty members (Prof. Nagaraj D Chonali and Prof. Ozwin D D'Souza). Vignesh Vidyut Controls, an esteemed company in the field of design and manufacturing of distribution transformers. The purpose of the visit was to provide students with first hand insights into the operations, technologies, and best practices within the industry. The industry visit to Vignesh Vidyut Controls proved to be an educational and inspiring experience for the EEE department students. It provided practical insights into the intricate world of distribution transformer design and manufacturing, exposing us to real-world applications of our academic knowledge



INDUSTRY VISIT VIGNESH VIDYUT CONTROLS, BENGALURU



INDUSTRY VISIT SUPER POWER HOUSE UTTAR KANNADA

An industrial visit was arranged by the Department of EEE for 5th semester to SUPA POWER HOUSE Ganeshgudi, Uttara Kannada district of Karnataka state on 10.01.2025. A total of 32 students of 5th semester were accompanied by Prof. Babu Naik Gugulothu and Prof. Shilpa G. Supa power house is located as a dam toe hydropower project on Supa dam constructed on Kali River. The plant has two generating units of 50 MW each, with vertical Francis turbine and synchronous generator. The units have been designed for a head of 72m. Both Units were commissioned in 1984-85 immediately after Supa dam was commissioned. The industrial visit provided students with valuable practical insights into hydropower generation, enhancing their understanding of dam toe power projects, turbine operations, and real-world power plant functioning.

INDUSTRY – INSTITUTE INTERACTION

An industrial visit was arranged by the Department of Electrical and Electronics Engineering for 4th semester students to Supa Dam on 15.05.2025 and the KPTCL 220/110 kV Substation at Karwar, on 16.05.2025. Supa Dam is a part of the Kali Hydro Electric Project and plays a significant role in renewable energy generation in the state. The students observed the massive infrastructure used for hydroelectric generation, including intake gates, penstocks, Francis turbines, and generators. Officials from KPCL and KPTCL provided detailed technical explanations and conducted guided tours of the facilities. Prof. H.D Kattimani and Prof. Vikram Chekuri accompanied the students



INDUSTRY VISIT TO SUPA DAM ON 15.05.2025 & KPTFL 220/10 KV
SUBSTATION AT KARWARA ON 16.05.2025

INDUSTRY – INSTITUTE INTERACTION

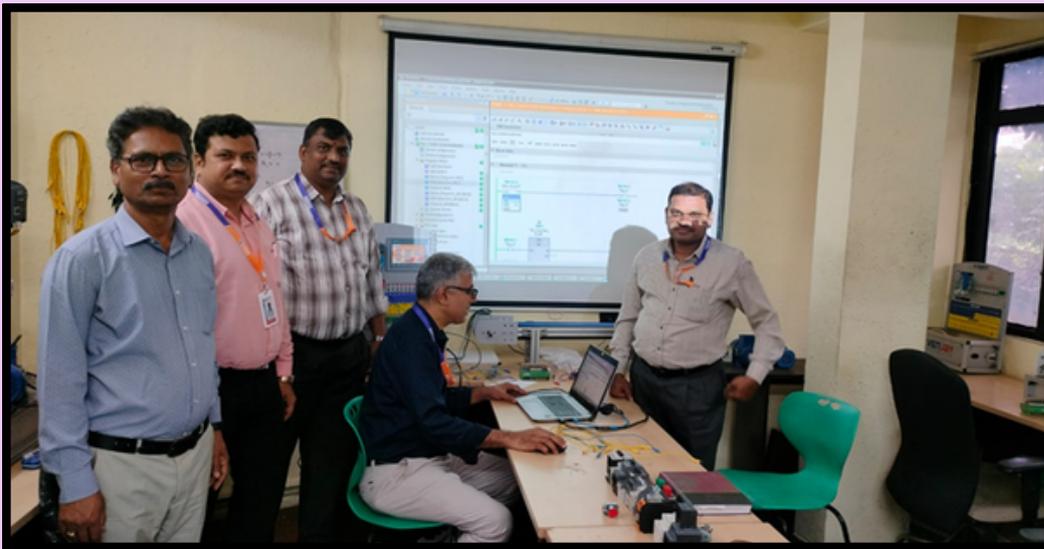
An industrial visit was organized by the Department of Electrical and Electronics Engineering for 6th semester students to the Green Vehicle Expo at Bangalore International Exhibition Centre (BIEC) on 22.05.2025. The expo showcased the latest advancements in electric mobility, including electric cars, two-wheelers, battery technologies, and EV charging infrastructure. Students gained valuable insights into sustainable transportation, emerging trends in green technology, and innovations from various manufacturers and start-ups. Prof. H.D Kattimani and Prof. Vikram Chekuri accompanied the students



