SPARK

A Bi-yearly in-House Newsletter of

Department of Electrical Engineering

B.P. Poddar Institute of Management & Technology

Vision of the Institute

To emerge as a progressive and premier Institute for Engineering and Technology education with ethical values for creative engineering solutions commensurate with global changes.

Mission of the Institute

- Offer quality education through modern accessible, comprehensive and research oriented teaching – learning process.
- Create opportunities for students and faculty members in acquiring knowledge through research and development.
- Providing effective interface with industry by strengthening Industry-Institute interaction and developing entrepreneurial skills.
- Meet ever-changing needs for the nation through rational evolution towards sustainable and environment friendly technologies.

Vision of the Department

To emerge as a knowledge hub for higher learning and research in Electrical Engineering.

Mission of the Department

- To create a conducive quality teaching –learning environment to make the student assimilate thorough knowledge in Electrical Engineering. To create a platform for building confidence among faculties and students by exchanging their views through research, interactive sessions with industry and by the use of modern tools.
- To adopt a goal driven teaching learning method to foster innovative entrepreneurship skills in student community with expertise in different engineering domain.
- To enable students to become authorities in the field of electrical engineering along with sustainable and environment friendly technologies to meet the societal needs.

Program Educational Objectives

The graduates of Electrical Engineering shall:

- Acquire adequate physical, analytical and technical knowledge of Electrical Engineering and allied fields to curate solutions, which effectively address the challenges posed by dynamic work environments.
- Inculcate self- assurance, collaborative spirit, critical thinking and acumen for innovation towards gaining a competitive edge in research and development as well as in entrepreneurial ventures.
- Imbibe professional ethics and the attitude to bank on sustainable and eco-friendly practices only, for the wellbeing of society at large.

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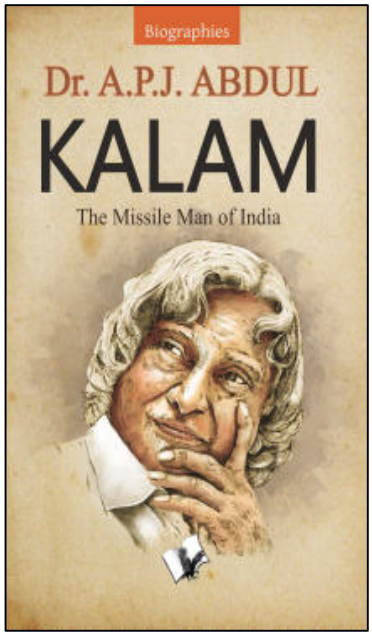
Dr. A.P.J. Abdul Kalam: The Missile Man of India



A. P. J. Abdul Kalam (1931–2015) is widely known as the "Missile Man of India" for his crucial role in developing India's missile and nuclear programs. Born in Rameswaram, he rose from humble beginnings to become one of the country's most respected scientists. Kalam played a key role in India's Pokhran-II nuclear tests and worked extensively with ISRO and DRDO on satellite launch vehicles and defense technology. Beyond science, he served as the 11th President of India and inspired millions of students with his vision for a developed India. His contributions continue to motivate young engineers and innovators across the nation.He was also a key figure in India's Integrated Guided Missile Development Programme, leading the development of missiles like Agni and Prithvi. Known for his simplicity and humility, Kalam connected deeply with students and emphasized education, innovation, and self-reliance. He authored several inspiring books such as *Wings of Fire* and *Ignited Minds*. His life remains a powerful example of dedication, leadership, and service to the nation.He was honored with India's highest civilian award, the Bharat Ratna, for his outstanding contributions. Even after his presidency, he continued teaching and interacting with students until his last day.

From Metal to Mind: The Rise of Machines That Work Like Humans

Modern machines are evolving far beyond simple automation, combining robotics with artificial intelligence to perform complex, human-like tasks. Today, autonomous robots are widely used across industries such as healthcare, logistics, and manufacturing, where they can navigate environments, analyze data, and act independently without constant human control. In space exploration, AI-powered robots are assisting astronauts by handling maintenance, inspection, and data collection more efficiently. At the same time, human-like interaction is becoming a reality, as machines can now recognize speech, respond intelligently, and even simulate emotions and facial expressions. With advanced AI models, these systems are able to learn and adapt over time, improving their ability to understand surroundings and solve problems. As this technology continues to grow, its future applications are vast, ranging from smart healthcare systems and intelligent assistants to autonomous vehicles and advanced tools for space exploration.

Advancements in Science & Technology

- **In December 2024, space research continued to expand** with ongoing missions under NASA's Artemis program, focusing on returning humans to the Moon and preparing for future Mars exploration.
- **The James Webb Space Telescope made new discoveries**, including detection of smaller asteroids and deeper observations of distant galaxies, helping scientists understand the early universe more clearly.
- **Breakthroughs in medical science showed promising results**, where researchers explored techniques to convert cancer cells back into normal cells, opening new paths for safer treatments.
- **Artificial Intelligence saw major integration in space missions**, enabling spacecraft and robots to make real-time decisions, improving efficiency and reducing human dependency.

