



Editorial Message

The Department of Electrical and Electronics Engineering, Basaveshwar Engineering College, Bagalkot, continues to uphold its commitment to academic excellence, industry engagement, and student development through a series of notable achievements and initiatives during this month.

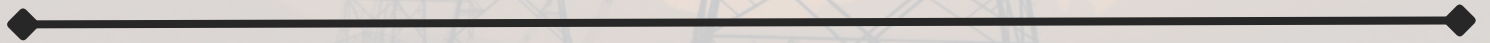
A key highlight is the remarkable placement accomplishments of our students. Ms. Srushti Mathapati secured a placement at Toyota Kirloskar, while Mr. Harish Kuri was placed at VST Tillers Tractors Ltd., reflecting the department's strong academic foundation and industry readiness of its students.

Strengthening industry-academia collaboration, the department actively facilitated an Industry-Institute Interaction under the MoU initiative. This engagement provided students with valuable exposure to real-world industrial practices, bridging the gap between theoretical knowledge and practical application.

Encouraging technical enthusiasm and innovation, the department organized the event "Ignite the Circuit," which served as a dynamic platform for students to enhance their problem-solving abilities and deepen their understanding of core electrical concepts through hands-on activities.

The department also takes pride in the accomplishments of its faculty members in the NPTEL certification programs, showcasing their dedication to continuous learning and academic excellence. These achievements contribute significantly to enriching the teaching-learning process within the department.

Through these initiatives and accomplishments, the department continues to foster a holistic environment that promotes technical competence, industry readiness, and lifelong learning, preparing students to excel in their professional journeys and contribute effectively to society.



⚡ INTERESTING FACT — The Grid Must Stay in Perfect Balance

Electric power systems operate on one of the most fascinating principles in engineering: instantaneous balance. Unlike water or fuel, electricity cannot be easily stored at large scale in its raw form. This means that at every second, the amount of power generated must exactly match the amount being consumed. If demand suddenly increases and generation does not keep up, the system frequency drops; if generation exceeds demand, the frequency rises. In India, this frequency is maintained around 50 Hz, and even a small deviation can signal instability. Grid operators continuously monitor and adjust power generation using advanced control systems, automatic generation control (AGC), and load dispatch centers. Failure to maintain this balance can lead to cascading failures, where one fault triggers another, eventually causing widespread blackouts. This delicate coordination across thousands of generators, substations, and transmission lines makes the electrical grid one of the most complex and precisely managed engineering systems in the world.



Event Highlight's

Ignite the Circuit



The IEEE Student Branch (STB35261) and BEC-IEEE Circuits and Systems Society (SBC35261I), in association with the Department of Electrical and Electronics Engineering, Basaveshwar Engineering College, Bagalkot, successfully organized “Ignite the Circuit” on the 4th and 5th of April 2026 at the EEE Department Seminar Hall.

The two-day event was designed to provide participants with an immersive experience in circuit-

based problem solving, real-time challenges, and technical exploration. Day 1, held from 2:00 PM to 6:00 PM, focused on engaging activities that tested participants' analytical thinking and foundational knowledge. Day 2, conducted from 10:00 AM to 2:00 PM, elevated the challenge with more advanced tasks, encouraging innovation, teamwork, and practical application of concepts.



The event witnessed enthusiastic participation from IEEE members, who actively engaged in the sessions and showcased their technical skills and creativity. The structured format ensured a balance between learning and competition, making it both informative and engaging.

The event concluded successfully with positive feedback from participants, marking yet another impactful initiative by the BEC IEEE Student Branch.

The department extends its heartfelt congratulations to the coordinator, Prof. Santhoshkumar Kandagal and Volunteers for their dedicated efforts and successful completion of the programme.



Did You Know? ⚡

The frequency of AC power in India is 50 Hz, meaning the current changes direction 100 times per second (since each cycle has two alternations).