INDUSTRY VISIT TO GREEN VEHICLE EXPO AT BANGALORE INTERNATIONAL
EXHIBITION CENTER (BIE)

INDUSTRY – INSTITUTE INTERACTION

An industrial visit to M/s. Venjay Automation Private Limited was organised on 23.06.2025 for faculty of Electrical Engineering department. During the visit, Mr. Charan, a representative from the company, briefed about the company and clients, later presented a demo on Basic PLC kit with HMI usage. The purpose of the visit was to explore the possibility of setting up a PLC based training kits for the students of electrical engineering department. The visiting staff also got an opportunity to program the PLC on a belt conveyor and see the variation with different settings. The faculty members who participated in the visit were Dr. Prashant A. A., Dr. Narapareddy Ramarao, Prof. H. D. Kattimani, Dr. Manjunatha Babu P., and Prof. Nagaraj D. C.



INDUSTRY VISIT TO VENJAY AUTOMATION PVT. LTD

ALUMNI INTERACTION INTERACTION

A Department of Electrical and Electronics Engineering organized an Alumni talk on “Real-world insights, Career advice, and Valuable Networking opportunities” for 4th semester students on 04.03.2025. Alumnus Mr.Girish , Mr. Manjunath, Mr. Ganesh, 2021 Graduated Batch shared their experiences and guidance on preparing for challenging MS entrance exams, obtaining a visa, financial planning, university application processes, adapting to life abroad, and securing internships while pursuing an MS. The event provided students with valuable first-hand insights into higher education abroad. The event was coordinated by Dr. Manjunatha Babu P, Prof. Ozwin Dominic D’souza and Prof. Nagaraj D.C.



ALUMNI INTERACTION ON 04.03.2025

FDP'S ATTENDED BY THE FACULTY MEMBERS

- **Dr. Madhu Palati, Assistant Professor, Department of EEE attended Five Day Faculty Development Programme on “Hands-on training on Smart building automation solution (with knx enabled schneider devices)” at Ramaiah Institute of Technology in collaboration with Schneider Electric India Pvt.Ltd Bangalore from 10.02.25 to 14.02.2025.**
- **Prof. Babu Naik Gugulothu, Assistant Professor, Department of EEE participated in Five Day Faculty Development Programme on “Hands-on Training on Smart Building Automation Solution (withKNX Schneider Devices)” at Ramaiah Institute of Technology in collaboration with Schneider Electric India Pvt.Ltd Bangalore from 10.02.25 to 14.02.2025.**
- **Prof. Vikram Chekuri, Assistant Professor, Department of EEE attended ATAL FDP on “FPGA Realization of Intelligent Controllers – An Industrial perspective” at NITTE MEENKSHI INSTITUTE OF TECHNOLOGY from 10.02.2025 to 15.02.2025.**

PUBLICATION OF RESEARCH PAPERS BY THE FACULTY MEMBERS

International Conference:

January 2025:

- Babu Naik Gugulothu, Sanjay Lakshminarayanan, Madhu Palati, Suresh Haleyr Lakshmegowda, and Mahipal Bukya. "A Practical Case Study on Effect of Moisture Ingress in Power Cables and Methods to Reduce Equipment Failure." Engineering Research Express (2025) vol.7 and No.1, Express 7, 015313, DOI 10.1088/2631-8695/ada5a9.
- P. Manjunatha Babu , Ozwin Dominic Dsouza, G. Shilpa, "A Hybrid Technique for Estimating the State of Health of Lithium-Ion Batteries", Optimal Control Applications and Methods, January 2025, volume 46, Issue 1, pp.1-15, <https://doi.org/10.1002/oca.3248>

March 2025 :

- Ayuesh G D, Manjunatha Babu P, presented a paper on "Design & Simulation for 2kW EV Charger using MATLAB SIMULINK" at International Conference on Computing for Sustainability and Intelligent Future (Comp-SIF 2025) at BMSIT&M on 22.03.2025.
- Sanjay Lakshminarayanan, H.D Kattimani, Prashant Athavale presented a paper on "An MPPT Charge Controller for Solar PV Installations using the Incremental Conductance Method", at International Conference on Computing for Sustainability and Intelligent Future (Comp-SIF 2025) at BMSIT&M on 22.03.2025.

