



Computer Engineering Department Newsletter-“Spectrum”

July 2024 to December 2024 (Ed.I)



Theme of Current Issue “Electric Vehicle & Green Mobility”.

Editorial Board

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Message from Principal.....



It gives me immense pleasure to offer the First issue of the Newsletter year 2024 dedicated to very pertinent theme in today's era: 'Electric Vehicle and Green Mobility'. Actually, our current theme is in line with a vision of our Hon. Prime Minister regarding the future of mobility in India based on seven crucial principles- the 7 Cs. The 7 Cs refer to Common, Connected, Convenient, Conges on-free, Charged, Clean, and Cutting-edge mobility. These principles are intended at transforming the way people move in India. Basically, Green or Eco-friendly mobility in true sense involves two sectors, namely – transport and Power. The success of implementing the green mobility depends on the integration of these two major sectors. The Government of India is providing much-needed push for the transition to green mobility by launching various schemes like the FAME (Faster Adoption and Manufacturing of Electric and Hybrid Vehicles) I and II, PLI Scheme, Battery Swapping Policy and Special Electric Mobility Zones. The Government is also offering various subsidies and tax benefits to encourage consumers to switch from ICE (Internal Combustion Engine) based vehicles to EVs

Prof.Dr.S.M.Deokar,
(Principal)

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Prof. T. J. Sawant D.E.E,B.E.(Elec.), MISTE Founder-Secretary		Prof. S.M.Deokar Ph.D. (E &TC) Principal

Computer Engineering Department

VISION

To build creative programming mind in the students for adopting emerging technology in the field of computing, for the betterment of society.

MISSION

M1: To impart sound theoretical and practical knowledge in the disciplines of computing, through effective teaching learning process.

M2: To produce industry and society oriented skillful engineers through co-curricular and extra-curricular activities.

M3. To inculcate ethical values in the students.

Vice Principal's Message.....



Dear Readers,

In today's world, Electric Vehicles (EVs) have the potential to play a significant role in sustainable economic development of a country, thus ensuring better quality of life for its people. Since 'Green Mobility' solutions are progressively becoming favored choice of people all over the world, by 2050 about 80% of the world's vehicle sales are expected to be electric as per McKinsey and Company estimates. Looking back at the history, the first Electric Vehicle was developed in the 1830s by a Scottish inventor Robert Anderson. In fact, in the early 20th century, EVs were more popular than Gasoline Vehicles, specifically in urban areas. However, with the mass introduction of the Ford Model T in 1908 made gasoline-powered cars widely available and affordable, leading to a decline in the popularity of EVs. Interest in EVs again began to grow in the 1990s and 2000s due to the fear of climate change and air pollution.

In this column, I would like to draw the attention of our readers towards an important aspect of EV adoption for promoting clean environment i.e. electricity production for such vehicle. All EVs running only on electricity have zero tailpipe emissions, but electricity production for such vehicle mostly come from fossil fuels like coal and natural gas which create carbon pollution. However, to migrate this quandary renewable sources of energy like wind or solar or hydel (water) can be used (Green transition) which do not create environmental hazards. Acknowledging this aspect, several countries and automakers are encouraging their customers to use renewable energy for charging their EVs.

In fact, new programs, solutions and strategies are being designed to enable customers to align EV charging to renewable energy sources (RESs), such as solar photovoltaic (PV) and wind energy systems thus help to decarbonize the environment. Even Central and various State Governments in India have undertaken multiple initiatives to encourage the green transition in EV charging. Here I would like to highlight few notable solutions and strategies.

Dr.M.S.Kalbande
(Vice-Principal)



1. Current Scenario and Regulation

The proliferation of electronic devices has led to a rapid increase in electronic waste (e-waste). Globally, millions of tons of e-waste are generated annually, but only a fraction is recycled properly. The rest often ends up in landfills or is processed by informal sectors, posing significant environmental and health risks. Regulations vary by country, with some, like the European Union, having stringent e-waste directives such as the WEEE Directive. However, enforcement and compliance remain challenges in many regions.

2. Challenges & Solutions

E-waste management faces several challenges:

- **Environmental Hazards:** Toxic components like lead and mercury can leach into the soil and water.
- **Health Risks:** Informal recycling exposes workers to hazardous substances, leading to severe health issues.
- **Economic Barriers:** High costs of proper recycling infrastructure and technology.
- **Regulatory Gaps:** Unpredictable regulations and weak execution.

Solutions:

- Implementing comprehensive regulations and enforcing them rigorously.
- Developing and deploying advanced recycling technologies.
- Encouraging manufacturers to adopt Extended Producer Responsibility (EPR) policies.
- Educating the public on the prominence of proper e-waste disposal.
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3. Ways of Reduction

Reducing e-waste involves:

- **Consumer Behavior:** Encouraging responsible consumption and dumping habits.
- **Product Design:** Designing electronics that are durable, repairable, and recyclable.
- **Reuse and Refurbishment:** Promoting the reuse and refurbishment of electronic devices to extend their lifespan.
- **Recycling Programs:** Establishing efficient and accessible recycling programs for consumers.