Placement Highlights

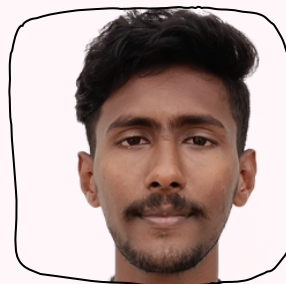


Srushti Mathapati

Company: Toyota Kirloskar motor pvt. Ltd

CTC: 6.26 LPA

Every small effort counts, Dedication and patience always lead to success.



Mr. Harish Kuri

Company: VST Tillers Tractors Ltd.

CTC: 4 LPA

The placement process was a good learning experience involving aptitude, technical and HR rounds. My internship helped me gain practical exposure and improve confidence during interviews.

Industry–Institute Interaction under MoU Initiative

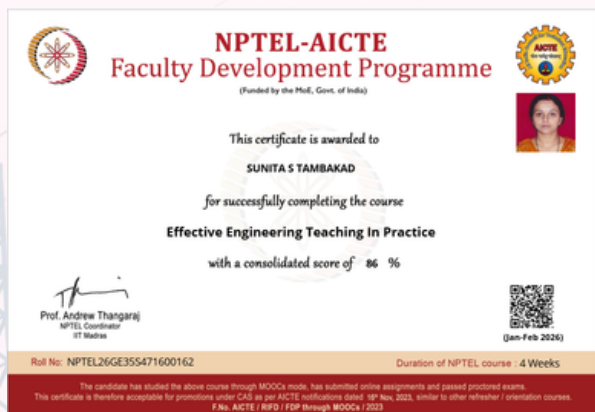


As part of the Memorandum of Understanding (MoU) initiative, the Department of Electrical and Electronics Engineering at Basaveshwar Engineering College (BEC), Bagalkote, organized a technical visit to KrishiTharanga FarmTech LLP, Vijayapura, on 22nd April 2026. Dr. Basanagouda Ronad, Associate Professor, along with research scholar Mr. Prashant Kadi, represented the institution in this interaction aimed at strengthening industry–academia collaboration. The visit focused on ongoing research in the chickpea knipping process, where Mr. Girish Bhadracharya presented developed models and shared key progress insights.

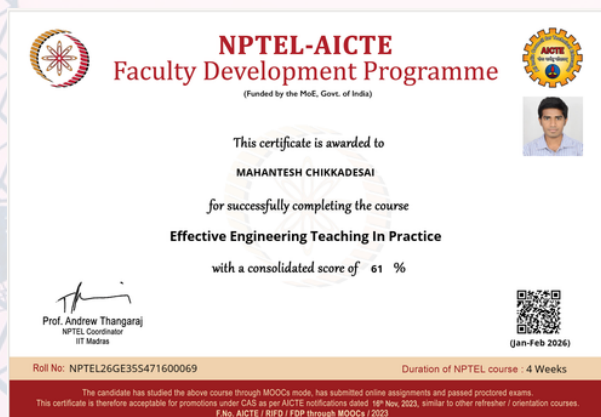
The session included meaningful discussions on prospective joint research proposals, future collaborative projects, and internship opportunities for students. The interaction provided valuable exposure to advancements in agricultural automation and highlighted the scope for interdisciplinary innovation. This initiative reinforces the commitment of BEC towards fostering strong industry partnerships, promoting research excellence, and enhancing student engagement through practical exposure.



Faculty Achievements

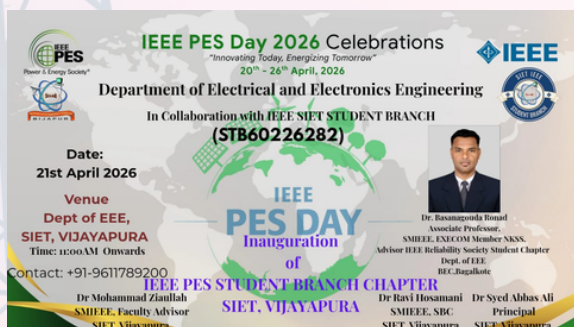


We are happy to share that Sunita S Tambakad successfully completed the NPTEL-AICTE Faculty Development Programme on “Effective Engineering Teaching in Practice” conducted during Jan–Feb 2026. Offered by IIT Madras, the programme focused on enhancing teaching methodologies, learner engagement, and practical approaches to engineering education. This achievement reflects her commitment to academic excellence and continuous professional development.