EVENT CORNER

Illuminating the Future: Dr. Suddhasatwa Chakraborty Shares Insights on Humanitarian Lighting Technologies

A lecture session on “Integration of Humanitarian Technologies in the field of Illumination Engineering” was organized by the Department of Electrical Engineering in collaboration with Institution’s Innovation Council (IIC cell), B.P. Poddar Institute of Management and Technology on 5th November, 2024 from 3 PM onwards. All students from the department of Electrical Engineering attended the session. The speaker, Dr. Suddhasatwa Chakraborty, Associate Professor in Department of Electrical Engineering, Jadavpur University, was our alumnus, graduated in the year 2004. He delivered a very nice and informative lecture on various fields of Illumination Engineering and its applications in our daily life. The students have enjoyed and learned a lot from such interactive session.The speaker was honoured by Principal, Prof. (Dr.) Sutapa Mukherjee and the session was concluded with the vote of thanks given by Dr. Sudipta Chakraborty, Associate Professor, Department of Electrical Engineering. Coordinators Ms. Chandrani Das and Ms. Madhumita Kundu Mondal, along with all faculty members and technical staff of the Department of Electrical Engineering, undertook an enormous effort to organize and conduct such a program successfully. Finally, student-volunteers' efforts must be appreciated for successful execution of the event.

*A glimpse into the insightful lecture session on the **"Integration of Humanitarian Technologies in Illumination Engineering"** at BPPIMT.*

PLACEMENT CORNER

The Department is pleased to highlight the recent placement achievements of the students, reflecting their technical competence and industry readiness.

Price Waterhouse Coopers LLP: Mookul Paul

Lumino Industries Ltd: Mritunjay Majee, Sourav Haldar, Sunayana Ram

Acdemor Edutech: Arijit Sadhu, Hena Mahata

Intellipaat Software Solutions Pvt Ltd: Priyangshu Das

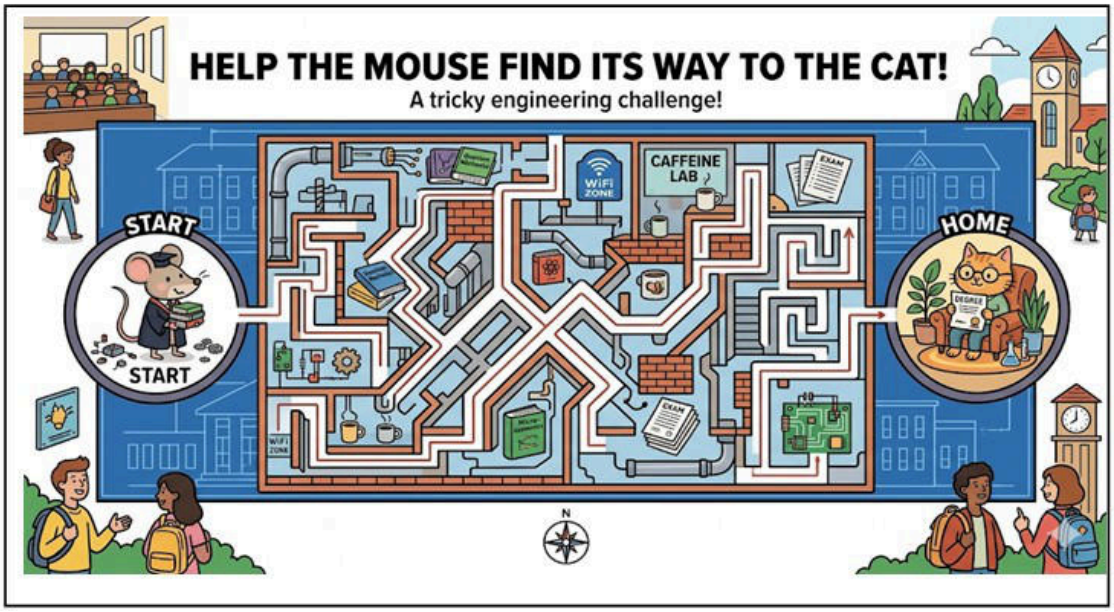
ACHIEVEMENT CORNER

Team Deviators (Electrical Engineering) secured the 3rd Prize at FORMA 2.24, the annual Inter-college Hardware Model Design Competition organized by the technical forum *Abhiyantran*. The team: Bishal Tarafder (Leader), Pratik Kumar Soni, Md. Danish, and Soham Saha impressed judges with their innovative working model of a VG engine during the event held on September 20, 2024.

Our Electrical Engineering students, Priyangshu Das and Tanushka Joshi, represented BPPIMT at the prestigious Future Tech Congress (FTC) 2024 in Bangalore on September 2-3, 2024. Under the mentorship of Mr. Aritra Ghosh (Assistant Professor, EE & YP Chairman, IET Kolkata), and through a volunteering initiative by IET India, they engaged with global leaders in Generative AI, Quantum Computing, and the Industrial Metaverse. This high-level exposure provided them with invaluable hands-on experience and a deeper understanding of the technological shifts transforming global industries.

BPPIMT Empowers Young Innovators: Outreach Program & Robotics Workshop on July 23, 2024, BPPIMT's IQAC and IIC, in association with IET Kolkata Local Network, conducted an Innovation & Entrepreneurship Outreach Program and Robotics Workshop at Beler Dhanyakuria Madhyamik Vidyalaya. Under the guidance of Dr. Surajit Mandal, Mr. Aritra Ghosh, and Mr. Subhasish Das, 68 school students explored the future of technical education. The BPPIMT Robotics Club student members provided live demonstrations of quadcopters, dual-axis solar trackers, and various bots. Highlighting the event's success and social impact, the initiative was featured in a special telecast by News 18 Bangla.

GAME CORNER



Call for Contribution: Students, staff and faculty members of Department of Electrical Engineering are requested to send their contribution for newsletter electronically to the email:spark.ee18@gmail.com.