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PMC TECH
INSPIRE TO INNOVATE

PMC PAGES

An Exclusive Annual Newsletter

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"We empower students for a Brawny Nation"

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OUR INSTITUTION

“PMC TECH play influential role with Industries for providing meaningful impact on overall competency and skill levels of the students in relation to knowledge updating with practicality in learning and professionalizing them aiming at the developing scenario of current and future technologies.”

PMC TECH Group of Institutions, Hosur, Tamilnadu established in the year 1996 is run by “Er. Perumal Manimekalai Telugu Minority Educational and Charitable Trust” under the dynamic leadership of Shri. Er. P. Perumal, Founder Chairman. The Institutions comprise Matriculation School, ITI, Polytechnic, Engineering College and Research Studies providing quality education in the region.

Er. Perumal Manimekalai College of Engineering (established 2002) approved by AICTE and affiliated to Anna University, is an ISO 9001:2014 certified Institution accredited by NAAC with B++ Grade. The Institute provide scholarly and professional environment with quality education & skill oriented training that help students becoming best employable for Industries and professional entrepreneurs for the Nation. The Institute supports students’ creativity/innovations by establishing Scientific and Industrial Research Organization (SIRO), Women Technology Park (WTP), Centre for IIT Bombay Employability Skill Trainings, Business Incubation Centre (MSME BI), Innovation & Entrepreneurship Development Centre (IEDC) etc.,for research and developments.

VISION

“To strive and achieve excellence in technical education and management with continuous applied research and development to create well groomed and responsible citizens who are dynamic, competent, innovative, eminent and delivery oriented engineers, technologists and management professionals to build a Brawny Nation.”

MISSION

PMC TECH will Endeavour

- **?High quality technical education by inculcating discipline, ethicality and personality development**
- **?Knowledge based professionals out of youth from all walks of life and enrich their quality of life by empowering self and family**
- **?Good Infrastructure for providing quality and quantity education, research and creativity progressively**
- **?Integrate with industry, R&D and business organization by ensuring connectivity with the society in the vicinity**
- **?An ultimate centre for state-of-art teaching and learning engineering and technology, research and management**

FOUNDER'S DESK

"MAKE OF US THE HERO WARRIORS WE INSPIRE TO BECOME. MAY WE FIGHT SUCCESSFULLY THE GREAT BATTLE OF THE FUTURE THAT HAS TO BE WON AGAINST THE PAST THAT SEEKS TO ENDURE, SO THAT THE NEW THINGS MAY MANIFEST AND WE ARE READY TO RECEIVE THEM"

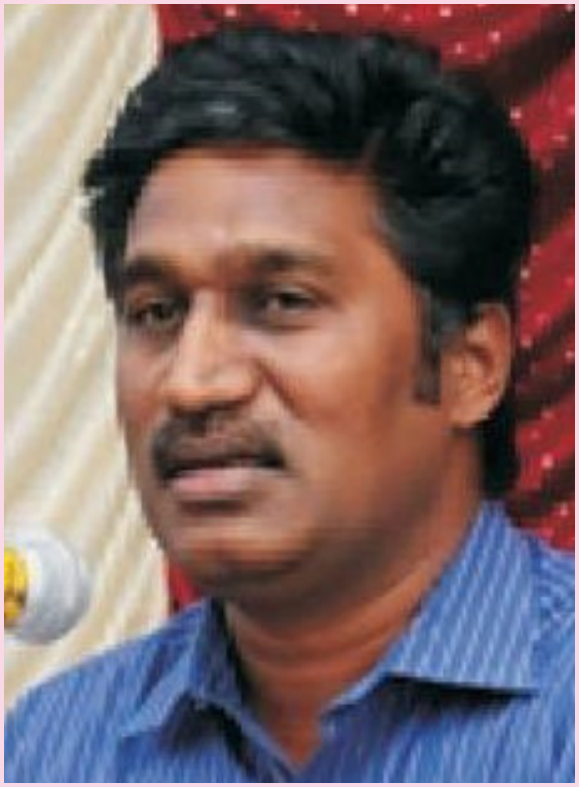
ER. P. PERUMAL

WELCOME TO PMC TECH, WHERE ACADEMICS AND ACTIVITIES NEVER END AND THE STUDENTS ARE MOLDED AS FUTURE TECHNOCRATS AND BUSINESS LEADERS. THE INSTITUTE WORKS ON THE VISION TO BECOME ONE OF THE LEADING CENTERS OF TEACHING, RESEARCH AND EXTENSIONS IN THE FIELD OF ENGINEERING AND TECHNOLOGY THROUGH TOTAL COMMITMENT TOWARDS QUALITY EDUCATION AND TRAINING. WE INSTILL OUR STUDENTS WITH THE STRENGTH OF CHARACTER, SELF-CONFIDENCE TECHNICAL COMPETENCE AND LEADERSHIP IN MANAGEMENT. WE PROPAGATE KNOWLEDGE TO THE STUDENTS WITH THE HELP OF DEDICATED FACULTY, STATE-OF- THE-ART LIBRARY AND WELL- EQUIPPED LABS ALONG WITH AUDIO-VISUAL THEATRE

THE INSTITUTE HAS AN ENVIABLE TRACK RECORD OF ACADEMIC EXCELLENCE, WHICH IS COUPLED WITH HANDS-ON INDUSTRIAL TRAINING, AND INNUMERABLE INDUSTRY-INSTITUTE INTERACTION, WHICH MAKES EACH PMC TECH STUDENT READY TO BE ABSORBED IN THE COMPAN

ER. P. PERUMAL
FOUNDER
PMC TECH- GROUP OF INSTITUTIONS

CHAIRMAN'S MESSAGE



"THE INSTITUTE NOT ONLY EXTENDS GOOD CAMPUS AND STATE OF THE ART COMPUTING FACILITIES TO THE STUDENTS BUT ALSO AIMS AT GIVING THOSE COMPETENCIES THAT WILL MAKE THEM LEADERS AND TRENDSETTERS IN THEIR RESPECTIVE FIELD, IN THIS AGE OF COMPETITION"

AS A PART OF PMC TECH'S COMMITMENT TOWARDS QUALITY TECHNICAL EDUCATION AND EXCELLENCE, WE EMBARKED ON PROMOTING FACULTY DEVELOPMENT PROGRAM, SEMINARS, WORKSHOPS AND CONFERENCES, WHICH WILL KEEP THE FACULTY AND STUDENTS ABREAST OF THEIR FIELD.