FACULTY REVIEW

- Dr. Madhu Palati, Department of Electrical and Electronics Engineering Received Certificate of appreciation as a Reviewer for the International Conference on Next Generation Communication & Information Processing (INCIP-2025), held on January 23rd-24th, 2025, at Manipal Institute of Technology, Bengaluru, in collaboration with Manipal Institute of Technology, Manipal, and Manipal University Jaipur.
- Prof. Babu Naik Gugulothu, Department of Electrical and Electronics Engineering has been invited as a Session Chair for the IEEE International Conference on "Next Generation Communication & Information Processing," scheduled on January 24th, 2025, at Manipal Institute of Technology, Bengaluru.
- Dr. Manjunath Babu P, Department of Electrical and Electronics Engineering completed the 4 credit Swayam course on "Introduction to Cyber Security", in the proctored exam conducted on 07.12.24.
- Prof. Babu Naik Gugulothu, Assistant Professor, Department of EEE was the reviewer for the IEEE International Conference on "Next Generation Communication & Information Processing"; at Manipal Institute of Technology, Bengaluru, on 24.01.2025.
- G. D. Ayush, P. Manjunatha Babu, P. N. Rakesh, S. Shetty and L. B. Varun, "Design & Simulation for 2kW EV Charger Using MATLAB SIMULINK," 2025 International Conference on Computing for Sustainability and Intelligent Future (COMP-SIF), Bangalore, India, 2025, pp. 1-5, doi: 10.1109/COMP-SIF65618.2025.10969861.
- S. Lakshminarayanan, H. D. Kattimani and P. A. Athavale, "An MPPT Charge Controller for Solar PV Installations Using the Incremental Conductance Method," 2025 International Conference on Computing for Sustainability and Intelligent Future (COMP-SIF), Bangalore, India, 2025, pp. 1-6, doi: 10.1109/COMP-SIF65618.2025.10969962.
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FACULTY REVIEW

- Hussaian Basha, C., Manjunatha Babu, P., Velpula, S., Fathima, F., Prashanth, V. (2024). A New Way of Optimal Scheduling of Virtual Energy Storages for Microgrids Regulation. In: Tiwari, R., Saraswat, M., Pavone, M. (eds) Proceedings of International Conference on Computational Intelligence. ICCI 2023. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3526-6_45.
- Manjunatha Babu, P., Gurucharan, B., Prathiba, M., Sai Rassmi, M., Shastry, V.B. (2024). A Real-Time Hand Gesture Recognition System Using Image Processing. In: Asokan, R., Ruiz, D.P., Piramuthu, S. (eds) Smart Data Intelligence. ICSMDI 2024. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3191-6_36.
- 3.Manjunatha Babu, P., Sai Rassmi, M., Gurucharan, B., Prathiba, M., Shastry, V.B. (2024). Smart Traffic Signal Control for Emergency Vehicles. In: Asokan, R., Ruiz, D.P., Piramuthu, S. (eds) Smart Data Intelligence. ICSMDI 2024. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3191-6_35.
- P. K. D, M. Babu P, T. S. U, C. V and A. S. Patil, "Electrical conductivity based oil detection and skimming," 2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST), Imphal, India, 2024, pp. 1-6, doi: 10.1109/GIEST62955.2024.10960230.

ANY OTHER INITIATIVES BY THE DEPARTMENTS

Department of Electrical and Electronics Engineering organized an Alumni talk on “Real-world insights, Career advice, and Valuable Networking opportunities” for 4th semester students on 04.03.2025. Alumnus Mr.Girish , Mr. Manjunath, Mr. Ganesh, 2021 Graduated Batch shared their experiences and guidance on preparing for challenging MS entrance exams, obtaining a visa, financial planning, university application processes, adapting to life abroad, and securing internships while pursuing an MS. The event provided students with valuable first-hand insights into higher education abroad. The event was coordinated by Dr. Manjunatha Babu P, Prof. Ozwin Dominic Dsouza and Prof. Nagaraj D.C.



ANY OTHER INITIATIVES BY THE DEPARTMENTS



The Department of Electrical and Electronics Engineering bid farewell to Dr. Madhu Palati on 04.04.2025, as he transitioned to a role in the industry, marking a new chapter in his professional journey.

*Thank
you!*