Collaborative Efforts: Temporary collaboration between governments, industries, and consumers to create ecological e-waste management practices.

MRS.Z.S.SAJJADE

(Lecturer)

Student Speak.....



Understanding E-Waste

Electronic waste, or e-waste, refers to discarded electronic devices like phones, computers, and TVs. As technology rapidly evolves, we're buying new gadgets more often, which leads to a growing pile of e-waste.

The Challenges

Volume: With millions of devices being discarded every year, the sheer volume of e-waste is overwhelming. It's becoming harder to manage and recycle all these electronics.

Toxic Materials: Many electronics contain harmful substances like lead, mercury, and cadmium. If not disposed of properly, these toxins can leak into the environment, causing serious health and ecological problems.

Low Recycling Rates: A lot of e-waste ends up in landfills instead of being recycled. This is partly due to a lack of awareness and inadequate recycling facilities.

Data Security: Old devices often contain personal data. Improper disposal can lead to data breaches and identity theft.

Conclusion

E-waste is a growing problem that requires collective action. By improving recycling efforts, educating the public, designing better products, and implementing effective policies, we can significantly reduce the impact of e-waste on our environment and health. Together, we can tackle the e-waste challenge and move towards a more sustainable future.

Pratik Bhosale
(SYCO)



Current Scenario and Regulations:

Begin by providing statistics on the global and local e-waste generation,

highlighting the rapid increase in electronic consumption and disposal. Discuss the environmental and health impacts of improper e-waste disposal, such as soil and water contamination from hazardous materials.

Explain existing regulations and policies related to e-waste management, including waste disposal laws, extended producer responsibility (EPR) regulations, and international agreements like the Basel Convention.

Use of Innovative Technology Solutions:

Advanced Sorting Techniques:

Use of automated sorting systems to separate different types of e-waste for recycling.

Automated Dismantling Processes:

Robotics and AI-based systems for disassembling electronic devices to recover valuable components.

Environmentally Friendly Recycling Methods:

Development of eco-friendly recycling technologies, such as chemical recycling and bioremediation, to minimize environmental impact.

Awareness Campaign and Sensitization:

Target Audience:

Tailor awareness campaigns to different demographic groups, including consumers, businesses, and policymakers.

Channels:

Utilize social media, educational workshops, public service announcements, and community events to reach a wide audience.

Mitesh Patel
(FYCO)

Alumni Meet



Computer Engineering Department organized Alumni Meet on 29th June 2024. The alumni meet offers to reconnect with the Alumni and celebrate their success and various achievements.

Webinar on “Capstone Project Planning”



Department of Computer Engineering organized webinar on “Capstone Project Planning”. Chief guest of this webinar were Mrs.Shubhangi Shinde(CEO & FOUNDER), Mr.Vishal Gosavi(CTO), Codezone IT Solutions, Pune.

Induction Program



Computer Engineering Department organized “Induction Program” for the first year students. During this program department toppers were felicitated and Principal Prof.Dr.S.M.Deokar and Vice Principal Prof.Dr.M.S.Kalbande guided the students about all departmental and other activities.

Teachers Day Celebration



Department of Computer Engineering celebrated “Teachers Day” on 5th September 2024. The chief guest Principal Prof. Dr.S.N.Deokar sir and Vice- Principal Dr.M.S.Kalbande addressed students about role and importance of Teacher in the student’s life and also guided students about role of students in society.

Engineers Day Celebration



Department of Computer Engineering celebrated “Engineers Day” on 15th Sept 2024. On this occasion TYCO students organized Project Presentation Competition. Students actively participated in all activities.

Seminar on “Personality Development”



Computer Engineering Department organized seminar on “Personality Development” for the first year students. CA Dhiraj Oswal (Motivational Speaker & Strategy Coach) was the chief guest of this seminar.

“Freshers Party”



Department of Computer Engineering organized “Fresher’s Party” for the first year students. Actor Om Yadav and Sagar Shelar were the chief guests for this function. Students from all three years presented different cultural programs on this event.

“Ganesh Festival”



Computer Engineering Department celebrated “Ganesh Festival” to worship the lord Ganesh. During these 10 days all ACES members and students enthusiastically participated in all activities.

“Diwali Celebration”



Department of Computer Engineering celebrated the festival of lights “Diwali”. All staff members and ACES members come together decorated the department and enjoyed this beautiful festival.

Summer Camp



Department of Computer Engineering organized “Summer Camp 2K24” for SSC students. During this summer camp sessions like VFX and Animation were arranged for the students.

Career Counseling Session



Computer Engineering Department organized “Career Counseling Session” for SSC students. Vice Principal Prof.Dr.M.S.kalbande and Mrs.S.N.Thorat guided students regarding various career options.

Upcoming Events:

- **Techmanthan**
- **Days celebration**
- **Farewell & Gathering**
- **Industrial Visits**

**HOD
(Dr.M.S.Kalbande)**