PMC TECH IS COMMITTED TO DEVELOP YOUNG MINDS FOR CREATIVE LEADERSHIP IN BUSINESS AND A PROACTIVE AND USEFUL ROLE IN SOCIAL TRANSFORMATION. TODAY THE NEED FOR BEING PROACTIVE AND CONSTRUCTIVE IS MORE ACUTE THAN EVER BEFORE DUE TO THE SWEEPING CHANGE INFLUENCING EVERY ASPECT OF OUR LIFE. THEREFORE, THERE IS NEED FOR ACTION BASED ON HOLISTIC TRAINING OF YOUTH TO TAKE ON VARIED CHALLENGES OF LIFE. AN OPPORTUNITY TO STUDY AT PMC TECH EMPOWERS A STUDENT TO ACQUIRE KNOWLEDGE AND DEVELOP SKILLS THAT WILL ENABLE HIM TO LEAD A HIGHLY PRODUCTIVE, REWARDING AND HOLISTIC LIFE.

SHRI.P.KUMR
CHAIRMAN
PMC TECH.

SECRETARY'S MESSAGE

"THE GOAL OF EDUCATION IS THE ADVANCEMENT OF KNOWLEDGE AND THE DISSEMINATION OF TRUTH"

THE RAPID RATE OF TECHNOLOGICAL ADVANCEMENT AND THE INFORMATION REVOLUTION HAVE OPENED NEW SERIES OF CHALLENGES AS WELL AS OPPORTUNITIES. WE AIM TO PREPARE THE STUDENTS TO BE SUCCESSFUL IN THEIR WORKPLACE. IT AIMS TO PREPARE THE STUDENTS WITH TECHNICAL KNOWLEDGE AND CAPABILITIES, FLEXIBILITY AND AN UNDERSTANDING OF THE SOCIETAL CONTEXT OF CORPORATE WORLD.

WE GIVE THE STUDENTS SUPPORT AND ENCOURAGEMENT THEY NEED TO REACH THEIR FULL POTENTIAL. WE STRIVE TO GIVE PROFESSIONAL EDUCATION A NEW PERSPECTIVE AND ACHIEVE PERFECTION IN ALL SPHERES. WE PROVIDE A PLEASANT & INTELLECTUALLY STIMULATING ENVIRONMENT. THE MAIN REASON FOR OUR TREMENDOUS PERFORMANCE IS THE FACULTY, WHICH MAKES PMC TECH STAND OUT FROM THE REST OF ENGINEERING COLLEGES AND INSTITUTES. I WISH TO ASSURE ALL CONCERNED THAT NO EFFORTS WILL BE SPARED TO BRING PMC TECH AS ONE OF THE TOP TECHNICAL EDUCATION INSTITUTIONS

SMT.P.MALLAR
SECRETARY
PMC TECH.

TRUSTEE MESSAGE

"EDUCATION ISTHE ABILITY TO LISTEN TO ALMOST ANYTHING WITHOUT LOSING YOUR TEMPER OR SELF-CONFIDENCE

PMC TECH IS COMMITTED TO CREATING AN AMBIENCE FOR NURTURING INNOVATION, CREATIVITY AND EXCELLENCE IN OUR STUDENTS. WE AIM TO PREPARE THE YOUNG ENGINEERS AND MANAGERS TO CONFIDENTLY AND COMPETENTLY FACE THE CHALLENGES OF INTENSIFYING COMPETITION BY IMPARTING HIGH QUALITY TECHNICAL AND MANAGERIAL EDUCATION COUPLED WITH APPROPRIATE TRAINING AND WIDE EXPOSURE TO THE STATE- OF-ART PRACTICES. OUR EDUCATIONAL PROGRAMMES LAY EMPHASIS ON ALL ROUND PERSONALITY DEVELOPMENT AND ALSO IN INCULCATING HUMAN VALUES AND PROFESSIONAL ETHICS WHICH HELP OUR STUDENTS BECOME MORE HUMANE AND SOCIALLY ALIVE TO LEAD A MEANINGFUL LIF

THIS NEWSLETTER WILL HELP THE STUDENTS AND FACULTY MEMBERS TO MAKE THEM AWARE OF DIFFERENT ACTIVITIES OF THEIR DEPARTMENT AS WELL AS THE OTHER DEPARTMENTS AND WILL DEVELOP A BETTER CULTURE AND ACADEMIC ENVIRONMENT. FURTHER THIS WILL BOOST THE MORALE OF STUDENTS AND FACULTY TO PARTICIPATE IN FUTURE ACTIVITIES.

SMT.P.SASIREKHA
TRUSTEE
PMC TECH.