We are happy to share that Mahantesh Chikkadesai successfully completed the NPTEL-AICTE Faculty Development Programme on “Effective Engineering Teaching in Practice” conducted during Jan–Feb 2026. The programme, delivered by IIT Madras, emphasized effective instructional strategies and modern teaching techniques in engineering education. His accomplishment highlights dedication towards professional growth and teaching excellence.

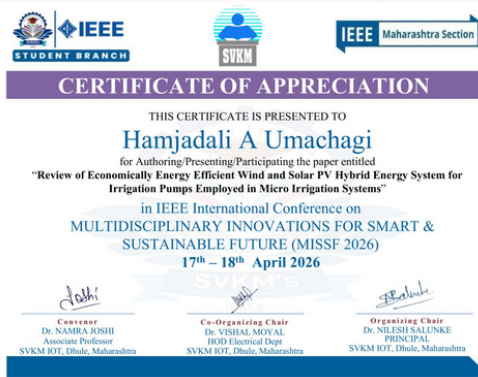
IEEE PES Day Celebration and SBC Inauguration



Dr. Basanagouda F. Ronad, Associate Professor, Department of Electrical and Electronics Engineering, Basaveshwar Engineering College (BEC), Bagalkot, graced the IEEE PES Day Celebration and the Inauguration of the IEEE Power & Energy Society (PES) Student Branch Chapter at SECAB Institute of Engineering and Technology, Vijayapura, on 21st April 2026, as the Chief Guest.

The event marked an important step toward strengthening student involvement in the power and energy domain. On this occasion, Dr. Ronad delivered a technical talk, sharing insights into current trends and developments in the energy sector, along with the growing importance of sustainable and innovative solutions. He also addressed the students through a motivational session, emphasizing the value of professional development and active participation in organizations such as IEEE PES. He highlighted the benefits of membership, including exposure to global knowledge platforms, networking opportunities, and avenues for technical growth. His inspiring address encouraged students to engage in technical activities, research initiatives, and professional communities, making the event both impactful and memorable.





A technical paper titled “Review of Economically Energy Efficient Wind and Solar PV Hybrid Energy System for Irrigation Pumps Employed in Micro Irrigation Systems” was presented in online mode at the IEEE International Conference on Multidisciplinary Innovations for Smart & Sustainable Future (MISSF-2026), IEEE Conference Record No. #68264, held during 17th–18th April 2026, at SVKM's Institute of Technology, Dhule, Maharashtra, India. The paper was authored by Mr. Hamjadali A. Umachagi, Research Scholar, EEED and Dr. Basanagouda F. Ronad, Associate Professor, EEED, BEC.

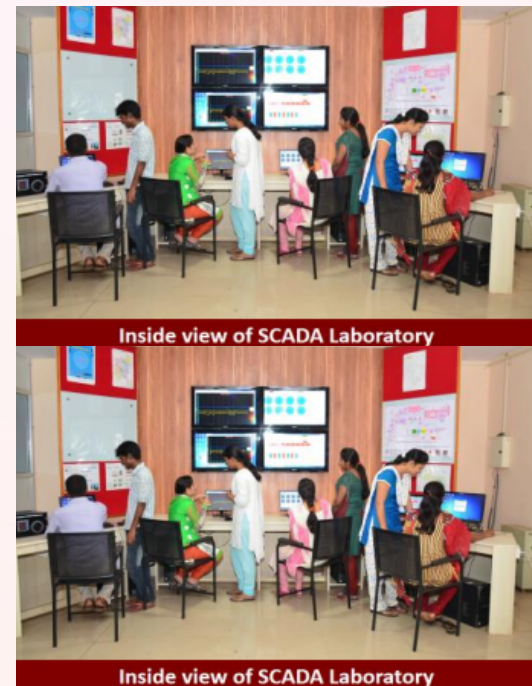
A research paper titled “Reliability Evaluation Methods for WECS: A Case Study of Karnataka Wind Farms” (Paper ID: 1082) has been provisionally accepted at the IEEE conference SeFeT-2026. The conference will be held from 8th–11th July 2026 at Visvesvaraya National Institute of Technology Nagpur. The paper is authored by Apoorva Kulkarni and Sangmesh Y. Goudappanavar. This achievement highlights contributions toward sustainable and reliable renewable energy systems.