PRINCIPAL'S MESSAGE

"I BELIEVE THAT EDUCATION IS NOT JUST ABOUT TEACHING CURRICULUM, IT IS ALSO ABOUT THE DEVELOPMENT OF HUMAN INTELLECT, CAPABILITY TO THINK INDEPENDENTLY AND SPEAK ARTICULATELY. THROUGH NUMEROUS STUDENT ACTIVITIES THE COLLEGE IMPARTS ALL THESE LIFE SKILLS IN STUDENTS. EDUCATION IN PMC TECH ALSO EMPHASIZES ON DEVELOPMENT OF PERSONALITY, INTER- PERSONAL SKILLS AND INSTILLING THE RIGHT VALUES"

WE ALWAYS ENDEAVOR THAT WHEN STUDENT GO OUT. THEY SHOULD BE RECOGNIZED AS HIGHLY KNOWLEDGEABLE, AMIABLE, ACTIVE AND GREATLY TRUST WORTHY INDIVIDUAL. THANKS TO THE EDUCATIONALLY COMMITTED MANAGEMENT, WE HAVE THE REPUTATION THAT WE PROVIDE ALL THE FACILITIES AND AMENITIES. MAY BE BECAUSE OF ALL THESE,. I AM THANKFUL TO ALL MY COLLEAGUES WHO ARE STRIVING HARD TO ESTABLISH PMC TECH AS ONE OF THE LEADING ENGINEERING INSTITUTIONS.

THE RAPID RATE OF TECHNOLOGICAL ADVANCEMENT AND THE INFORMATION REVOLUTION HAVE OPENED NEW SERIES OF CHALLENGES AS WELL AS OPPORTUNITIES. WE AIM TO PREPARE THE STUDENTS TO BE SUCCESSFUL IN THEIR WORKPLACE. IT AIMS TO PREPARE THE STUDENTS WITH TECHNICAL KNOWLEDGE AND CAPABILITIES, FLEXIBILITY AND AN UNDERSTANDING OF THE SOCIETAL CONTEXT OF CORPORATE WORLD.

DR.S.CHITRA.,M.E.,PH.D.
PRINCIPAL

PROGRAMMES OFFERED

UG Programmes B.E. / B.TECH.

- Aeronautical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electronics and Communication Engineering
- Electrical and Electronics Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Information Technology

PG Programmes M.E. / MBA / MCA

- Aeronautical Engineering
- Applied Electronics
- Computer Science and Engineering
- Engineering Design
- Power Electronics and Drives
- MBA - Master of Business Administration
- MCA - Master of Computer Applications

Research Programme

- Ph.D. - Computer Science and Engineering
  - Management Studies

PMC TECH IS HOSTING

To serve our Students, Industry & Society ahead of academics, PMC TECH is hosting

01 Innovation & Entrepreneurship Development Centre of DST

02 Business Incubation Center

03 Women Technology Park of DST

04 MHRD - Innovation Cell

05 PMKVY - Pradhan Mantri Kaushal Vikas Yojana by MSDE

06 CNC & Robotics Training Centre

07 Robotic Welding & Automation Centre

08 Visionary Learning Community of India (VLSI)

09 Campus Connect Programme Centre

10 Mission 10X Technology Learning Centre

11 Spoken Tutorial of IIT - Bombay

12 Robotics Lab Centre of IIT - Bombay

PROFESSIONAL BODIES

The presence of Professional bodies and their regular activities showcases the college on global arena benefitting both internal and external students and faculty members. Each and every department has well known international and national professional bodies, Research & Development centers, Incubation centers encouraging Entrepreneurship and Local Chapters.

Computer Society of India

ICT Academy of Tamil Nadu

The Institution of Engineers

Institute of Electrical and Electronics Engineers

The Institute of Electronics and Telecommunication Engineers

Indian Society for Technical Education

Indian Concrete Institute

Society of Automotive Engineers India

Madras Management Association

National HRD Network

MEMORANDUM OF UNDERSTANDING'S (MoU's)

The Institute, maintains strong associations with various National and Multinational Companies, Educational and Research Institutions by entering into Memorandum of Understanding. Being a lead Institution, it is extremely important to be connected with global network of Industries and Academic Institutions for enhancement of the competence of students and faculty members and facilitating even for others.

INDUSTRY & ACADEMIC COLLABORATIONS

We have well established systems to identify problems / gaps specific to our institutes and build collaborations with industries best suited to the interests of our students and faculty members. The main aim is to meet the requirement in par with industry expectations by maintaining continuous liaisons, interactions involving participation both by students and faculty members.

CISCO Academy

Oracle

NPTEL - Digital Resources

Infosys Technologies

Wipro Technologies

IIT - Bombay

IIT - Kharagpur

Reliance JioInfocomm Limited

GenNext Entrepreneurs

TCS – iON Assessment Centre

FANUC ROBOTICS

Visionary Learning Community of India

CENTRE OF LEARNING

We make the students “an industry ready personnel” or “professional entrepreneur” by way of providing education qualities at the highest level. For this purpose we facilitate collaborative programs with local industrial sectors, professional academic and research institutions. We strive to offer programs geared to help our stakeholders to get a competitive edge in the high skill and high demand global market.

Women Technology Park (WTP) of DST

Business Incubation Center of Ministry of MSME

Innovation & Entrepreneurship Development Centre-(IEDC) of DST

Campus Connect Programme Centre of Infosys

Mission 10X Technology Learning Centre of Wipro

Spoken Tutorial of IIT - Bombay

Spring Fest IIT - Kharagpur

Aakash Project Centre of IIT - Bombay

e-Yantra Robotics Lab Centre of IIT - Bombay

Aircraft airframe systems & generalmaintenance

IEI student's chapter of Aeronautical Engineering of Er.Perumal Manimekalai College of Engineering organized a Invited technical talk on IAFHelicopter Rotor System and Control on 27th January 2022.

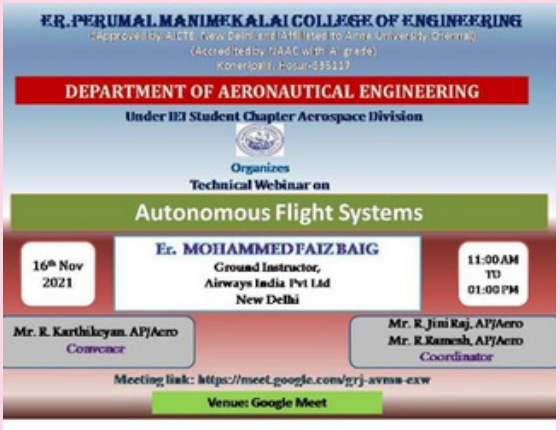
The IEI Student's Chapter - Aerospace Engineering Division (635117/PMCT/AS) is a vibrant and dynamic community of aerospace engineering students under the Institution of Engineers (India), designed to foster professional growth and development in the field of aerospace engineering. This chapter serves as a platform for students to collaborate, share knowledge, and engage in various activities that enhance their technical expertise and practical understanding of aerospace technologies.

The chapter organizes a wide range of events, including workshops, seminars, and guest lectures, where experts from the aerospace industry provide valuable insights into the latest trends, innovations, and challenges in the field. It also encourages students to participate in hands-on projects, design competitions, and internships, which help them apply theoretical knowledge to real-world scenarios.

Moreover, the chapter fosters a spirit of research and development by encouraging students to explore aerospace-related topics and present their findings at various national and international forums.

is a specialized branch of aerospace engineering focused on the design, development, testing, and production of aircraft and related systems. It involves the application of principles of physics, mathematics, and material science to create efficient, safe, and innovative flying machines, from small drones to large commercial airliners. Aeronautical engineers work on various aspects, including aerodynamics, propulsion systems, avionics, and control systems.

The core areas of aeronautical engineering include aerodynamics, which deals with the movement of air over wings and other surfaces; propulsion, focused on engines and propulsion systems; and materials science, which studies the properties of materials used in aircraft construction to ensure strength, durability, and weight efficiency. Additionally, aeronautical engineers work on flight mechanics, avionics (the electronic systems of the aircraft), and structural integrity.



Aerospace research is also a critical aspect of aeronautical engineering, as engineers work on improving fuel efficiency, reducing emissions, enhancing safety, and advancing the technology used in aircraft. This field offers significant career opportunities in both civilian aviation (airlines, aircraft manufacturers) and defense (military aircraft, space exploration). Aeronautical engineering combines technical skills, creativity, and innovation, contributing to the continued advancement of aviation technology.

VALUE ADDED PROGRAM

THE APPEAL OF VIRTUAL ADD-ON COURSES

One of the primary reasons virtual add-on courses have gained popularity is their unparalleled flexibility. Unlike traditional classroom-based learning, these courses can be accessed anytime and anywhere, making them an excellent choice for individuals juggling multiple responsibilities, such as full-time jobs or family commitments.

FUTURE PROSPECTS OF ADD-ON COURSES

The future of add-on courses looks promising, driven by advancements in technology and the growing emphasis on lifelong learning. Virtual reality (VR) and augmented reality (AR) are set to make learning more immersive, while artificial intelligence (AI) will enable personalized course recommendations and adaptive learning experiences.

EMPOWERING INNOVATION: ADD-ON COURSE ON PCB DESIGN USING PSPICE

The fields of electronics and electrical engineering have always been at the forefront of technological advancements, driving innovation and shaping the modern world. At the heart of every electronic device lies a meticulously designed Printed Circuit Board (PCB), which serves as the foundation for electrical connectivity and functionality. Designing a PCB is both an art and a science, requiring a blend of theoretical knowledge, practical skills, and cutting-edge tools. To empower learners with the necessary expertise, an add-on course on "PCB Design Using PSpice" has emerged as a valuable educational opportunity. This specialized course focuses on equipping participants with the skills and knowledge required to design, simulate, and analyze PCBs using PSpice, a leading circuit simulation software. From students and professionals to hobbyists and researchers, the course caters to anyone interested in mastering the nuances of PCB design and circuit analysis.

THE IMPORTANCE OF PCB DESIGN

A PCB is a thin board made of insulating material with a conductive pathway etched or printed onto its surface. These pathways connect various electronic components, enabling the flow of electricity and the execution of desired functions. The complexity of PCB design increases with the sophistication of the device, making it a critical skill for engineers and designers.
High-quality PCB design ensures optimal performance, reliability, and efficiency of electronic devices. A poorly designed PCB, on the other hand, can lead to signal loss, overheating, and even device failure. As the demand for compact, high-performance electronics grows, so does the need for skilled PCB designers who can tackle these challenges effectively.