BEC – SCADA for Distribution and Automation Research Center

The SCADA for Distribution and Automation Research Center at the Department of Electrical and Electronics Engineering, Basaveshwar Engineering College (Autonomous), Bagalkot, stands as a hub of innovation, research excellence, and industry-relevant technological development.

With a strong foundation in Supervisory Control and Data Acquisition (SCADA) systems, the research center focuses on modernizing distribution networks through automation, intelligent monitoring, and advanced control strategies. Equipped with state-of-the-art infrastructure and supported by dedicated faculty and research scholars, the center continues to contribute significantly to academic research, student development, and sustainable energy solutions.



State-of-the-Art Infrastructure and Major Equipment



The research center is equipped with advanced laboratory facilities that support both teaching and research activities. A key highlight is the Distribution Automation SCADA system, which enables real-time monitoring and control of electrical parameters, including voltage, current, harmonics, and system performance. With features such as IEC-compliant measurement systems, RS485 communication, MySQL-based data management, and programmable controllers, the SCADA setup provides a comprehensive platform for experimentation and analysis.



In addition, the laboratory houses wind-solar hybrid system setups, wind turbine generators, and grid-tie inverters that facilitate research in renewable energy integration. The presence of precision instruments such as anemometers, lux meters, and advanced measurement tools enhances the experimental capabilities of the center.

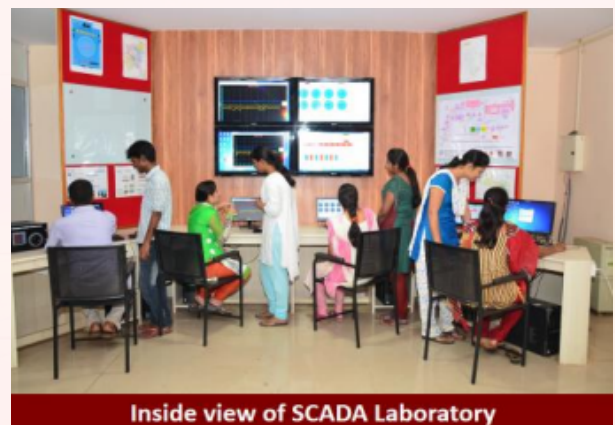
A notable addition is the MiPower software (Version 10.1), a powerful simulation tool used for load flow analysis, stability studies, economic dispatch, and renewable energy integration. This software enables students and researchers to model complex powersystems and analyze their behavior under various operating conditions.

Research Contributions and Project Development

The research center has consistently contributed to innovative project development across undergraduate and postgraduate levels. Over the years, projects have evolved from fundamental system design to advanced AI-driven solutions.

Early works focused on waste heat recovery systems and thermoelectric cooling, followed by studies on supercapacitors and wind energy integration into distribution systems. Subsequent research explored microgrid dynamics, fault ride-through capabilities of wind turbine generators, and load flow analysis of campus distribution networks.

Recent years have seen a significant shift toward artificial intelligence and data-driven approaches. Projects such as AI-based phase identification for distributed energy resources, energy behavior prediction of prosumers, and AI-driven fault detection systems highlight the center's alignment with emerging technological trends. The latest initiatives include the development of an AI-driven energy management system for data-enabled microgrids and AI-based fault prediction in transmission lines, demonstrating the center's commitment to future-ready solutions.