VIRTUAL ALUMNI MEET

THE NEED FOR VIRTUAL ALUMNI MEETS

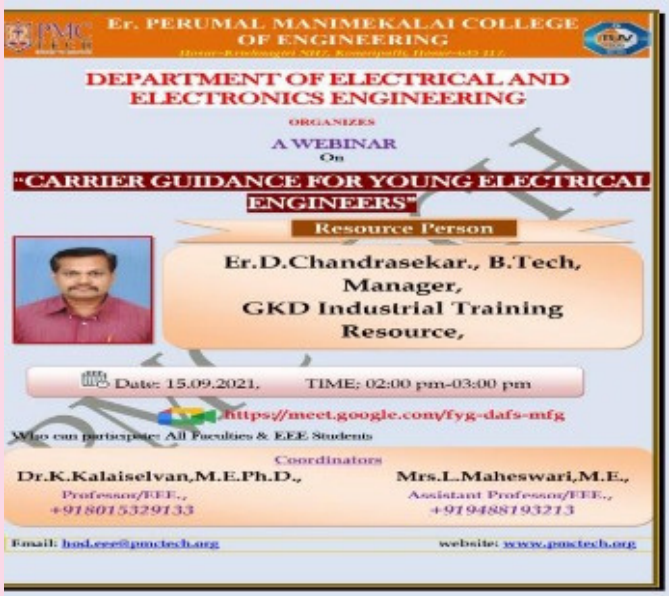
The rise of virtual alumni meets can be attributed to a combination of technological advancements and the evolving needs of alumni communities. Traditional in-person reunions, while cherished, often face limitations in terms of accessibility and attendance. Many alumni are unable to participate due to factors such as distance, time constraints, or financial barriers. Virtual events address these challenges by offering a convenient and inclusive platform for engagement.

Moreover, the global pandemic highlighted the importance of virtual connectivity, accelerating the adoption of online tools for organizing events. Institutions and alumni associations quickly realized the potential of virtual meets to maintain meaningful connections without the need for physical gatherings. These events have since become a staple in the alumni engagement toolkit, offering unparalleled reach and flexibility.

WEBINAR ON GUIDANCE FOR YOUNG ELECTRICAL ENGINEERS

The Webinar on Guidance for Young Electrical Engineers, conducted on 15th September 2021, was an impactful event aimed at inspiring and mentoring budding electrical engineers. Hosted by Er. D. Chandrasekar, Manager at GKD Industrial Training Resources, Coimbatore, the session attracted enthusiastic participation from students in their second, third, and fourth years, amounting to an audience strength of 105 attendees. This webinar served as a platform for fostering awareness and understanding of the electrical engineering profession. It underscored the multifaceted opportunities, challenges, and skillsets essential for excelling in the field. Er. Chandrasekar, with his wealth of industry expertise, shared insightful perspectives and practical guidance on how young engineers can bridge the gap between academic knowledge and industry expectations.

Highlights of the Webinar



The session began with an engaging introduction to the current trends in electrical engineering, highlighting technological advancements and the growing demand for sustainable energy solutions. Er. Chandrasekar eloquently emphasized the importance of staying updated with emerging technologies like automation, renewable energy systems, and smart grids. His narrative inspired participants to think innovatively and adapt to evolving industry needs.

Webinar on IoT Using Smart Devices

On 24th September 2021, an enlightening webinar titled "IoT Using Smart Devices" was conducted. This interactive session focused on the emerging technology of the Internet of Things (IoT) and its applications with smart devices, catering to the growing interest and demand for IoT expertise among young engineers. The session was skillfully led by Ms. S. D. Kumari, Senior Trainer at TVS Training & Services, Chennai. The event witnessed an impressive participation of 105 students, encompassing attendees from their second, third, and fourth years of study.

Aim and Objectives of the Webinar

Ms. S. D. Kumari brought a wealth of experience and expertise to the webinar, making the session both informative and engaging. She began by introducing the basic principles of IoT, explaining how interconnected devices exchange information over the internet

Key Takeaways for Participants

Ms. Kumari tailored her guidance to address the unique needs of students in different academic years: Second-Year Students: She encouraged them to build a strong foundation in IoT by familiarizing themselves with programming languages like Python and exploring online resources or tutorials. Third-Year Students: Ms. Kumari suggested focusing on hands-on projects, such as developing simple IoT applications or working with microcontrollers like Arduino or Raspberry Pi. Final-Year Students: For those nearing the end of their academic journey, the emphasis was on leveraging IoT knowledge for innovative projects and preparing for IoT-related career opportunities or higher education.

Webinar on Installation of Charging Stations & Opportunities for New Entrepreneurs

The Webinar on Installation of Charging Stations & Opportunities for New Entrepreneurs held on 28th September 2021 was a remarkable event designed to address the increasing significance of electric vehicle (EV) charging infrastructure and its potential for entrepreneurial ventures. The session was expertly conducted by Mr. N. B. Bharath, Former Manager of SaurUrja Vehicle Challenges (SUVC), part of the Refrangile Society of Technopile Engineers, Madhya Pradesh. With 105 participants across second, third, and fourth-year students, the webinar was a valuable learning opportunity.

Growth of EV Market: The increasing adoption of electric vehicles worldwide and its direct impact on the demand for charging stations. Technology in Charging Stations: An introduction to different types of charging solutions, such as Level 1 (slow charging), Level 2 (fast charging), and DC fast charging. Business Opportunities: Insights into entrepreneurial ventures in the EV charging space, such as public charging stations, battery swapping hubs, and mobile charging units

Key Insights from Mr. N. B. Bharath

Mr. N. B. Bharath, an experienced professional in the field of sustainable mobility, shared his insights on the development and operation of charging stations. He provided an overview of the technical and logistical requirements for setting up charging infrastructure, including the selection of appropriate equipment, site planning, and regulatory considerations.

Webinar on Real-Time Motion Control of a Humanoid Robot

On 30th September 2021, an insightful webinar titled "Real-Time Motion Control of a Humanoid Robot" was organized for students eager to delve into the fascinating field of robotics and automation. The session was led by Mr. V. Sudharsan, Assistant Professor, Department of Electrical and Electronics Engineering (EEE), Panimalar Institute of Technology, Chennai. This educational event saw the participation of 105 students spanning their second, third, and fourth years of study.

Highlights of the Session

Mr. V. Sudharsan began the webinar by explaining the evolution of robotics, particularly humanoid robots, which mimic human motion and behavior. He outlined the various applications of humanoid robots in industries such as healthcare, manufacturing, disaster management, and even entertainment. The engaging introduction provided students with a comprehensive overview of the potential and impact of humanoid robots in society. The session delved into the technical aspects of motion control, covering: Motion Planning: How robots calculate and execute movements in real-time. Kinematics and Dynamics: An explanation of forward and inverse kinematics, essential for precise motion. Sensors and Actuators: The role of sensors in providing environmental feedback and actuators in executing motions. Control Algorithms: An overview of algorithms used to achieve smooth and synchronized movements. Mr. Sudharsan enriched the discussion with practical examples, sharing insights from his experience in robotics research and development. He explained the challenges of maintaining balance, stability, and precision in humanoid robots, especially when responding to real-time stimuli.

Webinar on Embedded Systems

The Webinar on Embedded Systems, held on 9th October 2021, was a captivating session tailored for students eager to deepen their understanding of this ever-evolving domain in the field of technology. The session was conducted by Ms. Lavanya Kumaravel, an accomplished Embedded Software Engineer at Uniq Technologies, Chennai. The event welcomed an enthusiastic group of 105 participants, comprising students from their second, third, and fourth years of study.

Expert Insights from Ms. Lavanya Kumaravel

Ms. Lavanya Kumaravel began the webinar by unraveling the basics of embedded systems, defining them as specialized computing systems that perform dedicated functions within larger systems. She highlighted the unique blend of hardware and software design that sets embedded systems apart from general-purpose computing.

During the session, Ms. Lavanya delved into the following topics:

Core Components of Embedded Systems: An overview of microcontrollers, microprocessors, sensors, and actuators.

Programming Embedded Systems: A discussion of essential programming languages like C and C++, commonly used for developing embedded solutions.

Applications of Embedded Systems: Case studies showcasing their role in devices such as medical equipment, home automation gadgets, and advanced automotive systems.

Trends and Challenges: Insights into emerging trends like IoT-enabled embedded systems and the challenges of ensuring reliability, efficiency, and security in their design.

Ms. Lavanya's wealth of industry experience allowed her to contextualize the theoretical aspects with real-world applications, making the session both practical and engaging.

Objectives of the Webinar

The primary aim of this webinar was to introduce participants to the fundamentals and real-world applications of embedded systems. The session explored how these systems operate as the backbone of modern technology, driving innovation across a multitude of industries such as automotive, healthcare, consumer electronics, and telecommunications.

INDUSTRIAL VISIT

MAHALAKSHMI PLASTICS PRIVATE LIMITED

The department Mechatronics Engineering has been arranged a one day Industrial Visit at “MAHALAKSHMI PLASTICS PRIVATE LIMITED”, Hosur to the Second & third year Mechatronics Engineering students on 09.11.2021. Mr.N.Manivel, AP/Mechatronics Engineering was the student coordina

HINDUSTAN MACHINE TOOLS LIMITED

The department Mechatronics Engineering has been arranged a one day Industrial Visit Hindustan Machine Tools Limited, at Bangalore to the Second & third year Mechatronics Engineering students on 24.06.2019. Mr.K.Sureshkumar, AP and Mr.N.Manivel, AP/Mechatronics Engineering are the student coordinators.

INDUSTRIAL ROBOTS & IIOT

Industrial Robots and the Industrial Internet of Things (IIoT)

The landscape of industrial manufacturing is transforming rapidly, driven by technological advancements that integrate automation and connectivity. Two major pillars of this revolution are industrial robots and the Industrial Internet of Things (IIoT). These technologies, working independently and in conjunction, are shaping the future of industries by enhancing productivity, efficiency, and innovation.

The Synergy of Industrial Robots and IIoT

The integration of industrial robots with IIoT creates a powerful synergy that redefines industrial processes. Connected robots, often termed "smart robots," can communicate with other machines, systems, and operators via IIoT networks. This enables the creation of smart factories, where every component is optimized for efficiency.

Challenges and the Way Forward

While the integration of industrial robots and IIoT holds immense potential, it is not without challenges. Cybersecurity concerns loom large, as interconnected systems are vulnerable to breaches. Additionally, the complexity of implementation can deter companies from adopting these technologies.

IT IN MANUFACTURING

INFORMATION TECHNOLOGY (IT) IN MANUFACTURING

The role of Information Technology (IT) in manufacturing has undergone a transformative evolution. From improving operational efficiency to enabling advanced automation, IT is now an integral driver of the Fourth Industrial Revolution (Industry 4.0). In a world where competitiveness hinges on speed, quality, and adaptability, IT acts as the backbone of modern manufacturing processes. This article delves into how IT reshapes manufacturing, its applications, benefits, and challenges.

Evolution of IT in Manufacturing

Traditionally, manufacturing relied on mechanical systems and manual labor. The rise of computers and automation in the late 20th century marked the first major IT-driven revolution. Manufacturing Resource Planning (MRP) systems were introduced to streamline resource allocation and inventory management.

INDUSTRIAL AUTOMATION

INDUSTRIAL AUTOMATION

Industrial automation refers to the use of control systems, such as computers, robots, and information technologies, to operate machinery and processes with minimal or no human intervention. It is a cornerstone of modern manufacturing and has revolutionized industries by enhancing productivity, consistency, and efficiency while reducing costs.

BENEFITS OF INDUSTRIAL AUTOMATION

Increased Efficiency: Automation streamlines production processes, reduces cycle times, and optimizes resource utilization.

Enhanced Quality: Automated systems ensure consistency and precision, minimizing defects and errors.

Cost Reduction: By reducing labor costs, waste, and downtime, automation lowers overall operational expenses.