Postgraduate Research and Doctoral Contributions

The center actively supports postgraduate research, with projects addressing real-world challenges in power systems. Key PG projects include the design of LVDC microgrids, droop control for small wind turbines, and SCADA-based control of lighting loads. Advanced studies such as network reduction techniques for transient stability analysis further reflect the depth of research undertaken.

In addition to PG projects, the center has successfully guided doctoral research scholars. Notably, research on short-term wind forecasting for power planning and scheduling has contributed to improved decision-making in renewable energy systems. Another significant doctoral work focuses on the modelling and performance analysis of small wind turbine generators in microgrid environments, further strengthening the research base of the department.

Publications and Knowledge Dissemination

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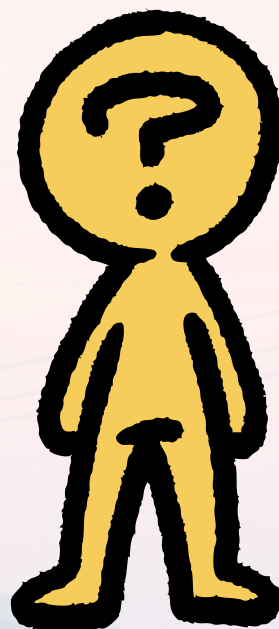
The research center has an impressive record of publications in reputed international journals and conferences. Research works have addressed critical areas such as stochastic power flow analysis, voltage regulation in distribution networks, and optimal placement of wind turbine generators in microgrids. Faculty and research scholars have presented their findings at prestigious platforms, including IEEE international conferences, contributing to global knowledge exchange. Recent conference papers focus on AI-based energy prediction, power balancing in distribution systems, and performance evaluation of rooftop solar PV systems, reflecting the center's active engagement with contemporary research domains.

The center has also contributed to scholarly book chapters published by leading publishers such as Springer and CRC Press. These works cover advanced topics including AI applications in power systems, wind turbine performance analysis, and IoT-enabled smart energy solutions, further establishing the department's academic credibility.

Find Who Am I ???

I follow a law that links three friends,
If one increases, another bends.
Without me, circuits can't be explained.
What am I?

I lag behind but never lead,
In AC circuits, I take this deed.
Between voltage and current, I create a phase
fight.
What am I?



Institute

Vision

To be an institution of excellence in education, research and innovation for a sustainable future.

Mission

1. Develop professionals globally for future requirements.
2. Nurture a culture of research, innovation and entrepreneurship.
3. Promote collaborations, extension and outreach programs for addressing industrial and societal needs.
4. Imbibe moral and ethical values.
5. Foster ecological and environmental consciousness.

Department

Vision

To be in the global forefront of education, research and innovation in Electrical and Electronics Engineering to meet energy, ecology, industrial and societal needs.

Mission

1. Develop globally competent professionals adapting to technological transformations in the field of Electrical and Electronics Engineering.
2. Promote collaborations with higher learning institutes and industries for research, innovation and entrepreneurship.
3. Imbibe moral & ethical values and render empathetical services to energy, ecology & environmental issues.

Programme Educational Objectives (PEO)

1. The graduates will be able to design the solutions to industrial challenges.
2. The graduates will be able to take up higher studies and research.
3. The graduates will be able to engage in multidisciplinary innovation and entrepreneurship activities.
4. The graduates will be able to adopt emerging technologies to provide solutions to the societal and environmental issues.

Programme Specific Outcomes (PSO)

1. Graduates shall be able to specify, formulate and analyze concepts used in power systems and electrical machines as per requirements of power & energy sector.
2. Graduates shall be able to identify, analyze, design and test technologies used in power electronics, electronic & signal processing circuits and control systems.
3. Graduates shall be able to apply conventional concepts and contemporary tools to design, simulate and analyze electrical and electronic systems for real time applications through hands on learning gained in SCADA, energy systems and power electronics laboratories.

“Success is not final, failure is not fatal: it is the courage to continue that counts.”

Winston Churchill

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 BEC IEEE PES



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