Improved Safety: Automation eliminates the need for human workers in hazardous environments, reducing the risk of workplace injuries.

Scalability: Automation systems can easily adapt to increased production demands or changes in product specifications.

Real-Time Monitoring and Control: Advanced automation systems provide continuous data insights for better decision-making and process optimization.

TECHNICAL WEBINAR

SMART AUTOMATION

Smart automation combines advanced technologies like artificial intelligence (AI), machine learning (ML), robotics, and the Internet of Things (IoT) to enhance the efficiency, adaptability, and intelligence of industrial and business processes. By leveraging data-driven insights, connectivity, and intelligent decision-making, smart automation is revolutionizing industries across the globe.

TECHNICAL WEBINAR ON SMART AUTOMATION

Join us for an insightful webinar on Smart Automation, where industry experts will explore the latest advancements in automation technologies. This session will cover key topics such as the integration of AI, IoT, and robotics in industrial processes, predictive maintenance, and adaptive manufacturing.

SEMINAR / WEBINAR ORGANIZED

JOURNEY TO INDUSTRY: PREPARING YOURSELF FOR SUCCESS

Entering the professional world, often referred to as the "industry," is a transformative journey that marks the transition from theoretical learning to real-world application. Whether you're a fresh graduate, a career changer, or a young professional, the journey to industry is both exciting and challenging. It requires a combination of technical expertise, soft skills, adaptability, and a proactive approach to stand out in a competitive market. This write-up explores the essential steps to prepare yourself for a successful transition to the industry.

UNDERSTANDING THE INDUSTRY LANDSCAPE

The first step in preparing for your industry journey is gaining a clear understanding of the landscape you're about to enter. Different industries have unique demands, trends, and expectations. For instance, the IT sector emphasizes technical proficiency and problem-solving abilities, while the healthcare industry may prioritize compassion, resilience, and ethical considerations.

WORKSHOP ORGANIZED

DATA SCIENCE

Data Science is an interdisciplinary field that focuses on extracting meaningful insights from vast amounts of data. It encompasses a blend of skills, including statistical analysis, programming, data visualization, and machine learning. As data becomes increasingly vital in decision-making across various domains, Data Science plays a critical role in transforming raw data into actionable knowledge.

Future of Data Science As technology advances, the scope of Data Science continues to expand. Emerging areas such as explainable AI, edge computing, and quantum data analysis are shaping its future. Moreover, with the rise of automated tools, Data Science is becoming more accessible to non-experts.

DATA VISUALIZATION IN CLOUD COMPUTING

DATA VISUALIZATION IN CLOUD COMPUTING

Data visualization in cloud computing is an essential process that bridges the gap between raw data and actionable insights. By representing data visually, organizations can simplify complex datasets, identify trends, and make informed decisions. As cloud computing becomes more prevalent, the importance of robust data visualization has increased significantly.

ROLE OF CLOUD COMPUTING IN DATA VISUALIZATION

Cloud computing provides a scalable and cost-effective platform for handling large datasets, often referred to as "big data." These datasets are generated in real-time from diverse sources such as IoT devices, social media, e-commerce platforms, and more. The cloud offers the computing power and storage to manage this data efficiently. Through data visualization, this massive amount of information is distilled into comprehensible visual formats, such as bar charts, heat maps, or dashboards.

INDUSTRIAL VISIT

INDUSTRIAL VISIT:

A Gateway to Practical Learning
An industry visit is a crucial part of learning, especially for students and professionals aiming to gain practical insights into real-world operations. These visits bridge the gap between theoretical knowledge and practical application, offering participants the opportunity to observe and understand the functioning of industries firsthand.

FUTURE OF INDUSTRIAL VISITS

With the advancement of technology, virtual industry visits are gaining popularity. These visits use virtual reality (VR) and online platforms to simulate the experience of a physical visit. While they cannot fully replicate the hands-on experience of an actual visit, virtual tours are cost-effective and accessible, especially for participants who cannot travel.

CONCLUSION

Industry visits are an invaluable learning experience, providing participants with a deeper understanding of real-world operations and bridging the gap between academics and practice. Despite logistical and access challenges, the benefits far outweigh the hurdles, making industry visits a critical component of professional and educational development. By embracing both physical and virtual industry visits, organizations and institutions can ensure that participants gain practical knowledge and are better prepared for their future endeavors.

TECHNICAL SYMPOSIUM "ROBOTECH-2K21"

Principal also discussed the significance of teamwork, problem-solving, and collaboration in the realm of technology. She encouraged students to embrace a spirit of curiosity and never stop learning, as the world of robotics is constantly evolving. Her message underscored the need to develop critical thinking, as well as technical expertise, to stay ahead in an ever-changing technological landscape. In conclusion, the Principal Madam's Felicitation Address at ROBOTECH-2K21 was a powerful call to action for the students to innovate, explore, and shape the future of robotics. It not only motivated the participants but also set the tone for the success of the symposium, making it a memorable and impactful event for everyone involved.

WORKSHOP

Industrial Robotics :

As industries move toward automation and smart manufacturing, the role of industrial robotics is expected to grow, revolutionizing production processes, reducing costs, and enabling companies to remain competitive in a rapidly changing global market.
Over time, industrial robotics has evolved with advancements in artificial intelligence (AI), machine learning, and the Internet of Things (IoT).

Industrial Robotics refers to the use of robotic systems in manufacturing and industrial environments to perform tasks that are typically repetitive, precise, or dangerous for human workers. These robots are designed to improve efficiency, accuracy, and safety in industries such as automotive, electronics, consumer goods, pharmaceuticals, and more. Industrial robots are equipped with advanced sensors, actuators, and control systems that allow them to carry out a wide range of functions, such as assembly, welding, painting, packaging, material handling, and quality control.

Chief Guest /Speaker :

Mr.G.Karthick, Director, Wayhead Technology Pvt Ltd, Chennai

Number of Participants : 19
YEAR/SEM : IV/VII

WORKSHOP

Industrial Robotics :

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Chief Guest /Speaker :

Mr.G.Vignesh, Technical Coordinator, Axis Global Institute of Industrial Training ,Chennai.

Number of Participants : 53
YEAR/ SEM : II/IV,III/VI, IV/VII

WORKSHOP

PCB Design Using Proteus 8.0 :

Proteus 8.0 is a popular software used for PCB (Printed Circuit Board) design and simulation. It offers a comprehensive platform for designing both the schematic and the physical layout of PCBs. The software provides tools for creating and testing electrical circuits with the added advantage of simulating microcontroller-based projects. Users can draw the circuit schematics, assign component footprints, and arrange components for the PCB layout.

Proteus also allows real-time simulation of the designed circuit, making it easier to test the functionality before manufacturing. It is especially useful for students, engineers, and hobbyists due to its user-friendly design and powerful simulation capabilities.

Proteus 8.0 features an intuitive interface, allowing users to easily add components from its large library and connect them through virtual wires. Once the schematic is complete, it can be converted into a PCB layout, where users can position components on the board, route the connections, and check for any design errors.

Chief Guest /Speaker :

Dr.T.Rajesh,
Technical Lead Engineer,Innovate Engineering Product,Hosur

Number of Participants : 32
YEAR/SEM : II/IV,III/VI

ADD ON COURSE

Add on Course on ROBOTICS PROCESS AUTOMATION

Robotic Process Automation (RPA) is revolutionizing industries by automating repetitive tasks, enhancing efficiency, and reducing human error. For those looking to upskill, several courses provide a comprehensive introduction to RPA and its applications. Coursera offers a specialization in RPA, focusing on UiPath, a leading RPA platform. This course covers the basics of RPA, UiPath Studio, and automation project development. It also prepares learners for the UiPath Certified Professional exam

These courses are ideal for beginners and professionals seeking to enhance their skills in automation. They offer hands-on experience, industry-recognized certifications, and the opportunity to explore the transformative potential of RPA in various sectors

CNC TURNING& MILLING

Add on Course on CNC TURNING& MILLING

CNC Turning and Milling are essential skills in modern manufacturing, widely used in industries like aerospace, automotive, and precision engineering. For those looking to enhance their expertise, several courses provide hands-on training and theoretical knowledge. TCS iON offers a comprehensive CNC Turning course that combines online lectures with practical sessions at Learning and Assessment Centres. The course covers topics like shop floor practices, engineering drawing, CNC technology, and metrology. It also includes hands-on experience with CNC Turning Centres and Vertical Machining Centres, making it ideal for beginners and professionals.

These courses equip learners with the skills to operate CNC machines, interpret production drawings, and perform production jobs. They also emphasize safety practices and industry standards, ensuring a well-rounded education. Whether you're starting your career or looking to upskill, these programs offer valuable opportunities to excel in the field of CNC machining.

LAB FACILITIES

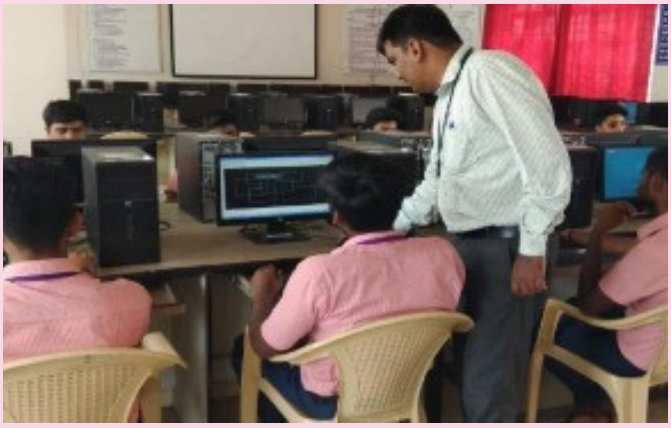
- **Strength of material and Fluid mechanics and Machinery Laboratory.**
- **Electrical Machines and Drive Laboratory.**
- **Microprocessor and Microcontroller Laboratory.**
- **Computer aided machine drawing**
- **Power Electronics Laboratory.**
- **Sensor and Instrumentation Laboratory.**
- **Dynamics Laboratory.**
- **Applied Hydraulics and Pneumatics Laboratory.**
- **Industrial Automation Laboratory.**

Dynamics Laboratory

Manufacturing Laboratory

Applied Hydraulics and Pneumatics Lab.

Electrical Machines and Drive Laboratory



CAD Laboratory

INSTITUTION SOCIAL RESPONSIBILITY

Volunteers Orientation Program

Hosur Run (For a Greener Future 2022)

Blood Donation Camp

Yoga Day Rally 2022 at Shoolagiri.

Yoga day 2022

NSS Volunteers Orientation Program

Youth Clean India camp

Environmental day 2022

INFRASTRUCTURE PHOTOS

Aeronautical Lab

Computer Lab

Civil - Concrete Lab

ECE LAB

Manufacturing Tech Lab

3D Printer Lab

Physics Lab

Library

INFRASTRUCTURE PHOTOS

PMC TECH - Engineering Main Block

West Block

East Block

Boys Hostel

Internet Café

Girls Hostel

Open Theatre Auditorium

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MBA | MCA

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POLYTECHNIC COLLEGE

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INDUSTRIAL TRAINING INSTITUTE

MATRICULATION SCHOOL

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